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DOCTOR OF PHILOSOPHY

An investigation of the impact of Corporate Social Responsibility on firms' financial performance: a global study

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An investigation of the impact of Corporate Social Responsibility on firms' financial performance: a global study.

By

Chaman Shrestha

January 2020



A thesis submitted in partial fulfilment of the University's requirements for the Degree of Doctor of Philosophy.

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Abstract

Firms' profitability is no longer a single measure of their success as CSR has started becoming the cornerstone of modern corporate accomplishment. Due to recent corporate scandals and unethical business practices, stakeholders are compelling firms to act responsibly and make a positive change in the environment, society and the world. Companies are investing heavily in CSR related programmes, and there has been a significant rise in the CSR performance reporting over the recent years. It is, therefore, the business benefits for implementing CSR initiatives is a rationale of this study. This thesis contains three empirical investigation chapters that provide compelling evidence on the impact of CSR on the firms' financial performance.

Prior studies examining the CSR effect on financial results mainly report mixed results. However, although there is a large prior literature on the link between CSR and firms' financial performance, studies on the link between CSR and long-term operating performance, long term stock performance are limited. Especially, prior studies examining the impact of CSR index's re-compositing on firms' financial performance focus on short term stock return and are from a single country/market. Very limited focus on more extensive geographical coverage (including emerging market) as CSR is becoming the global spectacle. Also, the CSR initiatives vary company to company and the nature of the industry they are operating. Hence, it is also vital to examine the potential heterogeneity in CSR-CFP relationship among industries/sectors.

In order to examine the impact of CSR on firms' financial performance, I conducted three empirical investigations. I use the FTSE4Good index series addition (deletion) and its ESG (Economic, Social and Governance) rating for CSR conformity.

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First empirical investigation (chapter 4) focuses on the long-term operating performance and use FTSE4Good Global index and a proxy for CSR conformity; the sample comprises 819 additions and 462 deletions between March 2002 and December 2015 (26 countries). I compared the operating performance of the FTSE4Good companies against the median performance of a relevant benchmark, e.g. industry-, size-, B/ME-, and momentum-matched portfolios of non-CSR firms (firm-matching approach). The first empirical result shows a statistically significant increase (decrease) in the operating performance of firms added (deleted) in the CSR index. Further comparisons with non-CSR benchmarks show that firms' addition in the FTSE4Good index is followed by a positive and statistically significant increase in most of the operating indicators studied and across all firm-matching criteria. On the contrary, firms' deletion from this CSR index is usually followed by consistent deterioration in all operating performance measures.

Similarly, in the second empirical investigation (chapter 5), I examine both shortterm and long-term stock return. To examine the short-term stock return, I use a total of 1,302 companies (725 additions and 577 deletions) and use Cumulative Average Abnormal Return (CAAR) methodology. Whereas, using the Buy-Hold Abnormal Return (BHAR) model and a sample of 596 added and 410 deleted companies, I examine the long-term stock return. The second empirical results report a positive and statistically significant abnormal long-term stock return for firms added in the FTSE4Good index over the long term. Investors can enjoy up to 4.41% in a matter of a year. However, for the firm deleted from FTSE4Good experience a negative and statistically significant stock return of 1.09% throughout 30 days and no material changes afterwards. In case of a short-term stock return, firms experienced a significant negative abnormal return when they are added, but no material changes in stock return for the firms deleted from the index.

In the third empirical investigation (chapter 6), I examine the impact of CSR on CFP in emerging markets by using a total of 1,244 firms-year observations representing 779 individual companies from 23 emerging nations between 2016 and 2017. I further evaluate the heterogeneity in CSR-CFP relationship across industries/sectors. The result of a final empirical investigation from the emerging market shows a positive and statistically significant impact of CSR rating on firms' financial performance measured by Tobin's Q and ROA. The robustness test confirms the positive impact of CSR on CFP using PTBV and ROIC. I also report that the CSR-CFP varies across industries/sectors. In this chapter, I further examine the moderating impact of cross-listing on CSR-CFP relationship and find that the positive impact of CSR on CFP is more pronounced for firms that are cross-listed in the foreign stock market.

Overall, the results of this study support the assumption of the stakeholder theory (instrumental stakeholder theory). Consistent with the signalling hypothesis, CSR reputation signals firms having strong internal resources and management capabilities to capitalise on potential investments and other corporate expansion opportunities in the future. Managers/corporate executives must maintain consistency in the firm's CSR engagement as any inverse changes could negatively impact firms' future performance. Hence, firms' engagement in the CSR-related initiative is a cornerstone of long-term business success.

Keywords: Corporate Social Responsibility, FTSE4Good Index, Operating Performance, long-term stock returns, CSR Index Additions, CSR Index Deletions, ESG Rating.

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List of Abbreviations

2SLS	Two-Stage Least Square
AAR	Average Abnormal Returns
B/M	Book to Market
BBC	British Broadcasting Corporation
BHAR	Buy-Hold Abnormal Return
BITC	Business In The Community
BP	British Petroleum
CAAR	Cumulative Average Abnormal Return
CAER	Corporate Analysis Enhanced Responsibility
CAPM	Capital Assets Pricing Model
CAPEX	Capital Expenditure to Sales
CAR	Cumulative Average Return
CDP	Carbon Disclosure Project
CEO	Chief Executive Officer
CFP	Corporate Financial Performance
CSI	Calvert Social Index
CSP	Corporate Social Performance
CSR	Corporate Social Responsibility
DJSI	Dow and Jones Sustainability Index
DSI	Domini Social Index
EIRIS	Expert in Responsible Invesement Solucion
EMH	Efficient Market Hypothesis
EPS	Earning Per Share

ESG	Economic Social and Governance
Eurosif	Europe Sustainable Investing Fund
FTSE	Financial Times Stock Exchange
FTSE4G-EM	FTSE4Good Emerging Market
GHG	Greenhouse Gas
GMM	Generalised Method of Moments
GRI	Global Reporting Initiatives
HML	High Minus Low
ICB	Industry Classification Benchmark
ILO	International Labour Organisation
ISIN	International Security Identification Number
ISO	International Organisation for Standardisation
KLD	Kinder, Liebenberg and Domini
KPMG	Klynveld Peat Marwick Goerdeler
MSCI	Morgan Stanley Capital International
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
PLC	Public Limited Company
PRI	Principle for Responsible Investment
PTBV	Price to Book Value
RNS	Regulatory News Service
ROA	Return on Assets
ROCE	Return on Capital Employed
ROE	Return on Equity

ROIC	Return on Invested Capital
SDGs	Sustainable Development Goals
SMB	Small Minus Big
SRI	Socially Responsible Index
SRIn	Socially Responsible investing
UN	United Nation
UNIDO	United Nations Industrial Development Organization
VIF	Variance Inflation Factor
WBCSD	World Business Council for Sustainable Development
WSJ	Wall Street Journal

Chapter 1 Introduction

1.1. Introduction

Corporate social responsibility (CSR hereafter) has gained significant attention in modern business operation and researches. Due to the increase in corporate scandals over the years, stakeholders have increased their presence in companies' affairs and their activities/operation. Stakeholders closely monitor firms' commitment and investment in socially responsible business practices. Due to stakeholders' intense pressure, businesses are nowadays compelled to devote their resources and investment in the good cause of making a positive change in the world. Also, CSR reporting is becoming an essential element of a corporate annual report. The growth of CSR reporting is increasing significantly over the years. The most recent survey by KPMG (2017) reports that about 93% of the top 250 global companies and 75% of 4,900 worldwide companies comprising top 100 companies by revenue of 49 countries adopt the corporate social responsivity¹. Also, 78% of the top 250 global companies include CSR information in their annual financial report (KPMG, 2017, p.21.). Such an increasing trend in CSR reporting is due to the increased regulation of the state/country, the requirement of stock exchanges and investor pressure. CSR is becoming a cornerstone of corporate success because it improves firms' reputation, innovation, risk management and revenue (Sen, Du, and Bhattacharya 2016; Porter and Kramer, 2011; Godfrey et al., 2009).

¹ The detail of report is available at

https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2017/10/kpmg-survey-of-corporateresponsibility-reporting-2017.pdf

Literature evidenced that a large number of studies that have examined the impact of the CSR to the firms' performance in different dimensions (Waddock and Graves, 1997; Orlitizky et al., 2003; Margolish et al., 2009, Peloza, 2009; Berrone and Gomez-Mejiam, 2009; Dhaliwal et al., 2011; Omar and Zallom, 2016; Qui et al., 2016; Wang et al., 2016; Du et al., 2017; Shiu and Yang, 2017; Feng et al., 2017; Li et al. 2018; Siueia et al., 2019; Zou et al., 2019). Overall, prior studies have reported mixed results; the positive, negative and neutral relationship between CSR and firms financial performance. However, the majority of studies have reported the positive impact of CSR on corporate financial performance (Peloza, 2009).

In this study, I examine the relationship between CSR and CFP in several ways. First, I examine the impact of CSR index addition and deletion on the firm's long-term operating performance. Second, I investigate the impact of firns addition and deletion from the socially responsible index on the stock price in the short-term and long-term. For both of this investigation, I use 26 cross country sample companies from the FTSE4Good Global index. Finally, I investigate the heterogeneousness in CSR-CFP relationship among industry sectors using companies from 23 emerging economies and associate with the FTSE4Good emerging index.

1.2. Research Problem

The awareness of the impact of business/companies to environment, society and community have increased significantly among stakeholders. Companies are implementing CSR practices to persuade their stakeholders who closely follow and react to the firms' operation. Stakeholders are explicitly demanding transparency of the companies CSR policy, investment, and commitment that ensure a positive impact on the society, community and the world. Further, Porter and Kramer (2011) argue that implementing CSR practice is a foundation of business success as it helps to gain a competitive advantage in the long-term. Hence, companies are investing in CSR and also using several ways (such as corporate reporting in annual financial report, websites, socially responsible index) to communicate the information regarding their commitment to the stakeholders' issues.

The popularity of the CSR index has increased significantly since the introduction of Kinder Liebenberg Domini (KLD hereafter) in 1990. At present, there are several CSR indices covering several geographical locations such as Dow Jones Sustainability Index (DJSI) (1999), Calvert Social Index (CSI) (2000), the FTSE4Good Index Series (2001), and most recently the Morgan Stanley Capital International (MSCI) ESG index (2014). These indices evaluate companies by their commitment and investment towards the environmental, social and governance issues. Companies are putting significant efforts and resources in CSR initiatives so that they can get membership of CSR related indices.

Prior studies have examined the impact of CSR index association on firm's financial performance using CSR index (Kappou and Oikonomou, 2016; Obrendorfer et al.,2013; Becchetti et al.,2012; Clacher and Hagendorff, 2012; Lourenco et al., 2012, Robinson et al., 2012). Especially within the context of the social index effect, studies have primarily focused on short-term stock performance and given lesser attention to the long-term impact. Also, the samples of these studies are from a single market, or a single country from a developed economy with a limited number of studies are from the emerging market or countries. Hence, it is worthwhile to examine the long-term performance with cross-country setting to cover the broader geographical and to improve the generalisability of the CSR-CFP relationship. Also, a limited number of studies have

examined the heterogeneousness in the CSR-CFP relationship among industry sector (Hoepner and Yu, 2010; Omar and Zallom, 2016; Feng et al., 2017). The result of these studies is somewhat mixed with limited sample sizes. Since CSR differs industry to industry, it is vital to investigate to see if the impact of CSR on financial performance differs from industry to industry.

Hence, based on the above discussion and the gaps in the literature, I will investigate the impact of CSR (CSR index association) on the firm's financial performance in several dimensions. I first compare the long-term operating performance of CSR firms against the median of the operating performance of non-CSR (not listed in CSR index) firms matched benchmark portfolio. I also investigate the operating performance after the addition and deletion from the CSR index to find if there any significant changes in the operating performance after the event. Secondly, I will examine the short-term and long-term stock return after addition and deletion from the CSR index. I also examine if impact differs from country to country. Finally, I investigate the heterogeneousness in the CSR-CFP relationship among industry sector using cross-country emerging market samples. I further examine if the cross-listing in the foreign stock market moderates the CSR-CFP relationship.

1.3. Research Questions

In the above section, I discussed the increased popularity as well as the compulsion for companies to implement CSR practice in their business model. Companies tend to implement CSR to satisfy their stakeholders and win their confidence and loyalty towards them. Hence, corporate social responsibility has now become a

necessity and not a choice (Grant Thornton, 2018). However, there are still a few questions that need to be answered and examined.

The primary research questions of this study are listed below:

- i) Does addition in the CSR index differentiate firms among competitors?
- ii) Do CSR firms perform better than their non-CSR counterparts?
- iii) Does the firm's addition (deletion) in the CSR index lead to an increase (decrease) in their long-term operating performance?
- iv) Do firms' involvement in CSR lead towards improved long-term stock performance?
- v) Does CSR-CFP relationship differ industry to industry sector?
- vi) Does the impact of CSR on financial performance differ across the country and geographical location?
- vii)Does the CSR-CFP relationship is more pronounced for the firms that are crosslisted in the foreign stock market?

1.4. Research Objectives

Corporate scandals have compelled businesses to adopt socially responsible initiatives. Corporate social responsibility is high on the business agenda. It is becoming valuable investment criteria/information for investors, and other stakeholders to assess the performance of the firm to make their decision. The higher financial profitability is no longer the most critical aspect of business success; and the concept of CSR provides the framework of value creation through the both achieving sufficient profit and satisfying various stakeholders' needs (Lopez, Gracia & Rodriguez, 2007). In this study, I aim to

examine the impact of CSR on the firms' performance. The objectives of this study are listed below:

- i. To determine the impact of CSR on firms' long-term operating performance.
- ii. To determine if firms listed in a CSR index performs better after addition than those listed in a non-CSR index.
- iii. To determine if firms that implement CSR initiatives are valued higher by the stock market in the long-term.
- iv. To determine if there is a different impact of CSR in CFP among industry sectors.
- v. To determine if CSR-CFP relationship varies across geographical location (developed and emerging market).
- vi. To determine if the CSR-CFP relationship is more pronounced for the firms that are cross-listed in the foreign stock market.

1.5. Theoretical Framework

The relationship between CSR and CFP is widely discussed in CSR literature over the years. Studies in the past used several theoretical frameworks to investigate the impact of CSR on the CFP. After having an extensive literature review, in this study, I employ several theoretical concepts that link to the CSR and corporate financial performance. To achieve the research objective and to answer the research question of this study, I employ stakeholders theory (instrumental aspect) and the signalling hypothesis.

The concept of CSR primarily focuses on satisfying companies' stakeholders. Stakeholders are individuals or group that can affect, or affected by the companies' operation (Freeman, 1984). Stakeholders confidence and loyalty is vital for a company's success and growth. According to the stakeholder theory, a firm should also focus on addressing the needs and demands of stakeholders to achieve corporate objectives. Hence, the instrumental aspect of stakeholder theory argues that CSR is instrumental for improved financial performance (Jones, 1995). Also, a firm with better stakeholder management through CSR tend to signals the firm's resources, capability and aspiration towards future growth and success. I use the signalling hypothesis (Spence, 1973) along with stakeholder theory to investigate the firm's long-term performance.

Further, the news and information regarding firms' commitment to CSR signal valuable and useful information for investors. Since the availability of new information signals valuable information and could affect the stock price behaviour, I use the signalling hypothesis in conjunction with stakeholder theory to examine the impact of CSR news on the short-term and long-term stock price. The detail of the theoretical framework and theories are explained later in the chapters.

1.6. Research Methodology

The primary objective of this study is to examine the impact of CSR on the firm's financial performance and expect a positive impact. In this study, I view the relationship between social entities and business as real, and their relationship is observable in the same way as a physical object or natural phenomena. This study also aims to contribute credible and meaningful knowledge to the CSR-CFP relationship literature. Hence, I employ positive epistemology. I derive the research question and testable hypotheses from the existing literature of CSR, stakeholder theory and signalling theory. In this study, I employ deductive approach as I am testing existing theories rather than creating or developing one.

The selection of the research methodology should be based on the suitability to answer the research question (Bryman, 2004). In this study, I am investigating the impact of CSR on firms' financial performance by following the positive epistemology and deductive research approach. Hence, I adopt quantitative methods of research. Chapter 3 of this thesis outlines the detail of the research methodology used in this study.

1.7. The scope of the Study

In the past, a larger number of studies have been carried out in examining the CSR-CFP relationship and are based on a single country and a single market. To achieve the objectives of this study outlined in the previous section, I examine the impact of CSR on the firm's financial performance in different dimensions. I used the FTSE4Good Index series (FTSE4Good Global Index and FTSE4Good Emerging Index) as a proxy of the CSR performance and sample consist of the companies from 26 developed and 23 emerging economies. First, using a sample of 1,281 (819 additions and 462 deletions) companies from developed economies, I investigate the impact of CSR on long-term operating performance. In this investigation, I compared the operating performance of the CSR companies against the median operating performance of the matched non-FTSE4Good benchmark portfolio. Further, I analysed the post-event (addition/deletion) operating performance.

In the second investigation, using a sample of 725 added and 577 deleted companies from FTSE4Good Global index, I investigated the short-term stock return. Similarly, I used a sample of 1,006 (596 additions and 410 deletions) to investigate the long-term stock return after the companies added and deleted from the FTSE4Good

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Global index series. I also conducted a country-wide investigation on the share price reaction on the CSR event.

In the third investigation, I use a sample of 1,244 firm-year observations from 23 emerging economies. I examine the relationship between the CSR rating and firms' financial performance. Also, I investigate the heterogeneousness of CSR-CFP relationship among industry sectors. Further, I examined the moderating impact of cross-listing on firms CSR-CFP relationship.

1.8. Contribution and significance of the Study

In this study, I examined the impact of CSR on the firms' financial performance. This study makes a significant contribution to CSR-CFP literature in several ways.

The first contribution is that this study contributes to the CSR-CFP literature, especially with stakeholder theory, signalling hypothesis through the CSR index recomposition as the proxy of CSR performance. As I find the positive impact of CSR on CFP, this study is consistent with instrumental stakeholder theory, which asserts that firms' involvement in CSR initiatives improves their financial performance. Also, firms' addition and deletion from the CSR index signal credible information to the stakeholders regarding the firms' commitment to CSR. The CSR index addition and deletion also signal the firms' capability, resources and ability to pursue their operation towards future growth and success.

Secondly, this study fills the gap in the research about the CSR index membership and its impact on the firm's long-term operating performances and long-term stock return. Studies in the past primarily focused on short-term market performance and gave lesser attention to long-term operating performance. I focus on examining the long-term operating performance because, for the corporate manager's perspective, the long-term operating performance is more important for the decision-making process. Also, I evidenced a positive and significant impact of CSR index configuration to the long-term stock return.

Thirdly, studies in the past have investigated the impact of CSR on CFP in aggregate and almost minimal attention on the industry-wide examination with a handful of studies using a sample from a single country (Feng et al., 2017; Omar and Zallom's, 2016). In this study, I use cross-emerging economies' company data to examine the heterogeneousness in the CSR-CFP relationship among industry sector. I find that the CSR-CFP relationship varies across the industrial sector.

Fourth, this is study is among in the front to examine the moderating impact of cross-listing on CSR-CFP relationship. I find the positive impact of CSR on CFP is more pronounced for cross-listed firms.

Further, this study is among in the front in utilising the cross-country data to examine the impact of CSR on firms financial performance. The sample consisted of companies from the FTSE4Good index services, which contains companies from 26 developed and 23 emerging economies. Since the result is derived from the sample covering a full geographical setting hence improve the generalisability of CSR-CFP relationship.

Finally, to the best of my knowledge, for the first time, I have used a unique set of CSR performance rating score provided by the FTSE4Good index series. I examined the impact to FTSE4Good emerging market index ESG rating score on firms' financial performance.

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1.9. The outline of the study

The objective of this study is to determine the impact of CSR on the firm's financial performance. In order to do this, I break down the thesis into seven chapters. I began this study by reviewing the literature of the CSR and impact on firms' financial performance in chapter 2. I explore the concept, theory, and motivation for implementing CSR initiatives. Then I review the past empirical studies on CSR-CFP relationship. Chapter 3 consist of the discussion on the research philosophy, methodology and framework that I applied to shape the relationship between CSR and financial performance. In the fourth chapter, I investigate the impact of CSR on the firms' longterm operating performance by comparing the operating performance of CSR and non-CSR companies. I also examine the operating performance of companies after the CSR index addition and deletion. Chapter 5 investigates and explains the short-term and longterm stock price return of a company after their addition and deletion from the CSR index. In the sixth chapter, I extend my investigation to the emerging economies. Using the sample companies from 23 emerging countries, I examine the heterogeneousness in CSR-CFP relationship among different industrial sectors. I also explore the relationship between the CSR rating score produced by FTSE5Good index series and companies' financial performance. Further, in chapter 6, I examine the moderating impact of crosslisting on the CSR-CFP relationship. In the seventh chapter of this thesis, I presented the overall summary, the conclusion of the study and followed by the future research avenues in the CSR-CFP relationship.

Chapter 2. Literature Review

2.1. Introduction

In this chapter, I explore some of the most important concepts of corporate social responsibility by reviewing the contextual, conceptual, and historical development of the field. In addition, a thorough understanding of CSR's historical development and the plethora of CSR-related theories will assist me in identifying appropriate gaps in the literature and proceed to the next part of my thesis, the formulation of appropriate testable hypotheses which will be further explored in the following chapters, 3, 4, 5 and 6.

According to Figure 2.1, this chapter is structured in different sections and subsection beginning with the various definitions of corporate social responsibility in section 2.2. The theoretical frameworks for each empirical chapter are based on different theories related to CSR. I discuss these theories in detail in section 2.3, followed by section 2.4 discussing the past empirical studies examining CSR-CFP relationship. This chapter concludes by discussing the gap identified in the CSR-CFP literature. The following cognitive map exhibit a snapshot of this chapter.

Figure 2. 1 Cognitive Map

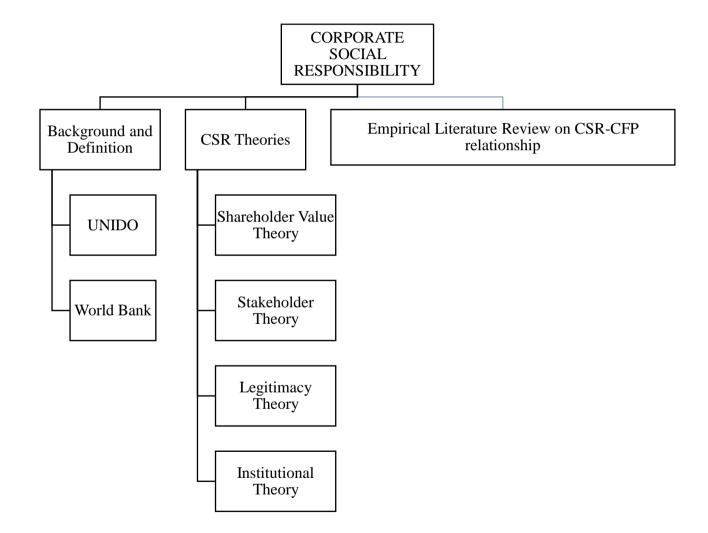


Table 2. 1 Overview of key studies on CSR-CFP relationship	
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Authors	Title of Papers	Source	Methodology	CSR Measure	CFP Measure	Result
Cochran and Wood (1984)	Corporate Social Responsibility and Financial Performance.	The Academy of Management Journal	Multiple Regression Analysis	CSR Ranking	Operating earnings to Assets Operating earnings to Sales Excess Market Return	Positive
Waddock and Graves (1997)	The Corporate Social Performance Financial Performance Link.	Strategic Management Journal	Multiple Regression Analysis	KLD Rating	ROA, ROE, ROS	Positive
Ruf et al., (2001)	An Empirical Investigation of the Relationship Between Change in Corporate Social Performance and Financial Performance: A Stakeholder Theory Perspective.	Journal of Business Ethics	Regression Analysis	KLD	Return on Sales, Return on Equity, Sales Growth	Positive
Orlitzky et al., (2003)	Corporate social and financial performance: a meta-analysis.	Organization Studies	Meta-analysis, Correlations and content analysis.	CSR report/ Disclosure	Market and accounting-based measured	Positive
Curran and Moran (2007)	Impact of the FTSE4Good Index on firm price: An event study.	Journal of Environmental Management	Event Study Methodology	FTSE4Good UK index	Stock Return	No impact

Becchetti et al., (2008)	Corporate social responsibility and corporate performance: evidence from a panel of US- listed companies.	Applied Economics	Event Study Methodology, Regression analysis	DJSI 400 (Addition)	net sales per employee, return on equity,	Positive Negative
Godfrey et al., (2009)	The Relationship between Corporate Social Responsibility and Shareholder Value: An Empirical Test of the Risk Management Hypothesis.	Strategic Management Journal	Event Study Methodology, Regression analysis	KLD Rating	Stock Return	Positive
Choi and Wang (2009)	Research notes and commentaries stakeholder relations and the persistence of corporate financial performance.	Strategic Management Journal	Regression Analysis	KLD Rating	ROA, Tobin's Q	Positive
Shen and Chen (2009)	Ambition Versus Conscience, Does Corporate Social Responsibility Pay off? The Application of Matching Methods.	Journal of Business Ethics	Matching approach, Regression analysis	CSR Award	EPS, ROA, ROE, Gross profit to sales, Income to sales	Positive
Margolis et al., (2009)	Does it pay to be good, and does it matter? A meta-analysis of the relationship between corporate social and financial performance.	SSRN	Meta-analysis	CSR	CFP	Positive

Doh et al., (2010)	Does the Market Respond to an Endorsement of Social Responsibility? The Role of Institutions, Information, and Legitimacy.	Journal of Management	Event Study Methodology, Regression analysis	Calvert and Domini Social Index	Stock Return	Positive
Cheung et al., (2009)	Does Corporate Social Responsibility Matter in Asian Emerging Markets?	Journal of Business Ethics	Regression Analysis	Researcher own constructed CSR score	Tobin's' Q, MTBV	Positive
Hoepner and Yu (2010)	Corporate Social Responsibility Across Industries: When Can Who Do Well by Doing Good'.	SSRN	Regression Analysis	Innovest strategic value advisor CSR Rating	Stock Return	Positive
Jiao (2010)	Stakeholder Welfare and Firm Value'	Journal of Banking and Finance	Regression Analysis	KLD Rating	Tobin's' Q	Positive
Robinson et al., (2011)	Signalling Sustainability Leadership: Empirical Evidence of the Value of DJSI Membership.	Journal of Business Ethics	Event Study Methodology, Regression analysis	DJSI	Stock Return	Positive (addition)
Clacher and Hogendroff (2012)	Do Announcements About Corporate Social Responsibility Create or Destroy Shareholder Wealth? Evidence from the UK.	Journal of Business Ethics	Event Study Methodology, Regression analysis	FTSE4Good UK index	Stock Return	No impact

Cheung (2011)	Do Stock Investors Value Corporate Sustainability? Evidence from an Event Study.	Journal of Business Ethics	Event Study Methodology	DJSI World index	Stock Return	Increase- Addition Decrease- Deletion
El Ghoul et al., (2011)	Does corporate social responsibility affect the cost of capital?	Journal of Banking & Finance	Regression Analysis	KLD Rating	cost of equity	reduction on the cost of equity
Jo and Harjoto (2011)	Corporate Governance and Firm Value: The Impact of Corporate Social Responsibility.	Journal of Business Ethics	Regression Analysis	KLD Rating	ROA, Tobin's Q	Positive
Becchetti et al., (2012)	Corporate social responsibility and shareholder's value.	Journal of Business Research	Event Study Methodology, Regression analysis	Domini Social Index	Stock Return	The negative impact of exit announceme nt
Lourenco et al., (2012)	How Does the Market Value Corporate Sustainability Performance?	Journal of Business Ethics	Event Study Methodology, Regression analysis	DJSI TSM index	Stock Return	positive

Xu et al., (2012)	Stock Market's Reaction to Disclosure of Environmental Violations: Evidence from China.	Journal of Business Ethics	Event Study Methodology, Regression analysis	Environmental violation event news	Stock Return	Negative
Ziegler (2012)	Is it Beneficial to be Added in a Sustainability Stock Index? A Panel Data Study for European Firms'.	Environmental and Resource Economics	Panel data, Regression analysis,	DJSI Stoxx 600	Return on assets, Tobin's Q	Increase- Addition
Nakai et al., (2013)	Sustainability membership and stock price: an empirical study using the Morningstar-SRI Index.	Applied Financial Economics	Event Study Methodology	Morning star SRI index Japan	Stock Return	positive on inclusion
Oberndorfer et al., (2013)	Does the stock market value the inclusion in a sustainability stock index? An event study analysis for German firms.	Journal of Environmental Economics and Management	Event Study Methodology	DJSI World index	Stock Return	The negative impact of inclusion
Deng et al., (2013)	Corporate social responsibility and stakeholder value maximization: Evidence from mergers.	Journal of Financial Economics	Event Study Methodology, Regression analysis	KLD Rating	Stock Return	Positive
Cordeiro and Tewari (2015)	Firm Characteristics, Industry Context, and Investor Reactions to Environmental CSR: A Stakeholder Theory Approach.	Journal of Business Ethics	Event Study Methodology, Regression analysis	Newsweek Green Ranking	Stock Return (long term and short term)	Long term - Positive Short term- Negative

Lyon and Shimshack (2015)	Environmental Disclosure: Evidence from Newsweek's Green Companies Rankings.	Business and Society	Event Study Methodology, Regression analysis	Newsweek Ranking announcement	Stock Return	Positive impact
Kappu and Oikonomou (2016)	Is There a Gold Social Seal? The Financial Effects of Additions to and Deletions from Social Stock Indices.	Journal of Business Ethics	Event Study Methodology, Regression analysis	MSCI KLD 400	Stock return (short-term) EPS (as operating performance)	No change on inclusion, Negative impact of deletion and Positive of inclusion on EPS
Su et al., (2016)	The Signalling Effect of Corporate Social Responsibility in Emerging Economies.	Journal of Business Ethics	Regression Analysis	Credit Lyonnais Securities Asia (CLSA) Hongkong	Tobin's Q	Positive
Omar and Zallom (2016)	Corporate social responsibility and market value: evidence from Jordan.	Journal of Financial Reporting and Accounting	Regression Analysis	Researcher own constructed CSR score	Tobin's Q	Positive

Hawn et al., (2017)	Do investors actually value sustainability? New evidence from investor reactions to the Dow Jones Sustainability Index (DJSI).	Strategic Management Journal	Event Study Methodology, Regression analysis	DJSI Global Index	Stock Return	Positive/ increased
Feng et al., (2017)	Corporate social responsibility and firm financial performance: Comparison analyses across industries and CSR categories.	American Journal of Business	Regression Analysis	KLD Rating	Tobin's Q ROA	Positive
Du et al., (2017)	The Business Case for Sustainability Reporting: Evidence from Stock Market Reactions.	Journal of Public Policy and Marketing	Event Study Methodology, Regression analysis	KLD Rating, Sustainability report	Stock Return	Positive
Mishra (2017)	Post-innovation CSR Performance and Firm Value.	Journal of Business Ethics	Regression Analysis	KLD Rating	Tobin's Q	Positive
Chen et al., (2018)	The effect of mandatory CSR disclosure on firm profitability and social externalities: Evidence from China.	Journal of Accounting and Economics	Matching approach, Regression analysis	Pollution report disclosure	ROA ROE	Negative
Zou et al., (2019)	Does doing good lead to doing better in emerging markets? Stock market responses to the SRI index announcements in Brazil, China, and South Africa.	Journal of the Academy of Marketing Science	Event Study Methodology, Regression analysis	SRI Index (Brazil, China, South Africa)	Stock Return	Positive return - inclusion

2.2. Background and definition of Corporate Social Responsibility

Stakeholders' needs have increased substantially over the years, while organisations consider it necessary to satisfy most of these demands. In recent times, there has been greater consensus on the likely impact of the organisational operation on the global environment, society and economy as a whole. These increased claims for the transparency and accountability have forced all organisations to follow a socially responsible business practice which not only focuses on maximising shareholders' wealth but also taking into account the needs of the broader society (Arvidsson, 2010; Swanson, 1999; Epsten and Freedman, 1994). By building and maintaining a good CSR reputation, companies can achieve both long-term corporate survival and shareholders' wealth maximisation. CSR has gained more credence and popularity in recent years, and for most companies, it is now part of their corporate strategy. In a survey by KPMG (2013), corporate social practices have increased by approximately 93% in the top 250 global companies, 76% in America, 73% in Europe, and 71% in the Asia Pacific. The same report also highlights the growth in CSR reporting for the countries of India, Chile, Singapore, Australia, Taiwan and China of 53%, 46%, 37%, 25%, 19%, and 16% respectively (KPMG, 2013).

On the other hand, the increased popularity of CSR can be attributed to the emerging popularity of socially responsible investing (SRIn) of recent years with an estimated \$6.57 trillion invested in socially responsible funds in the US at the beginning of 2014 compared to \$3.74 trillion in 2012 and \$3.1 trillion at the end of 2010 (USSIF, 2014, p. 12). The socially responsible investing in the US accounts approximately for more than \$1 out of every \$6 of assets invested. Concerning the European continent, there is a similar trend with most recent statistics reporting a sustainability-focused investment

of \notin 59 billion for 2013; an increase of 22.6% compared to that of \notin 48 billion in 2011 (Eurosif, 2014. p.11). The same report states that total socially responsible investment funds in the UK have increased by 11% to \notin 12.86 billion from \notin 8.93 billion in the year 2011(Eurosif, 2014. p.11). Hence, although only the business and economic textbooks highlight profit/wealth maximisation of the shareholder as a primary motive for a firm, these statistics mentioned above highlight the ever-increasing demand for responsible business practices, thus compelling firms to act in a socially responsible and ethical manner.

According to Bernstein (2000), CSR is high on the business agenda because companies have ethical and moral duties towards society and therefore, should contribute to the welfare of the community. Moreover, firms are recognised by investor and public not only because of their financial performance and their size of assets but also because of their resources, ability, capability, and most importantly experience to confront problems that arise in the society (Davis, 1973). On the other hand, CSR not only makes executive aware of inconsistencies arise in society due to the firms' operation but also inspire them to take proactive strategies towards social interests (Heal, 2004).

CSR is getting widespread attention due to its multiple implications on economics, philosophy, law and ethics, and the whole society. It has gained significant attention from academic, professionals, the NGOs, regulatory bodies, charitable organisation, so on and so forth. Also, the definition of the CSR, principles, policies varies across the sectors and organisations. Hence, CSR is termed as a contested concept (Moon, 2004; McLachlan and Gardner, 2004).

Although defining CSR varies from institution to institution, depending on the underlying policy agenda, the most comprehensive definition is provided by the United Nations Industrial Development Organisation (UNIDO) which states that CSR is a management concept that addresses stakeholders' expectations and integrates environmental and social issues to the company's operating model. It is termed as an instrument of balancing the *economic, environmental and social imperatives* (UNIDO, 2016) which are also known as the '*Triple Bottom Line*'.

The above definition emphasises the role of CSR in shaping firms' management policy to achieve relevant corporate objectives via the balancing of three primary obligations, namely the economic, social and environmental ones as created by the companies operations (ILO, 2016). Hence, an organisation will be able to achieve those objectives if and only if it successfully integrates stakeholders' expectations, interest, and demand within its culture. Similarly, the World Bank (2003) states that CSR is the corporate commitment to improving the quality of life by contributing to sustainable economic development, working together with several stakeholders (employees, local communities, society and government). It is a win-win philosophy that benefits both companies and social development (World Bank, 2003, p.1). According to the above definition, the emphasis of multiple stakeholder interests and ethical operating practices is essential for the business to succeed in the modern and dynamic environment. Firms should improve and develop the quality of life of their workforce, their families and their communities which consequently improves the status of the society as a whole (WBCSD, 2005; Johnson and Scholes, 2002).

In an attempt to clarify CSR-compliant practice, the International Standards Organisation (ISO) introduced ISO 26000:2010 which lists a series of criteria and standards for socially responsible practices of companies in the public and private sector. It comprises of seven key areas of social responsibility including consumer issues, human rights, the environment, labour practices, fair operational practices, community involvement and development, and organisational governance (ISO, 2010). These aspects of CSR, also known as the abbreviation ESG (environmental, social and governance).

Due to the voluntary nature of CSR, its definition varies across companies, industries, and sector. Similarly, the conflicting academic debate on the impact of CSR on the businesses has contributed to the development of several theoretical concepts. However, the fundamental aspect of all CSR theories is that firms have responsibilities towards the societal interest that go beyond simply legal and ethical duties, and more towards the development of broader social elements.

2.3. Theories of CSR

Prior literature on CSR theories produced several classifications of CSR (Secchi, 2007; Windsor, 2006; Garriga and Mele; 2004; Klonoski 1991 Preston, 1975). According to Garriga and Mele (2004), the theories of CSR are classified as instrumental, political, integrative and ethical theories. According to the instrumental theories, the primary social responsibility of a company is to create wealth for its shareholders. Any form of social activities is acceptable, if and only if, they are not against the primary purpose of wealth creation. Hence, this group of CSR theories consider socially responsible activities as a mechanism of accomplishing firms' long-term financial objective (Jones,1995; Donaldson and Preston, 1995; Jenson, 2010; Jamali, 2008). On the other hand, political theory more focuses on business-society relationships in the political ground. These group of theories argue that the social responsibility ascends from the social power that firm hold. The existence of a social contract between society and business leads to firms' participation in community activities. Similarly, the third group *Integrative theories*; state

that the existence, growth and continuity of the businesses depend on the society the latter one holds critical resources. It is, therefore, imperative for the firms should integrate social demands into their business model. The final group of theories, the *Ethical* ones state that firms have fiduciary duties towards their several stakeholders and the society as a whole and are required to implement morally and ethically acceptable practices in their operations (Crane et al., 2008). Hence as Garriga and Mele (2004) state, "companies should accept CSR as an ethical obligation above any other consideration".

This approach of classifying the CSR theories is complete and comprehensive since it has successfully managed to integrate multiple approaches. The clear link between different approaches and theories are well presented in line with the role of modern business in society. However, this classification is somehow weak in theoretical terms, as it ignores the important impact of complex interrelationships amongst the various aspect. For example, the instrumental theory is described as a mean of achieving firms' economic objectives through social initiates but fails to appreciate the contribution of stakeholder management and the corporate social performance approach to the financial performance, further classified as an integrative theory. Similarly, this approach also fails to explain the reason for separating different theories since different political theories may also be associated with the instrumental theory of CSR (Secchi, 2007).

Early studies have classified CSR under several alternative perspectives, including, amongst others, the classical shareholder view (Clarke, 1998, Lantos, 2001); the enlightened self-interest, moral approach linked to social expectations (Jenson, 2001) and the neoclassical approach (Moir, 2001). The classical (Lantos, 2001) and the neoclassical (Moir, 2001) approaches describe CSR under the concept of shareholders' value maximisation. On the other hand, the stakeholder approach represents firms'

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responsibility beyond shareholders' interest and address the issue of wider multi-party (stakeholders) expectations (Lantos, 2001). Other important theoretical concepts covered in hitherto CSR research are those of social legitimacy (Suchman, 1995; Deegan, 2002), institutional approach (Powell & DiMaggio, 1988; Greenwood et al., 2008), the resource-based view (Barney, 1994), so on and so forth. I further concentrate on analysing on the key theoretical perspectives of CSR.

2.3.1. Shareholder Value Theory

According to the shareholder value theory, the maximisation of the long-term wealth of the company's owners is a primary objective for the company, and corporate executives are obliged to act in the best interest of that shareholder. This theory is at the base of the neoclassical economic approach, where the shareholders' utility maximisation is the primary concern (Lantos, 2001). Levitt (1958) concept of social responsibility is one of the most important notions of the neoclassical theory of CSR. According to his study, business people should pay more attention to social responsibility because it poses threats to firms instead of an economic benefit. Levitt (1958, p.49) argues that "businesses will have a much better chance of surviving if there is clarity about their goals with the long-run profit maximisation been the key principle objective in practice as well as in theory". Similarly, Carr (1968) argues that converting the firms' resources into the products and services are the primary aims of the business. He compares the business responsibility and ethics with the game of poker where some dishonesty and deception are necessary for a firm to be successful. Therefore, as long as a company operates within the rule of law, it can shape its strategy as it pleases to maximise its profits (Carr, 1968, p.151). Historically, Carr's (1968) and Levitt's (1958) concepts that focused only on

profit maximisation while ignoring the ethical and social responsibility and termed as the 'pure profit-making view' (Lantos, 2001, p.602).

One of the most influential supporters of the aforementioned classical view is Friedman (1970). Friedman (1998) believes that in a "free economic system" there is one and only one social responsibility obligation for a business that is to use its resources and structure its operation in a way that maximises corporate profit. However, this is acceptable as long as the firm stays within the "rule of the game" (Friedman, 1970). Hence, managers should act in the best interests of their shareholders as supported by the agent-principal relationship of the agency theory (Smith, 2003; Sundaram and Inkpen, 2004). Any managerial actions that dissent to shareholders' interest could be perceived unethical even though such activities might be socially responsible. Based on this view, the participation in CSR activities represents a cost for the firm (Friedman, 1970) and can have an adverse impact on the firms and its shareholders (Levit, 1958).

In line with Carr (1968), Friedman (1970) also emphasised the importance of economic benefit rather than social norms and values during the shareholder wealth maximisation process. He also agrees that business also should consider ethics, honesty and requirements in their operations. He believes that a manager should not act, accept and implement any strategies that threaten shareholders' wealth. Any use of corporate resources for social objectives means imposing 'virtual taxes' to shareholders because social goals should be fulfilled by public servants and politicians rather than businesses (Friedman, 1970; Sternberg, 1997). Carroll (1996) states that most of the scholars in the past only focuses on the first part of Friedman's (1970) concept and ignore the second part which appreciates the ethical and legal aspect of the social and environmental responsibility in a non-deceptive way (Smith, 2003). The modern advocates of the

classical perspective of CSR (Lantos, 2001, p.603) label Friedman's (1970) proposition as the 'constrained profit-making view'.

In support of the shareholder view of CSR, Barry (2000, p.103) claims that firms can only be involved in socially responsible activities and philanthropic donations if the market is less competitive. He further argues that the use of corporate resources for CSR activities is indeed an act of dishonesty and theft. This is also corroborated by Henderson (2005), who further opposes CSR and claims that the latter can weaken corporate performance because it tends to increase corporate expense. He further argues that CSR merely covers the way for several-practices of over-regulation, for which the cost to society, in general, is greater than the benefit (Henderson, 2005, p.32). Most recent advocates of the shareholder theory (Jensen, 2002; Coelho et al. 2003; Sundaram and Inkpen, 2004) defend the value creation and maximisation concepts as companies' primary aim but also support CSR as an important aspect of the modern business environment. For example, Sundaram and Inkpen (2004) argue that focusing on the firm's shareholder's value maximisation also cover stakeholders' interest since the return/value to shareholders is the residual pay. These studies support that corporate managers' decision to create and maximise shareholders' wealth can be linked with stakeholder management. For example, Coelho et al., (2003) argue that interacting with stakeholders and maintaining a healthy relationship is vital to corporate profitability as well as it is a fiduciary duty of the firm's managers to their shareholders. Hence, it is essential for companies to balance multiple stakeholders' expectations with the primary objective that of wealth maximisation. Besides, a firm can maximise its long-term value by making certain adjustments with its stakeholders. For example, Jensen (2002) introduces a concept called 'enlightened value maximisation' where a firm can maximise its long-term wealth by incorporating both social and economic responsibilities. In a follow-up study, Jensen (2010) indicates that "to maximise the value of the firm, corporate managers must not only satisfy but enlist the support of, all corporate stakeholders like employees, managers, customers, suppliers, governments, NGOs and local communities". Hence, a firm that implements such a strategy will achieve its value creation objectives (Porter and Krammer, 2006; Queen, 2015).

Overall, this shareholder viewpoint of CSR aligns with the neoclassical theory that seeks to maximise shareholder wealth with the notion of profit maximisation and efficiency within a free market economy. Corporate managers have to focus on the value maximisation and any resources used in the CSR should contribute to the economic performance of the firm. The key assumptions of this particular shareholder view are the followings:

- Shareholders are the owners of the company and managers should focus on maximising their wealth.
- Corporate managers must use firms' resources efficiently to increase the profitability of the firm.
- A company should focus on producing goods and services for society to create wealth.
 Any use of business resources to social responsibility will impair its profitability.
- According to this theoretical perspective, a free and competitive market with minimum public interaction is the best condition for wealth creation.
- Corporate managers should focus on the optimum utilisation of firms' resources. The economic benefits must support manager discretion to use resources in socially responsible activities.

 Companies are fulfilling social expectations by creating jobs, providing goods and services, and strengthening competition.

However, for a large part of the CSR academic community, the shareholder value theory is narrow and only focuses on firms' economic aspect. Moreover, shareholder theory argues that not all social problems are a responsibility for the companies but the state/government (Friedman, 1970; Smith, 2003 Sundaram and Inkpen, 2004); as well as, it ignores the fact that firms have their stakeholders and have some rights towards firms that can have significant impact on their operation. Due to these conceptual limitations and weaknesses of shareholder theory, the use of social theories such as these of the Stakeholder theory, the Legitimacy theory and the Institutional theory are increasingly used to address the wider issues of the society. For example, the stakeholder theory integrates the wider social aspects in achieving firms long term goal. This theory states that the firms cannot achieve their long-term economic success if they only focus on their owners, on the contrary, it argues that a wider approach is needed that incorporates firms' several stakeholders and appropriate relationship management and it is vital for the success in the competitive marketplace.

Hence, the stakeholder theory states that CSR is an instrument for achieving firms' objectives and can lead to higher profitability through operating responsibly in society. In order to be successful in a current business environment where the competition is intense, firms must focus on building a sustainable relationship with their stakeholders, attract their support, develop trust and enhance the cooperation through the process of stakeholder management. In the following section, I elaborate further on this.

2.3.2. Stakeholder Theory

Stanford Research Institute firstly introduced the term "Stakeholder" (Freeman et al. 2010) but the foundation of the concept in academic and management literature started by Freeman (1984) in his seminal study. According to Freeman (1984), "stakeholders are any group or individuals who can affect, or affected by, the achievement of a corporation's objectives, including employees, customers, suppliers, stockholders, banks, environmentalists, government and other groups who can help or hurt the company" (p.52). Hence, interests, concerns and demands of stakeholders should be considered in the firms' strategic decisions. Subsequent studies widely adopt this view.

Prior literature has classified stakeholders in numerous ways, such as internal and external (Zahra and Pearce, 1989); strategic and moral (Goodpaster, 1991); supportive, managerial, non-supportive and mixed blessing ones (Savage et al. 1991); latent, expectant and definitive stakeholders (Mitchell et al. 1997); single and multiple issue (Wood, 1995); voluntary and involuntary stakeholders (Clarkson, 1994).

Clarkson (1995) divides stakeholder into primary and secondary by their interest, claims, ownership and rights in the firm's activities. According to him, primary stakeholders include investors, employees, customers, and suppliers, and they are formally/officially connected to the organisation. On the other hand, secondary stakeholders are defined as those who can influence/affect (or are influence/affected by) the corporation, but they are not engaged in a transaction with the corporations and are not essential for its survival (Clarkson, 1995, p.107). Without these stakeholders' involvement, an organisation cannot survive

Stakeholder theory is based on the concept that multiple stakeholders have an interest in the operations and the decision of corporations (Branco and Rodrigues, 2007; Crane,

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Matten and Spence, 2014) and it further elaborates the relationship between these two parties. Ansoff (1965) was the very first to introduce the stakeholder theory (Fernando and Lawrence, 2014; Roberts, 1992).

The doctrine of the stakeholder theory is that corporate executives/managers are accountable to their stakeholders and must ensure the balance of divergent interest of several stakeholders. It emphasises corporate accountability beyond economic and financial objectives. Hence, in order to be successful, firm or managers should focus on balancing the interest and creating the value for multiple stakeholders including shareholders without ignoring the interest of either party (Branco and Rodrigues, 2007; Guthire et al., 2006; Carroll and Buchholtz, 2003; Radin, 1999; Donaldson and Preston, 1995; Clarkson, 1995; Jones, 1995).

Stakeholder theory has been classified in many ways using various assumptions. For example, Berman et al., (1999) classified shareholder theory as intrinsic stakeholder commitment model and strategic stakeholder management. According to strategic stakeholder management, companies address the concern and interest of stakeholders because the stakeholders' reaction and behaviour towards the firms' activity may directly affect the economic performance of the company. On the other hand, the intrinsic stakeholder commitment model argues that firms address stakeholders concern because of a moral commitment to stakeholder group and that this commitment, in turn, impact firms' financial performance (Berman et al., 1999. p.502).

Similarly, Gray et al. (1996) categorise the stakeholder theory as an ethical and managerial perspective. This approach is later extended by Guthrie et al. (2006), Belal and Owen (2007), Deegan (2009), and Gray et al. (2010). Under the ethical perspective, organisations can be perceived to be a mechanism for meeting stakeholders' expectations

rather than shareholder value creation. Also, the company should treat its stakeholder fairly and equally (Deegan, 2009). The ethical perspective can be linked to the normative stakeholder theory (Donaldson and Preston, 1995) and the accountability stakeholder theory (Gray et al. 1996). This concept opposes Friedman's (1984) argument and focuses that firms being accountable and acting in accordance with the stakeholders' interest and needs even though it is not financially beneficial (Hasnas, 1998). This aspect of stakeholder theory overshadows the concept of shareholder value creation and priorities the fulfilment of stakeholders' expectations and interests. Organisations have to understand that stakeholders are real players (Freeman, 1998) and corporate managers should consider the moral and ethical aspect of each decision taken, which may need to satisfy the interest and needs of these interested parties (McVea and Freeman, 2005). The ethical perspective also stresses the importance of the point that stakeholders are entitled to treat fairly and equally by corporations regardless of their power (Deegan, 2009).

On the other hand, with regards to the managerial concept, the stakeholder theory state that stakeholders control the firms' critical resources (Deegan, 2009; Mitchell et al. 1997). Under this perspective, managerial focus and priority should be given to the fulfilment of those stakeholders who are economically powerful. Stakeholder participation is assumed to be critical to the corporate decisions that may affect the firm (Murray and Vogel, 1997). It is because stakeholders are contributors to wealth creation, risk bearers and the potential beneficiaries (Post et al., 2002). The managerial perspective of the stakeholder theory focuses on the managing the relationship among the firms' stakeholders than focusing only on the financial objective as according to Donaldson and Preston (1995) a stakeholder has resources and power to improve the financial performance of a firm or otherwise lower them.

The managerial concept of stakeholder theory is primarily a strategic management concept (Porter and Kramer, 2006) which aims to gain and retain a competitive advantage in the industry through proper management of firms' relationship with multiple stakeholders. Firm and stakeholder have a two-way relationship with conflicting interest (Preble, 2005). For example, employees expectation of high salary is conflicting to a customer who wants a low price but standard product quality. On the other hand, firms that focus on financial profitability by reducing staff expenses may affect staff productivity and creativity. Consequently, because of a poor standard and less quality, the customer may boycott the firm resulting in lower profits (Crane, Matten and Spence, 2014). Hence, it becomes evident that managing conflicting stakeholders' expectations is a very challenging task for businesses.

Similarly, Donaldson and Preston (1995) classify the Stakeholders theory into three different standpoints such as descriptive /empirical, instrumental and the normative theory. Among these three perspectives, descriptive and normative are more focus on moral reasoning and theoretical relationship between firm and stakeholders, while the instrumental aspect of stakeholder theory is more practical compared to others. The descriptive theory is about how the corporation operates and maintains relations with its stakeholders while the normative dimension defines the norms, morals and principles that a company should follow while operating in the society. However, the instrumental concept describes the function of how the company manages its stakeholders to achieve its objectives. According to this perspective, a firm with stakeholder management policy in place will benefit from improved profitability.

Mitchell et al. (1997) propose a model of 'stakeholder identification and salience.' This model focuses on prioritising firms' stakeholders on the basis of the possession of

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the attributes of power, legitimacy, and urgency. Power is defined as the ability to control, whereas Legitimacy is the firm's behaviour that is acceptable and expected by society, and last, the urgency exists when there is a pressing call for attention (Magness, 2008). The power is noted as the most crucial attribute among the three. Mitchell et al. (1997, p.873) suggest that "stakeholder salience will be positively related to the cumulative number of stakeholders attributes- power, legitimacy, and urgency- perceived by managers to be present." The corporate manager should prioritise a stakeholder with a high degree of all those three attributes. Neville and Menguc (2006) assert that stakeholders' needs and expectations may be conflicting, complementary and cooperative. It is therefore that managers should not take stakeholder's salience independently (individually), but rather should address with potential interaction with other stakeholders. The interaction between the multiple stakeholder networks and the salience facilitates a better understanding of the impact of stakeholders on the firms (Neville and Menguc, 2006). Hence, power, legitimacy, and urgency are the key assessment criteria for managers to respond and prioritise the interest of legitimate stakeholders (Agle et al., 1999; Mitchell et al. 1997, p.882).

Prior literature focuses on CSR and stakeholder theory instantaneously (Wadddock and Graves, 1997; Ullman, 1985; Richardson et al. 1999; Preston and O'Bannon, 1997; Rowley and Berman, 2000; Ruf et al. 2001; Moore, 2001; McWilliams and Siegal, 2001; Murthy, 2007; Godfrey et al. 2008; Salama et al., 2011; El Ghoul et al. 2011). Simpson and Taylor (2013) define stakeholder theory as a systematic approach of the firm and its surroundings that describes the complex relationship between business and society. It also examines how these two elements interact with each other after taking into consideration a socially-responsible behaviour and accountability of the firm towards

its various stakeholders. Hence, in order to achieve long-term success, the organisation should devote more resources and focus on managing and maintaining a healthy relationship with its stakeholder (Donaldson and Preston, 1997; Tsoutsoura, 2004). The fundamental theme of Stakeholder theory is to meet the needs and demand of multiple stakeholders through implementing a socially responsible practice that makes a positive change in the society (Ruf et al., 2001), and such practice is called CSR. Murthy (2007) defines CSR as the social practice where companies shift their responsibility towards meeting the needs and expectation of several stakeholders. Firms involvement in CSR activities (e.g. corporate philanthropy) towards secondary stakeholders generates positive moral capital by improving stakeholders' confidence towards firms (Godfrey, 2005). Satisfying stakeholder through CSR practices improves firms reputation (Godfrey, 2005; Russ and Tencati, 2009), which consequently increases shareholders' long-term wealth (Godfrey, 2008). Further, the empirical studies evidence that firms' commitment towards satisfying and maintain the healthy relationship with their stakeholders facilitates a lower level of leverage and cheaper cost of capital (El Ghoul et al., 2011; Dhaliwal et al., 2011, Goss and Roberts, 2011; Bae et al., 2011).

In line with stakeholder theory, firms' CSR initiative communicates their level of involvement towards contributing to the positive changes in society and community. The instrumental aspect of the stakeholder theory asserts that the improved stakeholder relationship is an instrument of corporate success (Jones, 1995; Donaldson and Preston, 1995). Regular communication and education will improve a firms' legitimacy with their stakeholder (Lindblom, 1994; Deegan, 2002; Gary et al., 2010) via the process of CSR activity disclosures. Hence, firms' involvement in CSR activities improves the stakeholders' confidence towards them. Firms' healthy relationship with their stakeholders improves corporate image, reputation, and subsequently leads towards sustainable business growth (Mitchell et al., 1997; Branco and Rodrigues, 2006; Du, Bhattacharya, and Sen, 2010).

Stakeholder theory is a holistic view of all parties directly or indirectly associated with the organisation that has a legitimate interest in the company. The key assumptions of the stakeholder theory are the following:

- 1. Stakeholders are parties that are directly or indirectly affects and affected by business operations.
- 2. Firms have diverse groups of stakeholders with a divergent interest in them.
- 3. Stakeholders hold a significant amount of resources and power that is required for companies to operate and grow in the environment.
- 4. Companies have responsibilities (economic, environmental, social) to fulfil and satisfy their stakeholder's interest and demand.
- 5. Businesses should balance and priorities their stakeholders based on interest, power, urgency and salience (Mitchell et al., 1997).
- 6. The effective management of the firms' stakeholders is vital for their overall growth and success.
- 7. Stakeholder satisfaction through CSR is an instrument of improved corporate performance.

The stakeholder theory is a model which guides companies to take a holistic approach in setting their corporate objectives. The stakeholder model considers both ethical and economic aspect of firms and empowers them to implement socially responsible initiatives towards making a positive change in society. Stakeholder theory promotes fairness in dealing with parties associated with the companies and hence promotes both corporate growth and the welfare of the society. However, the stakeholder theory is not free from the ambiguity. For example, the definition of a stakeholder is still ambiguous (Jones and Wicks, 1999). Although stakeholder theory is a good integration of social welfare, ethics, CSR and economics, this theory has not explained on what the stakeholders expect from companies and how the divergent needs of stakeholder can be balanced. In addition, the stakeholder theory fails to explain how and from where the roles and responsibility of firms come from, but it only focused on fulfilling the roles and responsibility instead. According to the Legitimacy concept (Suchman, 1995), the roles and responsibility of organisations come from society. Firms are the part of the social system that operates within the boundary of the society and aim to fulfil the needs and demands of the society via offering goods and service that meet the expectation of the social elements (Deegan and Blomquist, 2006; Campbell et al., 2003). Hence, CSR can be explained better with the combination of the stakeholder theory and the legitimacy theory. In the following section, I elaborate further on this.

2.3.3. Legitimacy theory

Corporations are artificial entities created in society by humans. Hence, they have to act within the norms, and values of the community where they are established and must ensure that the operations and actions they take are perceived as being legitimate. It is important that companies act sincerely in line with the social systems, they should not compromise the social norms, values, customs, belief and laws because society gives them permission/license to operate, grow and use resources and market (Magness, 2008; Campbell et al., 2003; Guthrie and Parker, 1989). The survival and continuation of a company depend on the society where the corporations are operating, and its value system is congregant to the value system of the society (Deegan, Rankin and Tobin, 2002; Lindblom, 1984).

Legitimacy theory is a positive theory that focuses on firms' relationship with the society as a whole and seeks to describe (explain) firms' behaviour rather than prescribing how they should behave (Deegan, 2006; Gray et al., 2010). According to Suchman (1995, p.574) legitimacy is "a generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions". Legitimacy focuses on whether the behaviour of a corporation is appropriate regarding social norms, values or social contract (Scherer and Palazzo, 2011). It enforces firms to balance their operation with the norms and values of the society. Firm's behaviour and their business activities must be consistent with and acceptable by the social system of which they are founded (Deegan, 2002; Dowling and Pfeffer, 1975, p. 122), consequently improves the resource supply assurance and the credibility of company activities in order to achieve their goals (Gray et al. 2010; Laan, 2008; Seti, 1975; Suchman, 1975).

Suchman (1995) states three types of legitimacy that are complementary and strengthen one another; pragmatic, moral, and cognitive. According to the practical perspective of legitimacy, people and individuals in society support organisations, not only because these are important to them in meeting individual needs, demands and interests, but also because they see companies as being responsive to their larger interest (Suchman, 1995; p.578). This view is consistent with the concept of rational self-interest underlying neoclassical economics (Deegan, 2009). Organisations could gain and maintain pragmatic legitimacy by fulfilling multiple stakeholders' demands and

expectations. This can be done via the implementation of CSR initiatives that focus on various social expectations.

According to Suchman (1995: p.582), cognitive legitimacy is the "mere acceptance of the organisation as necessary or inevitable based on some taken for granted cultural account". Society accepts any actions and behaviour of corporations if they are unavoidable or necessary to social elements. Corporate behaviour that may harm the general public and individual is neither accepted nor recognised by society. This perspective of legitimacy assumes that corporations classified as sinners, e.g. tobacco firms, are less legitimate than those in other industries such as the food industry. Hence, cognitive legitimacy is achieved if society regards corporate structures, processes, actions and behaviour as acceptable and desirable.

Moral legitimacy is the third topology, which refers to the optimistic normative investigation of corporations and their behavioural activities towards achieving their goals. It is based on the assumption that corporate activity is "the right thing to do" (Suchman, 1995: p578). Palazzo and Scherer (2006, p.73) state that moral legitimacy refers to conscious moral judgment on the organisation's output, procedures, structures, and leadership. According to this point of view, corporations can obtain legitimacy by promoting activities that support and improve social welfare. Hence, activities related to CSR play a vital role in promoting social welfare resulting in the achievement of moral legitimacy (Jamali, 2008; Wood, 1991).

Legitimacy is one of the reasons that companies are implementing socially responsible initiatives in their reporting. It is vital that corporate activities must be legitimate in the eye of the society so firms can continue growing and it is achieved by operating in line with the social norms and expectations where the firms are operating (Arvidsson, 2010). Nevertheless, legitimatizing corporate activities constantly is difficult to achieve as social norms, values, and expectations change continuously. Regular changes could result in firms' failing to legitimise their operations; a condition often referred to in the literature as Legitimacy Gap (Lindblom, 1994). There are four different strategies that businesses can use to legitimise their operations, including education and information, manipulation of perception, changing the social expectation and changing the perception of the stakeholders (Lindblom, 1994; Yongvanich and Guthrie, 2007, p160).

The use of CSR activities facilitates Lindblom's (1994) strategies for legitimisation and plays a vital role in their implementation. If legitimacy is threatened, communication and education play a significant role in the process of legitimation. Dowling and Pfeffer (1975) argue that public disclosure of information in firms' annual report can be used as a means to implement these strategies. Similarly, Gray et al., (2010) argue that corporations are actively initiating CSR activities to communicate stakeholders that firms are legitimising their operations with regards to society. CSR activities and disclosure are all part of the legitimation process that an organisation can adopt (Deegan, 2002; van der Laan, 2009).

Carroll (1979) argues that the principle of legitimacy focuses on duties, responsibilities and sanctions that exist at an institutional level and determines the scope and limitations of the business-society relationship. However, empirical studies on this argument produce mixed results. In a seminal study, Honger (1982) supports the explanation of the legitimacy concept in corporate social reporting. The author examines corporate social reporting trends in the US steel industry and the content of the disclosure. The results show increased variation in social disclosure practice over the examined

sample period concluding that change in disclosure occurs in response to the changing expectation of society towards corporate behaviour (Honger, 1982). However, Guthrie and Parker (1989) and O'Dwyer (2002) provide contradictory evidence. In detail, Guthrie and Parker (1989) examine the concept of legitimacy as a primary explanation of CSR using broad cross-sectional social and ethical disclosure data for Broken Hill Proprietary Company Ltd (BHP), an Australian mining company. Their findings suggest that legitimacy theory appears not to be a primary explanation for CSR.

Similarly, using the social disclosure of the UK firms, Campbell (2000) reviewed Marks and Spencer's social disclosure and found that its corporate social policies are motivated by the trait of the company's chairperson rather than what is predicted by the legitimacy theory. This finding is further corroborated by O'Dwyer (2002), who interviewed senior executives of large Irish companies and reports that social and environmental disclosure policies are rarely motivated by legitimacy-related factors. Hence, he contends that CSR disclosure is not always a successful legitimisation strategy.

On the contrary, numerous studies are examining the link between corporate legitimacy and CSR that report a positive relationship. For example, Deegan et al., (2002) examined the relationship between community concern for social and environmental issues and the firm's annual report disclosure and found a significant positive correlation. Companies publish positive social and environmental information in response to negative media attention (Deegan et al., 2002, p. 312). This result is also corroborated by Chu et al., (2013) who examine the factors driving companies to publish greenhouse gas report of Chinese firms. The author found that those big firms operating in an industry that produces higher-level carbon dioxide and have negative publicity, they tend to publish only neutral and good news (Chu et al., 2013, p.114).

More recently, the use of legitimacy theory in accounting research has increased significantly with the bulk of prior studies showing that corporate social responsibility is positively linked to the legitimacy (Kamal and Deegan, 2013; Mousa and Hansan, 2015; Bhattacharya, 2015). This is supported by the fact that corporate engagement with CSR initiatives has significantly increased. For example, according to KPMG (2013), the rate of corporate social reporting rate has risen substantially, with 93% of the top 250 global companies include a CSR report alongside their annual financial statements. The increasing trend in CSR reporting suggests a possible increased pressure on corporate entities to initiate CSR activities and disclose them in the annual reports (Gray et al., 2010) so as to maintain corporate legitimacy towards the society. The social pressure has now become one of the key motivating factors for pursuing CSR activities (Adams et al. 1998; Bansal and Roth, 2000; Patten, 1992; Deegan, 2002).

The legitimacy theory summarises the importance of firms' long-term relationship with society in order to sustain and thrive in a dynamic environment. It asserts that the existence of business depends on the resources they acquire from society and exchange their product and services instead. However, legitimacy concept ignores the fact that firms could face tough and steer threats from other factors such as competitors, suppliers, and substitute products which could have a detrimental effect on the firms' financial performance. Legitimacy theory does not describe or provide an alternative to what a company should do to overcome this threat. According to Porter (1980) in order to remain competitive firms must analyse external forces such power of supplier, buyer, industry rivalry, the threat of new entrant and substitute products. Competition inside as well outside the industry poses a significant threat to the survival of a firm. Companies implement the CSR initiatives in order to cope with the competition and to differentiate themselves among competitors in the industry (Porter and Kramer, 2006; Kemper et al., 2013; Flammer, 2013). Similar to stakeholder theory, Legitimacy theory focuses on maintaining a close and healthy relationship with social elements and fails to explain that companies implement CSR to cope with companies by copying their competitors. Firms' intention to pursuit CSR is better explained with the concept of the institutional theory. The institutional theory examines firms' structure and explains for having homogenous characteristics or forms in firms which are within the same field or industry (Fernando and Lawrence, 2014, p.162). Hence, companies' participation in CSR can be explained better with the combination of the stakeholder theory and the legitimacy theory and the institutional theory. In the following section, I elaborate further on institutional theory.

2.3.4. Institutional Theory

Scott (2014), defines an institution "as the symbolic and behavioural system that contains representational, constitutional and normative rules together with regulatory mechanisms. In other words, an institution is a combination of several elements and structures such as social processes, cultural perceptions, regulations and norms, that empower stability and meaning to social behaviour (Glover et al., 2015). Hillman and Keim (2001) classify the institution into two types, formal and informal. The formal institution includes rules, regulations, policies, laws, constitutions and other formal agreements which are formed and legalised by society and nations. On the other hand, informal institutions are ruled behaviour and mental models which are made by individuals through religious norms or beliefs, culture, and codes of society. At the national level, the institution consists of the socio-political, legal, and economic systems.

Institutional theory is widely used as a theoretical concept in social sciences as it helps to explain the activities and policies implemented at the corporate level. The institutional theory investigates why firms have homogeneous characteristics within specific industry/sectors. According to institutional theory, corporations as legal entities are controlled by a social framework of norms, rules, customs, values and anticipated expectations that establish socially appropriate and acceptable economic behaviour (Carpenter & Feroz, 2001). It analyses the ways in which corporations and groups obtain their place and legitimacy by complying to social regulations and norms (Glover et al., 2014). This definition is extended by Scott (2007) to include the element of adaptation in changing regulatory, cognitive and normative conditions. General macro-environmental forces such as political, social, economic, technological and legal forces affect the corporate decision to pursue legitimate practices towards multiple stakeholders. Hence, the institutional theory helps to clarify how changes in such forces influence corporate decisions to implement CSR initiatives. It analyses corporate behaviours, strategies and management practices under different institutional environments.

The institutional theory assumes that companies are homogeneous and they implement similar management structures, processes, policies, practices and structures adopted by other corporations in the same industry, irrespective of their actual effectiveness, in order to resemble other corporations in the same organisational field that face the same environmental conditions. DiMaggio and Powell (1983) characterised the process of achieving homogeneity as 'isomorphism' and introduced three mechanisms of institutional isomorphism, namely coercive, normative, and mimetic.

Coercive isomorphism is related to informal and formal pressure to adopt homogenous characteristics from external factors, such as governmental regulation,

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stakeholder pressure, shareholder influence, and political influence in the organisation. The coercive isomorphism arises from organisational dependence on powerful stakeholders and firms are coerced to implement similar practices and strategies such as corporate social responsibility practices (Deegan, 2009). This aims to maintain and strengthen existing relationships with powerful stakeholders, as most of the influential interested parties in the same organisational field usually have similar expectations. Similarly, other stakeholders such as, the government or environmental agencies could be the coercive factor that drives corporations to follow responsible practices which favour natural environment as and avoid possible sanctions on the company's operations.

On the other hand, Normative isomorphism emerges from the professional standards, morale, ethics, social obligations, and common values of particular institutional practices. DiMaggio and Powell (1983) define normative isomorphism as the collective struggle by members of organisational field or occupational group to define, control and establish a cognitive base and legitimation for their occupational autonomy (p.152). The normative isomorphism ensures corporations maintain relevant professional standards, behaviour and practices that are legitimate. Hence, it drives companies to act in a socially responsible way and develop a sustainable business practice that fulfils the expectation of its multiple stakeholders (Glover et al., 2014; Deegan, 2009). For example, to be a member of a particular CSR index, corporations have to meet certain conditions and maintain their appropriate standards regarding socially responsible behaviour (also known as ESG criteria). Hence, as per normative isomorphism, corporate managers tend to commit their resources and time consistently to gain and maintain the CSR index membership. Otherwise, any adverse changes in firms corporate social commitments, performance, standard, and conditions may threaten their continued membership in the

association. Hence, normative factors influence corporations to act in a socially responsible manner for their long-term survival and growth.

Finally, according to mimetic isomorphism, companies tend to imitate the practices, behaviour, strategies and process of other organisations due to the uncertainty and dynamism of the environment. DiMaggio and Powell (1983) argue that environmental change is one of the primary factors that drive corporations to mimic competitors' practices when responding to similar problems so as to remain competitive in their industry. Corporations which are unable to track and capitalise the benefit of the superior management processes and practices adopted by the best of their competitors may face the risk their legitimacy towards society and may lose their competitive position in the market. For example, undertaking CSR initiatives could be viewed as one of many successful methods that a corporation can implement to meet the expectations of its stakeholders and strengthen/ secure its corporate legitimacy.

The second dimension of institutional theory is decoupling. It is referred to the distinction between firms' external image and their actual practices (intentional or unintentional), procedures and structure (Moll et al., 2006; Dillard et al. 2004). It can be linked to the concept of legitimacy, where good environmental and social practices (e.g. CSR reporting) that a company implements, as a mean to improve its image in the society, may vary from their actual performance (Deegan, 2009). Institutional theory drives firms to maintain, retain and develop legitimacy by motivating them to adopt CSR practices that are linked to social norms and values. These practices are important for businesses as it helps them to respond to the uncertainty of the environmental dynamism. Theories of CSR primarily focus on the relationship between business and society. Prior literature suggests several factors that are responsible for driving companies towards implementing

CSR initiatives. The degree of these CSR practices varies in institutional level, organisational level, country level and even individual level (Dam and Scholtens 2012; Campbell, 2007; Chapple and Moon, 2005; Freeman, 2004; Johnson and Greening, 1999).

2.4. Empirical literature review on CSR-CFP relationship

Balancing the stakeholder expectation is one of the biggest challenges for any organisations that require regular commitment and management efforts. The manager should aim to address stakeholders according to their interest, power, urgency and salience (Mitchell et al., 1997) since they actively and closely monitor the corporate behaviours and events whether it is related to finance or environmental or other social agenda. Any changes in stakeholders and corporate relation may have an adverse effect on firm performance. Therefore, the company should implement CSR initiatives to respond to stakeholders' expectation and maintain the relationship.

CSR can be defined as the programs and activities that are aimed to build and strengthen the relationship between a firm's internal and external stakeholders by fulfilling their demands and expectations. Prior literature on the CSR-CFP relationship is rather mixed. Although the majority of studies suggest a positive association (Beurden and Gossling, 2008), there are a few also suggesting a negative (and neutral) relationship (Orlitizky et al., 2003; Margolish and Walsh, 2009, 2003). For example, Peloza (2009) reports that among 128 studies examining CSR-CFP association, 59% suggest a positive, 27% report neutral and 14% suggest the negative correlation between them.

Previous studies have outlined the several benefits of implementing CSR such as; reputational advantage/gain, the reduction of cost through the efficient use of resources and

improved efficiency, and reduction of risk and impact of negative events. These have a direct and indirect impact on the financial and operational performance of companies (Isaksson et al., 2014; Tarabella and Burchi, 2013; Lourenco et al., 2012; Robinson et al., 2011; Carroll and Shabana, 2010; Crane et al., 2009). One of the key advantages of investing in CSR initiatives is to build a strong relationship with stakeholders and improve the firm's reputation. Improved stakeholder management is an indicator of excellent corporate management practices (Lourenco et al., 2012; Waddock and Graves, 1997; Hillman and Keim, 2001; Barone et al., 2007, p.444). It asserts that the firm's image and brand name differentiate businesses from their counterparts leading to a competitive advantage. This is because better CSR reputation will improve stakeholders' trust, confidence, support and participation in company's operations which consequently create valuable intangible assets (Godfrey et al., 2005; Brammer and Millington, 2005; Pittula, 2000). Furthermore, stakeholders (including customer, suppliers, employees) are very sensitive to environmental and social issues. They want to be a part of (associated with) those companies which implement the environment and socially friendly business practices because they enjoy the social image and brand name (Martinez-Ferrero et al., 2016; Carmeli et al., 2006; Brammer and Millington, 2004; Russo and Fouts, 1997; Pava and Krusz, 1996; Preston and O'Bannon, 1978). Addressing stakeholders' expectation and demands through social responsible practices leads to a positive impact on consumers' trust, loyalty on firm's products, and improved overall perception towards company (Pino et al., 2016; Fishman et al., 2006; Becker-Olsen et al., 2005; McWilliams et al., 2006; Folkes and Kammins, 1999; Murray and Vogel, 1997; Fomburn and Shanely, 1990). It takes years for firms to build/create such a reputation but takes only overnight to destroy them (Asgary and Li, 2016).

Sen and Bhattacharya (2001, p.225) examine the relationship between CSR and consumer attitude and perception towards firms' products and services and report a positive correlation. The analysis suggests that a company's irresponsible and unethical activities may destroy consumer trust and loyalty, subsequently leading to a decrease in corporate revenue. This is because consumers appear to punish socially irresponsible companies by boycotting their products and services (Russell et al., 2016; Austin et al., 2006). Starbucks's tax payment case is the perfect example of consumers' boycotting the products and services. There were angry voices, protest, huge criticism against Starbucks in the UK, due to which for the first time, the company suffers 3.4% of UK sales decline (Independent, 2014). Starbucks later firm made a voluntary payment of £10 million each year in 2012 and 2013 (Guardian, 2012).

On the other hand, firms with better CSR practice in their operation increase sales through increased consumer loyalty (Pivateol et al., 2008; Bhattacharya, Korschun and Sen, 2008). Customers are also willing to pay the premium price for the products and services produced by the socially responsible companies (Du, Bhattacharya, and Sen, 2007; Austin et al., 2006, Smith, 2004). Wan et al. (2016) found that CSR company enjoys improved financial performance through increased consumer perception and loyalty towards the products and services. The demand for Fairtrade products in the UK is an excellent example of consumers' attitude and preferences to socially responsible business goods and services. A study by Smith (2003) on consumers' buying behaviour of free-range eggs in the UK suggests that although the price of the free-range eggs is much higher, its sales consist 35% of overall egg market.

Similarly, subsequent studies also provide evidence that firms' participation on philanthropic donation increases their following year sales revenue and abnormal stock return ((Lev et al., 2010; Godfrey et al., 2009; Brammer and Millington, 2009). Kaspereit (2016) argues that firms with high CSR practices less likely to encounter revenue losses due to the loss of organisational legitimacy. Therefore, companies' participation in socially responsible initiatives improves financial performance (Kang et al., 2016; Lau et al., 2016; Ortlizky et al., 2003, Dowling, 2002; Waddock and Graves, 1997).

Firm tend to implement CSR strategies in order to remain competitive among its rivals (Lau et al., 2016). Implementing CSR can also reduce corporate costs through improved operational efficiencies. Laczniak and Murphy (1991) assert that companies implementing socially responsible and ethical business practices would reduce the probability of incurring a high social cost such as fines which in turn lead to improved performance. For example, developing proactive strategies towards environmental and social compliance could prevent firms from possible fines and other cost related to damages (Hart, 2005; Berman et al., 1999; Shane and Spicer, 1983). On the other hand, the firm could save cost through the efficient use of energy and materials, waste reduction and minimisation of insurance expenses (Ambec and Laoie, 2008; Miles and Covan, 2000; Porter and Van der Linde, 1995). Similarly, the firm may benefit from lower tax schemes and financial assistance from the government to implement environmental and social responsible operating practices (Berman et al., 1999). Investment in employee welfare programs like training and development, health and safety, rewards and work environment improves efficiency through increased employee productivity, turnover, efficiency, lower absenteeism and innovation-related behaviour that strengthen firms' capabilities (Costa, 2015; Turker, 2015; Turban and Greening, 1997). Prior studies suggest that companies with high CSR engagement may attract highly-skilled employee (Martin, 2006; Backhaus et al., 2002; Turban and Greening, 2000). Nielsen (2011) global survey on CSR reports that respondents like to work for the companies contribute towards society to make a positive change. CSR also promote existing staff morale and goodwill (Waddock and Graves, 1997; Hart, 1995; McGuire et al., 1988). In a recent study, Sun and Yu (2015) document the positive relationship between CSR and employee performance. They suggest that employees in socially responsible companies generate a better operating performance compared to non-CSR firms (Sun and Yu, 2015, p. 262). This is also facilitated by a reduction in costs associated with injuries /accidents and lower risk of workers' health and safety (Aldana, 2011; Cochran, 2007; Turban and Greening, 1997).

The third benefit of implementing CSR is the reduction in the impact of negative events to corporate performance. According to Shane and Spicer (1983), the firm's commitment to CSR and its disclosure affects the general stakeholder's perceptions on the company's compliances to socially responsible issues. The disclosure of firms' improved commitment to CSR offsets the past corporate irresponsibility and also reduces the possibility of further negative impact (Kang et al., 2016). Moreover, CSR initiatives provide a way of reducing downside business risk and are an essential element in the risk management function of a firm (Husted, 2004, p.176). To that end, CSR practices (e.g. philanthropies, disclosure) are found to improve information transparency, accountability, corporate strategy (Jensen and Mecklin, 1976) as well as reduce the impact of negative events which may adversely affect firm's profitability (Heal, 2005). Any violation of the environmental and social system could destroy the reputational image and may lead to a reduction in revenues and profit² (Wei et al., 2013; William and Barrett, 2000). This is

² Most recently, Volkswagen was fined with \$10 billion (Reuter, 2016 Viewed on

^{27/06/2016)} suffering a significant drop in the sales revenue for 2015 by 4.8% to 5.82

because, although irresponsible and unethical practices imply a low cost to the firms in the short term, in the long term company will suffer significant loss (Asagry and Li, 2016). In a study by Wei et al., (2013) using accident data for 119 listed firm between 2005 and 2012, the authors investigate the impact of corporate accidents and their media coverage on stock market returns. Their results suggest a significant adverse effect of such events on the stock market performance. Therefore, implementing CSR strategies motivate managers towards proactive (forward-looking) culture and act as a contingency to such possible events in the future that can reduce corporate future cash flows (Martinez-Ferrero et al., 2016; Kang et al., 2016; Waddock and Graves, 1997).

Prior literature also suggests that CSR firms enjoy the benefit of improved credit rating because credit agencies are considering social performance in evaluating companies' creditworthiness (Jiraporn et al., 2014; Atig et al., 2013; Spicer, 1978). This is because high-CSR firms are benefitting from a cheaper source of finance and reduced cost of capital (Sharfman and Fernando, 2008; El Ghoul et al., 2011; Dhaliwal et al., 2011, Gross and Roberts, 2011; Chava, 2010).

Hence, based on the above discussion, a firm can achieve superior operating performance due to the perceived benefits of investing in CSR. Any CSR-related corporate events, behaviours, and actions convey management's capability and strength to run a business. Any favourable changes in CSR improve stakeholders' confidence towards them

million from 6.82 million cars year-on-year (BBC, 2016, viewed on 02/02/2016) due to the carbon emission scandal. Similarly, the Deepwater Horizon's oil spill costs BP Plc a total of \$18.8 billion (WSJ, 2015 Viewed on 02/03/2016) consisting mostly of fines and the bill to clean up the oil spill.

and vice versa. To retain the stakeholders' support and trust, it is necessary that a company should communicate their CSR commitment and performance on a regular basis.

One of the most efficient and widely used means of communicating the socially responsible commitment to stakeholders is the announcement of company's membership in socially responsible organisations or socially responsible stock indices (SRI) such as FTSE4Good, DJSI, Calvert Social Index. The SRI is based on a series of ESG (Environment, Social, and Governance) dimensions³. Since the first introduction of the SRI by Kinder, Liebenberg and Domini (KLD) in 1990, e.g. Domini 400 Social Index, the attraction of investors towards these socially responsible indices has increased significantly. Companies are evaluated, ranked and listed according to their performance and commitment to the environment and society. As a result of the increased popularity of socially responsible investments in recent times, new SRIs have been introduced such as the Dow Jones Sustainability Index (1999), Calvert Social Index (2000), the FTSE4Good Index Series (2001), and most recently the MSCI ESG index (2014). These indices have now become a key determinant for investors' in making allocation decisions due to their ability to incorporate relevant non-financial information on CSR performance (Elliot et al., 2014; Lopez et al., 2007; Belghitar et al., 2014; Slager, 2014; Becchitti et at., 2008; McWilliam and Siegel, 2002). A firm can obtain such membership only after meeting a certain level of socially-responsible performance over a period, while, any variation in the index configuration means a significant change in the firm's social performance. Prior studies

³ Such as employee welfare, labour practice, human rights, governance, consumer/customer issues, fair operating practices, corruption, environment, organisational management, and involvement in community development.

suggest that change announcement in the index configuration can reduce information asymmetry (Dhaliwal et al. 2014; Cho, Lee, and Pfeiffer, 2013; Healy and Palepu, 2001) as well as can affect the trust and confidence of the general public or stakeholders (employees, customer, supplier, creditors, governments) which have a direct and indirect impact on the firms' financial performance.

Past studies that examined the CSR-CFP relationship based on the SRI mainly focus on financial performance with limited attention given to the impact on accounting measures. These studies concentrate on market reaction to CSR-related information by examining changes in the stock price, stock returns and business risk (Deng, Kang, and Low, 2013; Becchetti et al., 2012; Sabbaghi and Xu, 2012; Jiao, 2010; Lee and Faff, 2009; Sharfman and Fernando, 2008; Kemf and Osthoff, 2007). Early studies suggest that the financial performance of socially responsible and ethical firms tend to be indifferent (in terms of economic and statistical significance) to that of non-SRI (ethical) benchmark firms (Kreander et al., 2005, 2002; Statman, 2000; Sauer, 1997; Gregory et al., 1997; Mallin et al., 1995; Luther et al., 1992). For example, Sauer (1997) and Statman (2000) did not find a material difference in monthly stock return between Domini 400 social index and S&P 500 companies. On the contrary, Kempf and Osthoff (2007, p.921) assert that past SRI rating is valuable information for institutional investors. They suggest that a socially responsible investing strategy leads to high abnormal returns of approximately 8.7% per year. This is also corroborated by Jiao (2010), who reports that companies focusing on addressing stakeholders' expectations tend to enjoy a higher valuation of their stock.

Studies such as those by Becchetti et al., (2012, 2009); Cheung (2011); Robinson et al. (2011); Doh et al., (2010); and, Curran and Moran (2007) examine the impact of companies' addition and deletion from those indices to stock market returns. These studies

document significant rise (fall) in the stock price/return after the entry (exit) announcement. For example, in Robinson et al., (2011), the authors suggest that the market recognises firm's entry in (exit from) SRI as valuable information since such events demonstrate company's commitments of being socially and environmentally friendly. Their finding conveys that the companies' addition to DJSI outweighs the cost and dedication associated with it (Robinson et al., 2011, p.501). Similarly, Doh et al., (2010, p.1480) find an average reduction on share price by 1.5% following an SRI deletion event. In contrast, Oberndorfer et al. (2013) argue that entry to more visible SRI index may have a larger negative impact. Their study reports a negative cumulative average abnormal return of 2% after the companies were added in the DJSI STOXX (Oberndorfer et al., 2013). Similarly, Clacher and Hagendorff (2013) suggest no significant favourable changes in the share price during the announcement of entry to an SRI; while, Lourenco et al., (2013) use DJSI addition as a sustainability reputation indicator and examine whether book value of equity and net income for those firms added in the DJSI am higher than that of their non-sustainability counterparts (from Dow Jones Global Total Stock Market Index). Their results indicate an increased net income for businesses added in the DJSI (Lourence et al., 2013, p.25.).

Other studies examine the CSR-CFP relationship using accounting-based measure such as ROA, ROE, ROS, sales growth, net income and profit-before-tax (Dam and Scholtens, 2015; Alvarez et al., 2013; Harjoto and Jo, 2011; Lee and Jhang, 2008; Ruf et al., 2001; Berman et al., 1999; Judge and Douglas, 1998; Waddock and Graves, 1997; Simerly, 1994; Dooley and Lerner, 1994; Cochran and Wood, 1984). One of the seminal studies by Cochran and Wood (1984) documents a positive relationship between operating earningsto-sales and operating-to-assets ratios with SRI ranking. This is supported by Lee and Jhang (2008), who document a similar relationship using the accounting rate of return (ARR) as a proxy for operating performance.

Lopez et al., (2007) compare the performance of companies listed in DJSI (Dow Jones Sustainable Index) as a proxy for CSR to companies listed in DJGI (Dow Jones Global Index) as non-CSR firms between 1998 and 2004. They find no differences in total assets, capital and revenues but a statistically significant difference in the profitability of the DJSI firms. As the authors argue, the DJSI firms experienced only a temporary negative impact on the profitability which may be due to the costs associated with the index membership (Lopez et al., 2007, p.298). However, a recent study by Demetriades and Auret (2014) produced mixed results by reporting that the return on capital employed (ROCE) of DJSI companies is 11.18% higher than the conventional companies, but the return on assets (ROA) of DJSI firms is 1.82% lower than that of the traditional companies (Demetriades and Auret, 2014, p.1).

However, very few studies have examined the impact of deletion and addition from SRI to the firm's accounting performance. Beccheetti et al., (2008) examine the effect of Domini Social Index 400 (DSI 400) affiliation on the firms' performance using a sample of US companies between 1990 and 2004. After controlling for size, industry, business cycle, they find that companies' affiliation to the DSI significantly reduces the returns on equity. Interestingly it reveals the existence of a positive and statistically significant effect on the net sales per employee indicator. Similarly, the exit from the index produces substantially adverse effects on the total sales per employee, return on equity, and the investment and capital employed. These findings are directly opposed to those reported by Ziegler (2011) for the Dow Jones Stoxx 600 Index. Using a balanced panel data approach for a sample of 266 European companies and 1,330 observations from the Dow Jones Stoxx 600 Index this

study reports a positive impact of CSR index addition on the firm's returns on assets. However, the impact on Tobin's Q was insignificant in statistical terms. Their study also suggests a significantly positive impact on ROA for continental European firms but not for the Anglo-Saxon European companies.

From the above review, it can be noted that the impact of the SRI on firms' financial performance is rather mixed. The inconsistency in the results could be due to the methodological and conceptual differences adopted by the various studies (Lee et al., 2009; Wartick and Cochran, 1985). The majority of these studies have used a relatively small sample size and investigate the short-term effect. Similarly, those studies comparing the performance of CSR and non-CSR firms have ignored factors such as firms' size, industry sectors, book-to-market value, business risk in the benchmark selection process although these factors could have a significant impact on the CSR-CFP relationship. For example, firms' size may convey the ability to afford the CSR initiatives. Normally, large companies have more resources available to invest in CSR project that may reduce the risk of potential fines and cost, which consequently leads to improved profitability (Clacher and Hagendoff, 2012). Therefore, consideration of such factors in the benchmark firms' selection could improve the reliability of the results.

On the other hand, the result of past studies is found to be country-specific, resulting in a lack of generalizability across other markets, geographical areas or countries. Almost all of these studies are based on a single state (the USA and the UK) or a single market (Lurenco et al., 2012; Robinson et al., 2011; Cheung, 2011), and the result could be different in different region like other emerging and developing economies because the CSR differs from country to country (Moon, 2009). There is very limited research carried out using the FTSE4Good index, mostly concentrating on market performance and within the UK domain. Hence, the investigation of the accounting-based performance of companies listed in the FTSE4Good Global Index in this study allows better investigation of the CSR-CFP relationship since it includes a widely disperse universe of stocks across different industries and geographical locations.

2.5. Chapter Conclusion

The empirical investigation on the relationship between CSR and CFP has been conducted extensively over the years and produced mixed results. Using a statistical metaanalysis (Orlitizky et al., 2003; Peloza, 2009; Wang et al., 2016) and qualitative metaanalysis (Margolis et al., 2009) all these studies report, on average, a positive relationship between CSR and CFP. Some minor inconsistency in the aforementioned results is attributed to the methodological and conceptual differences adopted by the various studies such as differences in the methodology of measuring the CSR performance, exclusion of firmsspecific factors, weak empirical analysis and stakeholder mismatching (Wartick and Cochran, 1985; Wood and Jones, 1995; McWilliams and Siegel, 2000; Lee et al., 2009). For example, prior studies have compared the financial performance of CSR against non-CSR firms in several ways such as using aggregate CSR index returns against non-CSR index return (Belighitar et al., 2004), SRI index companies against non-SRI Index companies (Lopez et al., 2007; Demetriades and Aruet, 2014). The main issue of the studies mentioned above is that they suffer from confounding effect as they ignore other corporate events occur during the study period(Becchetti et al., 2012; Cheung, 2011; Oberndorfer et al., 2013) . The confounding effect occurs when the impact of CSR on firm's financial performance is distorted by the presence of other variables (Austin, 2011; D'Agostino, 1998), such as non-CSR related corporate events such as mergers and acquisition. Shen and Chang (2009) compare CSR firms performance against their close match using propensity score matching (PSM) technique to reduce the confounding effect. Even the propensity score matching does not provide the closest matching, and therefore more reliable, in CSR-CFP investigation as both CSR and CFP varies with firms specific micro characteristics. Hence the possible comparison of the studies using alternative matching procedures may not be reliable and valid because the CSR-CFP relationship is greatly affected by such firm's micro-characteristics (Kang et al., 2016, Lee and Grewal, 2004). Hence, it is my belief, that is is essential to compare the CSR-CFP relationship using identical firm-specific matching criteria to improve the validity and reliability of the comparison.

Advocates of CSR have argued that CSR increases the firms' value in the long-term (Porter and Krammer, 2011; Jensen, 2010; Carroll and Shabana, 2010). Nonetheless, prior studies examining the CSR-CFP relationship using the socially responsible index (SRI) mostly focused on the stock return in the short-run (Becchetti et al., 2008; Doh et al., 2010; Cheung, 2011; Lourenco et al., 2012; Nakai et al., 2013; Hawn et al., 2017; Zou et al., 2019;). A handful of studies have focused on the long term stock return. For example, Robinson et al., (2011) investigated the stock return for up to 60 days and reported 2.09% increase after addition in the DJSI, whereas Kappu and Oikonomou, (2016) investigated up to 125 days and reported no material changes after the addition but significantly negative returns within 14 days after the deletion from the MSCI 400 index. Both studies may not be effective in examining the long-term return as they both used cumulative average abnormal return (CAAR) which tend to suffer from the bias of skewness, new listing, and measurement error when used long-term intervals (Ritter 1991, Lyon et al., 1999; Kothari and Warner, 2008). Instead, the buy and hold abnormal return (BAHR) is more powerful in detecting the long term-stock returns (Barber and Lyon, 1997; Kothari and Warner, 2008). Park and Lee (2018)

investigate the long-term return using BHAR; their study is limited to a small sample size from Japan. They reported a positive and statistically significant return of 33.80% within three years after the addition in the CSR index. In fact, such changes in the stock price may not only driven by the CSR but could be due to other positive corporate events that could happen in three years span. In most of those studies, there is no clear indication of how the authors have controlled for such events. Furthermore, prior studies have not taken into account the possibility of possible investment arbitrage opportunities created by CSR. Specifically, literature shows the impact of the announcement of CSR related disclosure to the abnormal share price return in the short-run (Zou et al., 2019; Park and Lee, 2018; Kappu and Oikonomou, 2016; Cheung, 2011; Doh et al., 2010). Studies have compared the performance prior and post of an event in both positive and negative CSR news. It is interesting to know whether the CSR-index addition and deletion announcement can create an arbitrage opportunity for investors in the equity markets over the long term. The impact of the social index effect on firms' long-term stock returns across the countries is yet to be examined. My study fills the gap in the literature.

Similarly, as discussed previously, studies on the index effect primarily focus on stock market returns. However, the examination of the CSR index effect (firms' additions and deletions) on their operating performance is rather seldom. Prior studies that have examined the impact of CSR index addition and deletion on firms' long term operating performance are mostly using limited samples (Kappu and Oikonomou, 2016; Beccheetti et al., 2008; Ziegler, 2012). Becchetti et al., (2008) report an increased net sales per employee but a reduction on the ROE after the addition of a firm in the DSI 400. Ziegler (2012) report an increased ROA after firms' addition in the DJ Stoxx 600 index. Whereas, Kappu and Oikonomou (2016) do not document any material changes in earning per share

(EPS) after the addition but show that EPS deteriorates after a firms' deletion. The results of the aforementioned studies are mixed and primarily based on US data. Since operating performance is vital for firms as it plays a significant role in financial and especially investment decision-making, it is important to examine the impact of firms' addition and deletion from an SRI (socially responsible index) to firms' operating performance using a broader sample and by covering a wider geographical area.

Prior studies demonstrate that CSR implementation varies across industry sectors (Hart, 1995; Brammer and Millington, 2003; Barnett, 2007; Sweeney and Coughlan, 2008). Such studies investigate CSR-CFP link using an aggregate sample and tend to control for industry and year fixed effects (Barnett and Salomon, 2012; Gregory, Whittaker and Yan, 2010; Qui et al., 2016; Chen et al., 2018; Hawn et al., 2018; Siueia et al., 2019). However, very limited studies have investigated CSR-CFP heterogeneity among the industry sectors (Hoepner and Yu, 2010; Omar and Zallom, 2016; Feng et al., 2017). For example, Omar and Zallom (2016) investigate CSR-CFP among three different industries. Similarly, a most recent study by Feng et al., (2017) investigate the CSR-CFP relationship among ten different sectors and report a positive association between CSR and CFP in most but not all of them. Both studies are based on a single country data where the former uses 26 companies from Jordan, and the latter uses 1,877 firms across 10 industry from the US. The results from these studies are inconsistent, forcing the authors to ask for an extension to their study that can cover more industries from different samples and from a wider geographical coverage. To that end, it is important to explore possible positive, negative and neutral relationships between CSR and CFP across different industries.

Further, one of the issue CSR-CFP literature is the measurement of the CSR performance. Studies have used several measures of CSR; for example, Peloza (2009) reports 39 different types of CSR measures used in CSR-CFP studies over the years. Among them, 18% use pollution and environmental, 16% use health and safety measures, 12% use awards and audit by a third party, 9% use the KLD index, and 9% use the Fortun magazine ranking. Similalry, Lu et al., (2014) review prior empirical papers on CSR-CFP relationship between 2002 and 2011 and found that around 17% use CSR disclosure, 41% use reputational rating, 10% use environmental and social audits reports performance, and rest use other defined measurements. In recent years, studies are using CSR index addition/deletion as a proxy of CSR performance and are mostly focusing on the US-based indices.

Studies from emerging markets have used either individually-constructed CSR indices or score or content analysis as these countries lack reporting requirement regulations and information intermediaries (Adams, 2004; Kelley et al., 2018; Siueia et al., 2019). Also, studies using such CSR measures possibly suffer from the researchers' own bias and lack of experience in coding and marking relevant CSR performance. Also, incompatibility of alternative individually-constructed CSR indices is a major area of concern. To overcome such issues on CSR-CFP investigation for emerging markets, this study utilises a holistic approach using CSR ratings obtained from a single source, a specialised agency such as the FTSE.

Further, companies from the emerging market have cross-listed in the foreign stock market. Cross-listed firms need to adapt/implement CSR to legitimise themselves with the capital market of the host country (Bell et al., 2012). Prior studies reported the positive impact of cross-listing on the CSR (Bell et al., 2012; Boubakri et al., 2016). For

example, Del Bosco, and Misani (2015), who report firms' ESG performance is improved significantly after firms are cross-listed. Boubakri et al. (2016) corroborate the finding of, Del Bosco, and Misani (2015), find a positive relationship between cross-listing improves firms CSR performance using 10,815 observation from 54 countries between 2002 and 2011. Cross-listing in the foreign country stock market significantly improves firms CSR performance and therefore improve financial performance. However, to the best of my knowledge, the moderating impact of cross-listing on the CSR-CFP relationship is yet to be examined. My study fills this gap in the literature.

Of the limitations in the CSR-CFP literature so far, the result of past studies is also found to be country-specific, resulting in a lack of generalizability across other markets, geographical areas or countries. Almost all of these studies are based on a single state (the USA) or a single market (Lurenco et al., 2012; Robinson et al., 2011; Cheung, 2011), and the result could be different in different region like other emerging and developing economies because the CSR differs from country to country (Moon, 2009). There is very limited research carried out using the FTSE4Good index mostly concentrating on market performance and within the UK domain (using FTSE4Good UK index). Hence, the investigation of the financial performance of companies listed in the FTSE4Good Global Index in this study allows better investigation of the CSR-CFP relationship since it includes a widely disperse universe of stocks across different industries and geographical locations.

Chapter 3. Research Methodology

This chapter provides an overview of the approach and methods adopted in this study. It begins with a brief explanation of my underlying research philosophy, approach, methods and their rationale for choosing them in section 3.1. In section 3.2, I introduce the research design, which includes sample and data selection procedures as well as dependent, independent and control variables. The adopted theoretical framework is explained in section 3.3.

3.1. Research Philosophy

Research philosophy is defined as the system of beliefs and assumptions in which researchers see the world in the process of developing knowledge (Saunders, Lewis, and Thornhill, 2016). In the current thesis, I view the relationships between social entities and business as real; these relationships are observable in the same way as a physical object or a natural phenomenon. Social entities are the group of individuals, organisations, and elements formed together for social reasons, while business is an organisation that produces good and services to fulfil the needs and demands of these social entities. As such, transactions exist between these entities, where one exchanges the goods and services against their value and so on. Consistent with the concept of stakeholder theory (Freeman, 1984), one is affected by or affects another. Therefore, this current study assumes a causal relationship between these two elements, a social entity (as CSR) and business (as CFP). This relationship can be investigated objectively through the development of a hypothesis where I can expect a positive impact of CSR on firms' financial performance. On this basis, I can argue that this study follows a positivist research philosophy. Positivism relates to the scientific belief that the world can be measured objectively by using appropriate methods (Thorpe et al., 2002, p28). It indicates to 'what is posited/given' (Saunders, Lewis, and Thornhill, 2016, p136.) or 'objective accounts of the real world can be given' (Denzin and Lincoln, 2005, p.27). It concentrates on the use of scientific methods where the result from the empirical analysis of data and information are objective and unbiased. Positivism is a philosophy that refers to the notion that knowledge is valid if it is measurable and observable. It also involves the quantitative aspect and uses surveys, experiments and statistical tools in order to examine or test the hypothesis using empirical data (Neuman, 2000). It, therefore, reflects the adoption of the 'falsification' approach introduced by Karl Proper (1959), which means the inherent possibility that the testability of any scientific hypothesis can be proved as false. Karl (1959, p.95) asserts that any statement to be a scientific hypothesis must be falsifiable and subject to critical investigation. Selecting the positivism approach does not aim to prove something is wrong/false; rather, it focuses on establishing the truth. In this study, selecting the aforementioned research philosophy appear to be most appropriate as I have the following conditions:

- The current research used the existing theory to develop a hypothesis and aimed to confirm either a part of it or as a whole. It is assumed that the CSR is a mechanism to improve/increase firm's financial/operating performance, which is represented in the hypothesis that I am going to test,
- assume the causal relationship between the CSR and CFP.
- The researcher attempts to remain impartial and detached from the research and data, and
- Utilise a methodology that is well structured and well-defined.

Furthermore, one of the aims of my research is to create and contribute to the knowledge, especially in the field of CSR-CFP relationship, which is consistent with the epistemological standpoint. Spender (1998) asserts that "epistemology is the division of philosophy that studies the origin and nature of knowledge" (p.1). It contains assumption related to the knowledge of a researcher; his/her methods of communication; and validity, acceptability or legitimate of the knowledge (Saunders, Lewis, and Thornhill, 2016; Burrell and Morgan, 1979)⁴. On the basis of epistemological assumptions, I conduct the scientific investigation regarding the impact of CSR on the firm's financial and operating performance, where data and information are to be collected, sorted and analysed in order to answer the research questions and test the set hypotheses. Hence, I adopt a positivistic epistemological philosophy because I focus on finding measurable and observable results and try to generate knowledge that can be meaningful and credible. Further, all result and conclusions deriving from the use of a positivistic approach can be viewed more reliable and allow generalisation of the findings (Ryan, 2015; Babones 2016; Heckman, 2005; Collis and Hussey, 2003; Kuhn, 1977). Therefore, I use this approach to analyse firms' commitment to CSR and the impact of the latter on their financial and operating performance.

3.1.1. Deductive and Inductive research

The literature has identified two widely used research approaches in the scientific study; deductive and inductive research approach. In the deductive approach, the

⁴ Oxford dictionary defines epistemology as "The theory of knowledge, especially with regard to its methods, validity, and scope, and the distinction between justified belief and opinion" (http://www.oxforddictionaries.com/definition/english/epistemology).

conclusion is derived logically from a set of premises with the conclusion being true when all the premises are true (Saunders et al., 2016, p.144). All underlying assumptions/premises derive from existing academic theories and prior literature. According to figure 3.1, the deductive approach begins with reviewing the relevant academic literature and theories on the subject matter. Researcher develops the hypothesis on and expresses in the operational term. Subsequently, the researcher collects, sort, analyse and evaluate all relevant data and information from various sources leading to the test of these premises or hypotheses. Following the empirical examination, the researcher draws appropriate conclusions about the original premises. Hence, the deductive approach involves testing the existing theory and deriving conclusions that can either confirm or refute the set hypotheses (Bryman, 2004, p.8).

Figure 3. 1 Deductive Research Process (Sekaran, 1992)

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The aforementioned approach is fundamentally opposed to that of the inductive which develops the theoretical propositions, often in the form of the conceptual framework (Saunders et al., 2016; Ketokivi and Mantere, 2010). In this latter approach, the researcher tries to understand the nature of the problem and then collects data and information. On the basis of the data and empirical analysis, the general principles and theories on a specific subject are then developed (Saunders et al., 2016; Traford and Leshem, 2008). It is also commonly known as the 'bottom-up approach' as it begins with the observation of the specific data and leads to theory development. The validity of the result is high in inductive approach, but the reliability is very low because the overall interpretations are motivated from particular events (sample-specific) (Trafford and Leshem, 2008; Heckman, 2005). The main weakness of inductive research approach is that results might not be generalisable due to the lack of repeating the research on similar conditions (Heckman, 2005).

As the primary aim of this study is to test the relationship between CSR and financial/operating performance of the firm, I am investigating the impact of CSR on the financial/operating performance of a company with the expectation of deriving a positive relationship between them. The research questions and the testable hypotheses of this study are already established theoretical propositions, e.g. the concept of stakeholder theory, stating that firms must fulfil their stakeholders' demand and expectation since the latter play significant role in firms' survival and growth (Arvidson, 2010; Freeman, 1984). Addressing social/stakeholders' issues through CSR initiatives help firms to remain competitive in the industry (Lau et al., 2016; Porter and Krammer, 2006; McWilliams and Siegel, 2000; Waddock and Graves, 1997). Corporate commitment towards social interest results in increased reputation that consequently leads to (i) improve sales through increased customer loyalty (Wan et al., 2016; Sen and Bhattacharya, 2012); (ii) improved productivity and cost reduction through retaining or attracting highly skilled employee and improved innovation (Kang et al., 2016; Greening and Turban, 2002) and (iii) reduce the risk (Cassimaon et al., 2016; Kang et al., 2016;

Godfrey et al., 2008; Barnett and Solomon, 2008). These benefits consequently lead to increased profitability overall. This is consistent with the argument of the instrumental stakeholder theory, where CSR is assumed to be an instrument used to improve the profitability of a firm (Jones, 1995). Therefore, the choice of selecting a deductive approach is the most appropriate in this case.

3.1.2. Research Methodology

In order to attain research aims and objectives, there are two broad methodological choices available in scientific research under the deductive approach; i.e. qualitative and quantitative methods. Qualitative research is a method of gathering and analysing data and information using formal and informal techniques. Under this method, the researcher may not know the variables in advance but has a rough idea of the issues or problems. It involves exploration and interpretation of non-numerical data and information such as perceptions, opinions and behaviour of a sample of individuals (Cooper and Shindler, 2003). This type of methodology facilitates the understandings of the problem investigated by focusing on exploring the depth of the values, behaviour, the attitude of individuals or phenomenon. It is, therefore, subjective as individual interpretations and perceptions regarding social reality might differ and may involve a high possibility of bias. In this method, data and information are presented in a non-numeric format and no use of statistical assessment tools. This means that the reliability of finding/result can be very low, although even if they can be highly valid. Similarly, this type of research methods is not repeatable due to the difficulty in setting the same research condition and environment, while the research problem may have reformulated during the study. Hence, result and conclusions from a study utilising qualitative research methods might not be

able to be generalised. This is also supported by Bryman (2004), who asserts that qualitative research is inductive by nature since it focuses on the development of theories (p.20).

By contrast, quantitative research methods involve the collection, analysis and exploration of numerical data and information to investigate the relationship between variables through statistical analysis tools (Denzin and Lincon, 2000). It is often considered an objective approach in which the researcher clearly defines the variables before collecting the data and analysing them. The research problems are deductively well-structured and do not change during the study. Moreover, structured and formal methods are used to gather the data and information from statistically representative samples of the target population (Cooper and Schindler, 2003). Also, researchers normally tend to remain objectively detached to the subject aiming to conduct the investigation in an unbiased manner. Hence, the conclusion derived from quantitative research could be highly significant in the statistical term. If research variables are identical and any focus of empirical testing is repeated/conducted under similar condition, then there should be the same findings and conclusions.

Bryman (2004) states that the selection of the research methodology should be based on the suitability as regards the research questions (p.38). Also, the research paradigm tends to drive towards the choice of specific research methods. In the current research, I am adopting positivistic, which assumes that reality is an objective fact. The knowledge of reality is measurable and observable. Having adopted this philosophy, my study follows the deductive approach of research, empirically investigating the relationship between two variables, i.e. the CSR and financial performance.

3.2. Research Design

3.2.1. Sample and Data Selection

This study examines the impact of CSR on firms' financial performance. All financial measures are examined with regards to change in firms' stock price and their operating performance. In order to select an appropriate sample of CSR companies, the author reviewed several alternatives social responsibility benchmarks; such as Global Reporting Initiative (GRI), Dow and Jones sustainability index (DJSI), Morgan Stanley Composite Global Socially Responsible Index (MSCI Global SRI), Calvert Social Index (CSI), Business in the Community (BITC) CSR index and of course the Financial Times socially responsible index (FTSE4Good index), etc.

Prior studies have conducted the investigation using only a small sample from specific countries or markets such as those of Corderio and Tewari (2015); Oberndorfer et al., (2013), Robionson et al., (2012); Cheung (2011). In this study, I am focusing on covering as many companies as possible from a wider sample of cross country data. To do so, I contacted these indices and requested for the constituent list of their indices as the constituent lists are not currently publicly available. Once I gather the constituent list, I extracted the static information through Thomson Reuters DataStream database. After reviewing all data information, two alternatives were selected, which can cover a wide geographical area that is the MSCI Global CSR index and the FTSE4Good index. Among these two, FTSE4Good covers companies from a relatively wider geographical area. The final decision was not solely based on the geographical coverage, the author also considered carefully regarding the availability of further information such as membership criteria, methodology and most importantly the disclosure of changes in the index (addition and deletion). Fortunately, such information is publicly and easily available

from FTSE4Good as they are released on their website. The rating scores of each company are not available and also not comparable due to recent amendment/changes in the FTSE methodology. Therefore, this study uses index membership changes (i.e. addition and deletion) as a proxy of the CSR performance. All data and information related to the FTSE4Good are extracted from FTSE, regulatory news service (RNS), and Investigate website.

The FTSE4Good Global index consist of companies from 32 countries (Australia, Austria, Belgium, Bermuda, Canada, Denmark,Finland, France, Germany, Greece, HongKong, Ireland, Israel, Italy, Japan, Jersey, Luxembourg, Malaysia, Netherlands, New Zealand, Norway, Panama, Papua New Guinea, Portugal, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, UK and USA) added between 2001 and 2015. I have deleted Panama, Papua New Guinea, and Jersey. due to very limited data availability. Also, although FTSE4Good was established in July 2001, data are only available from March 2002 onwards. Hence, my investigation covers the full period between March 2002 and December 2015.

Countries	32
Industries Sectors	40
Total number of constituents in FTSE4Good Global	
Index (as of 31 March 2016)	791
Total Inclusions	956
Total Exclusions	532
Number of benchmark companies	27167

Table 3. 1 Initial sample description

According to Table 3.1 presents the initial sample description, the total number of constituents in the FTSE4Good Global Index is 791 (at the end of trading on 31 March

2016). Between March 2002 and December 2015, there are 956 additions and 532 deletions. The addition in the index reflects higher performance in CSR metrics and the firm's increased focus towards its numerous stakeholders.

To examine the impact of CSR on operating performance, this study used only 819 additions form an initial total of 956 additions. This is because 137 companies were added multiple times within the three-year period. Similarly, some companies are deleted from the index primarily due to the lower score in CSR metrics. Among 532 deletions, I only use 462 records as these deletions are only due to the inability of these firms to meet the CSR addition criteria (are valid CSR reason) or scoring/rating below the threshold point, which means the lower CSR performance. The rest of these records are deleted as these firms have been dropped from the index due to different reasons such as them been merged or acquired (M&As activities). I also remove those companies that have been deleted multiple times over the post-event measurement period (Kothari and Warner, 2008; McWilliams and Siegel, 1997; Fama and French, 1969). Moreover, the total deleted sample also contains all firms that are already bankrupt/liquidated. The total number of companies that are dead (bankrupt/liquidated) and deleted between July 2001 and June 2018 are 127. Hence, in this study, there is neither look ahead bias nor survivorship bias, given that I have the entire statistical universe of stocks/firms that have been included in this index. Theoretically, my approach in data collection and data inclusion is in line with prior research which focuses in the elimination of possible survivorship bias (Gilbert and Strugnell, 2010; Carpenter and Lynch, 1999; Elton et al., 1996).

Further, to compare the operating performance of CSR companies against non-CSR companies, the current study also uses benchmark companies portfolio (termed as non-FTSE4Good companies) from 40 different industry sectors across 26 countries. The

benchmark portfolio is based on the matching criteria such as (i) same industry, (ii) same momentum decile portfolio, (iii) same B/M decile portfolio, (iv) similar size decile portfolio, (v) industry and size (two dimensional), and industry and B/M (two dimensional). The details of the sample sizes are explained in individual empirical chapters later in this thesis. The initial list of companies added and deleted in the FTSE4Good Global index between the beginning of March 2002 and the end of December 2015 are presented in Table 3.2.

All financial and accounting data for both the FTSE4Good and benchmark (non-FTSE4Good) companies are obtained from Thomson Reuters Datastream. The selected data set covers the period between January 1995 and December 2015. To be added in the sample, both FTSE4Good and non-FTSE4Good, companies must have monthly data available for at least three years before their index addition and three years after their deletion date.

Year	Month	Additions	Deletions
2015	December	48	36
	September	0	12
	June	34	0
	March	0	8
2014	September	43	3
	March	7	9
2013	September	29	2
	March	16	27
2012	September	19	6
	March	24	12
2011	December	0	4
	September	21	15
	March	68	5
2010	December	0	1
	September	14	18
	March	20	6
2009	December	0	4
	September	24	27
	March	12	17
2008	December	0	8
	September	23	34
	March	37	16
2007	December	0	3
	September	20	31
	March	15	16
2006	December	0	2
	September	20	13
	March	31	22
2005	December	0	3
	Oct-18	0	7
	Sep-22	0	2
	September	30	20
	March	70	22
2004	December	0	3
	September	63	11
	March	62	29
	May	1	0
2003	September	57	39
	June	0	5
	March	37	5
2002	December	0	11
	September	50	14
	March	61	4
	Total	956	532

Table 3. 2 Initial addition to and deletion from the FTSE4Good Global index between March 2002 and December 2015.

3.2.2. Proxies for Operating and Financial Performance

Prior studies examining the CSR-CFP relationship are categorised into three broad categories on the basis of the measurement of firms' performance: (i) the accounting approach, (ii) the market-based and (iii) the perceptual one (Ortilizky et al., 2003; Margolis et al., 2009; Lu et al., 2014; Wang et al., 2015). Market-based measurement is dominant in examining the impact of CSR on firms' performance. The stock return is becoming a popular measure of firms' financial performance due to a number of reasons such as information availability, reliability, comparability. This approach is based on the premise that the efficient market hypothesis holds; hence, any event can act as a signal in the market of future performance. Hence, if the market is efficient, the current price of stock should fully reflects all firms' announcements instantly (Fama, 1969, Brown and Reilly, 2009), including CSR event/announcements (Doh et al., 2010; Robinson et al., 2011; Cheung et al., 2011; Curran and Moran, 2011; Lyon and Shymshack, 2015; Corderio and Tewari, 2015). Similarly, membership on the FTSE4Good Global index can signal good CSR practices through regular participation and investment, leading to improved stakeholder confidence and improved financial performance for such firms.

Since a market-based study only covers short-term changes in the share price, the use of accounting-based measures is also widely adopted. The most popular measures include return on assets (ROA) (Santoso and Felina, 2014; Barnett and Soloman, 2012; Ruangvist et al., 2014; Demetriades and Auret, 2014; Belu and Manescu, 2011), return on equity (ROE) (Sabbaghi and Xu, 2013; Chen, Feldmann and Tang, 2015; Gracia-Castro and Arino, 2014), net profit margin, and sales growth (Chen, Feldmann and Tang, 2015, Becchetti et al., 2009), etc. One of the key advantages of using accounting-based measurements is its ability to explore the possible long-term effects of CSR implementation.

The third category, the perceptual metric, is the qualitative approach of measuring the financial performance using internal and external ranking such as the Fortune Magazine ranking, Newsweek Green ranking. In this study, I am not using the perceptual metric. Instead, I will examine the performance impact of the FTSE4Good index ranking score.

Peloza (2009) reports that 70% of the studies are using accounting-based measures and 53% use market-based measure (p.1524). He also finds that 80% of past studies used a single measure of financial performance and recommended the use of multiple broad measures of firms' performance in order to quantify the impact of CSR effectively. Following Peloza (2009), this study uses the multiple metrics of CFP such as cost-based, revenue-based, and integrative measures.

Prior literature also suggests that several accounting-based indicators have been used to measure the performance of the companies (Margolis et al. et al., 2009; Peloza, 2009). Among them, most of the studies examining the CSR and CFP relationship focuses on financial metrics that includes tax, interest, and depreciation. However, since different countries have different accounting policies, account closure terms and financial structures, the computation of depreciation, income tax, and interest, etc. may vary and indeed, could affect/distort the actual effect of CSR on such performance (Powell and Stark, 2005; Carlin et al., 2009). Hence, in the current study, I use numerous operating performance metrics in order to investigate the actual effect of CSR on corporate performance. The operating performance metrics neither reflect tax nor interest nor depreciation. Also, the tax status, financial/capital structure of the firm and the accounting policy do not affect such measures (Carline et al., 2009). Moreover, the operating performance measures represent the economic benefit generated by the firm (McLaughlin et al., 1996, p.44) reflecting firms' operational effectiveness, efficiency, and productivity. Further, I also use the short-term, long term stock return, Tobin's Q, and ROA. The selection of financial and operating measures are presented in Table 3.3;

Investigation		Financial Measures	Study Method	Thesis Chapter
Impact of CSR on the firms operating performance.	1.	Operating Profit Margin	Event Study	
	2.	Operating cash flow per sales	(Barber and Lyon Model, 1997)	
	3.	Current ratio		4
	4.	Working capital growth		
	5.	Total debt to total capital		
	6.	Return in invested capital		
Lucres of a CCD and the	7.	Stock return	Event Study	
Impact of CSR on the firms' stock return (short-			CAAR- Short-term	5
term and long-term).		Stock Ictum	Event Study	5
			BHAR- Long-term	
Heterogeneousness in CSR-CFP relationship		Tobin's Q	Regression models (OLS, 2SLS,	6
among the industry.	10	. ROA	GMM)	-

Table 3. 3 Proxies for operating and financial performance.

All relevant accounting and financial data for sample firms are obtained from

Thomson's DataStream. The relevant World-scope database codes are presented as follows;

• Stock return: It is an adjusted price of the stock on the relevant date and denoted by data type *P* in the DataStream. These prices are already adjusted for subsequent capital gains.

The return on the share price is calculated as follows;

$$R_{it} = ln \left[\frac{P_{it} + d_{it}}{P_{it-1}} \right]$$
(3.1)

where ln is the logarithmic function, is the share price return of stock i at time t, is the share price of stock i at time t, is the dividend payment of stock i at time t and is the share price of stock i at time t-1.

• The operating profit margin: Operating profit margin is defined as the operating profit (EBIT) relative to Net Sales reported by the company in a year. The operating profit

is defined as the firm's income before interest tax and depreciation (WC18191). Barber and Lyon (1996) argued that EBIT is a cleaner measure firms operating performance and represent economic benefit generated by as a company. The addition of tax, interest and other special items in the measuring the performance can obscure the operating performance (McLaughlin et al., 1996).

- Operating cash flow per sales: The operating cash flow per sales is the ratio of operating cash divided by the net sales/revenue, which measures a firms' liquidity position generated per sales. The operating cash flow is a measurement of cash received by a firm from its normal operating activities. It indicates firms' ability to generate cash to continue its operation.
- Current ratio: Current ratio is a measure of firms' ability to meet their short term and long-term obligations. It is used to assess whether the firms' have enough cash and cash equivalents and currents assets, or the ability to generate them to be able to pay their debts as they fall due. It is calculated as firms' current assets divided by current liabilities.
- Working capital growth: Working capital growth is the changes in the firms' liquidity and solvency position over the year. Working capital is the difference between firms' current assets and their current liabilities. If the current assets of firms do not exceed current liabilities, it reflects firms' difficulty in paying their creditors, lenders and the possibility to become bankrupt.
- Total debt to the total capital ratio: Total debt to total capital ratios, also known as gearing ratio that measures the financial leverage of a firm. It reflects a proportion of debt and owner's equity used by a firm to fund its operation. Normally, high gearing

ratio indicates high financial leverage, which does not necessarily mean the poor financial position of a firm.

- Return on invested capital (ROIC): Return on invested capital is the measure of firms' profitability and their ability to generate a profit from their capital. It indicates how effectively a firm is utilising its capital to generate a profit. It is calculated as net income after tax divided by the total capital.
- Tobin's Q: Tobin's Q is a ratio of the market value of a firm and the book value of its assets (the replacement cost of assets). It measures a firm's assets in relation to the market value of its shares and total liabilities. The Tobin's Q between 0 and 1 implies that the replacement cost of a firm's assets is much higher than the market value of a company, and it is the indication that market value of a company's stock is undervalued. On the other hand, Tobin's Q above 1, indicates a firm's stock is overvalued compared to its book of assets.
- Return on Assets (ROA): ROA is a financial ratio which measures the proportion of profit a firm earns in relations to its resources (measured as total assets). The ROA is calculated as net income divided by total assets of a firm.

3.2.3 CSR performance (Independent variable)

As discussed in chapter 2 of this thesis, studies in the past have used several measures of CSR performance. Margolis et al., (2009) argued that the corporate social performance could be measured as the multidimensional construct (economic, legal, ethical and discretionary) (Carroll 1979; Wood, 1991) or a function of how companies' treat their stakeholders (Clarkson 1995, Campbell, 2007). The corporate social responsibility is often termed as socially responsible behaviour or corporate social performance and often used as interchangeable in the empirical studies (Margolis et al., 2009, p.8). Although prior research is extensive, there is no unanimous agreement on the use of a single metric for capturing firms' CSR performance. Moreover, the choice of CSR measurement depends on the underlying research discipline. A review of 159 studies between 1972 and 2008 by Peloza (2009) reveals 39 unique measures of CSR. Among them, 18% of studies use pollution control or output; 16% use environmental, health and safety investment; 12% used thirdparty audit. The use of the KLD index and Fortune magazine ranking consist of 9%. These measurements are divided into two categories (Margolis et al., 2009), i.e. specific dimension and broad category. The former approach includes companies' policies, their disclosures, corporate performance on environmental issues, firms' philanthropic commitments and donations, and related misdeeds, offences etc. On the other hand, self-reported social performance, observers' perceptions, third-party audit, and screened mutual funds are added in the latter category, i.e. broad categories. In this study, I use the so-called 'third party audit' approach, which involves the systematic investigation of the data and information of the companies in different CSR dimensions. Some popular 'third-party audit' includes data from sources like the Kinder Liebenberg Domini (KLD), Dow Jones Sustainability Index, FTSE4Good Index, Calvert social index, etc. These indices periodically include and exclude firms on the basis of changes in their rating and ranking obtained.

3.2.3.1. The FTSE4Good Index Additions, Deletions and ESG rating as a proxy of CSR performance

In this study, I empirically investigate the impact of addition and deletion from the FTSE4Good Global index on firms' financial performance. Addition in the FTSE4Good Global Index is considered as a proxy for corporate commitment to the social agenda, and

it is in line with prior studies in the field (Belghitar et al., 2014; Clacer & Hagendroff, 2012;

Robinson et al., 2011; Cheung, 2011; Collison et al., 2008).

Figure 3. 2 The FTSE ESG rating model. (Methodology overview FTSE Russell, 2016, p.4.)

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The FTSE4Good Global Index includes a list of global companies that demonstrate high environmental, social and governance practices and has been one of the leading indices in ESG criteria. It was established in 2001, with objectives of promoting higher corporate social responsibility practice among corporations, providing stakeholders (including investors) appropriate means of identifying firms that are highly committed in CSR issues (environmental, social and governance). Most importantly, it aims to provide a comprehensive tool for examining/tracking CSR investment and benchmarking portfolios. It initially consists of five sub-index such as FTSE4Good Europe index, FTSE4Good Japan index, FTSE4Good UK index, FTSE4Good US index, and FTSE4Good developed index (previously known as FTSE4Good Global index). FTSE recently expanded the FTSE4Good

index and introduced new series such as FTSE4Good Emerging index, FTSE4Good Bursa Malaysia Index, FTSE4Good ASEAN 5 Index, FTSE4Good Latin America Market index, FTSE4Good Australia 30 index, etc. The FTSE4Good index series are now covering the major geographical regions: UK, Europe, US and emerging market in Asia and Latin America (FTSE4, 2019).

The FTSE4Good framework is aligned with the UN sustainable development goals (SDGs). In fact, FTSE helps in developing the UN Principle for Responsible Investment (PRI) and becomes a founding signatory (FTSE, 2016). The FTSE4Good policy committee initially work together with external parties that are specialised in the CSR performance management assessment such as Expert in Responsible Investment Solutions (EIRIS) and its network partners, including Fundacion Ecologia y Desarrollo (EcoDEs) Spain, Corporate Analysis Enhanced Responsibility (CAER) Australia, Institure fuer Markt-Umwelt-Gesellschaft (imug) Germany, Ecovalores Mexico, Greeneye Israel, Korea CSR Research Service (KOSSR) Korea, Economistats sin Fronteras Spain. The FTSE4Good is committed to provide a comprehensive assessment and are aiming towards standard harmonization globally which are drawn from over 40 leading global frameworks such as Global Reporting Standard (GRI), the OECD Guidelines, Carbon Disclosure Project (CDP), the Transparency International's Business Principles for Countering Bribery, the Greenhouse Gas (GHG) Protocol (FTSE, 2016).

In order to qualify for the index membership/addition, companies must be in either the FTSE All-World index or FTSE Developed Index (Global). In addition, companies must be working towards environmental sustainability, upholding supporting universal human rights, developing a positive relationship with stakeholders, ensuring excellent supply chain labour standards and countering bribery (FTSE, 2019). However, companies that are

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operating wholly or partly in sectors that involve producing either tobacco, coal, weapons (including nuclear), investment trusts and even firms that are involving in the marketing of breastmilk substitute are screened out.

Over the past decade, the FTSE4Good methodologies and additional criteria have been updated comprehensively. The most recent and updated model of FTSE ESG rating contains over 300 indicators and 14 different CSR themes under three pillars presented in Figure 3.2. The criteria include climate change, water use, biodiversity, pollution and resources, health and safety, labour standards, human rights and community, customer responsibility, supply chain, anti-corruption, tax transparency, risk management, and corporate governance (FTSE Russell, 2016).⁵ Due to continuous improvement in the addition criteria over the years, FTSE4Good have contested firms to invest significantly in CSR so that they can get listed, or risk of losing membership (FTSE, 2016).

An independent committee of FTSE4Good examines the socially responsible practices of the company through data and information that are publicly available or collected through companies' websites, annual report, questionnaire, and liaising with the managers from the companies. Further, to ensure accuracy in the information, they have extensive correspondence with the stakeholders/parties that are linked directly or indirectly with companies. Based on the above-mentioned information, they score and rate companies between 0 and 5, where 5 is the highest rating representing CSR compliance and 0 for the lowest performer or no disclosure. For the FTSE4Good global index, a company with an

www.ftserussell.com

⁵ Please see the Index Addition Rules that were updated in September 2014. Source:

Index Addition Rules for the FTSE4Good Index Series v3.5, July 2019,

average FTSE ESG rating of 3.1 or above, is added to the FTSE4Good global index, subject to the additional requirement.⁶ On the contrary, any company rated below 3.1 is classified as "in the risk of deletion" from the FTSE4Good index (FTSE, 2019, p.12.). On the other hand, companies from emerging market require a rating score of 2.5 or above to get listed in the FTSE4Good emerging index and companies scoring below 2.5 are a risk of deletion (FTSE, 2019, p.12.). The FTSE4Good index reviews its constituents twice in a year and provides other information such as changes in the system and changes in the criteria for addition and deletion.

In summary, in this study, I consider the FTSE4Good index series and its rating as the most appropriate CSR for several reasons. The CSR performance (rating or addition and deletion) are determined objectively on the basis of a wider range of criteria that are set externally. Firms are assessed for three main pillars (environmental, social and governance) and 14 different themes for corporate social responsibility dimensions independent of other firms' characteristics. In addition to the publicly available information regarding firm's corporate social investment and initiatives collected from several sources, FTSE4Good Index series also conduct the survey of the companies and process of consultation with companies managers (Clacer and Hogendroff, 2011). Such survey and consultation allow management to convey companies private CSR information which can be quantified and validated externally by FTSE4Good policy committee (FTSE, 2019). Further, the periodic assessment of firms CSR performance

⁶ Company must also fulfil the additional requirements which are in section 4 of the Index Addition Rules for the FTSE4Good Index Series v3.5, July 2019, which can be accessed on www.ftserussell.com

over time allows the researcher to investigate any deviations in CSR performance. In this study, I use the changes' announcement of FTSE4Good constituent the additions in the FTSE4Good index signalling companies' increased commitment to social issues, while deletions are signalling the opposite. The 'addition' in the FTSE4Good Global index refers to the new companies added in the index and 'deletion' refers to those companies that have been deleted (eliminated) from the FTSE4Good Global Index series after they have been listed in the index series for a while. Hence,

- The addition in the FTSE4Good Global Index is a proxy of firms' robust CSR compliance.
- The deletion from the FTSE4Good index is a proxy of firms' weak CSR compliance weak CSR performance.
- Furthermore, I also use the FTSE4Good ESG rating score (in chapter 6) as a proxy of firms' CSR performance.

3.2.4. Control Variables

Changes in the firms' financial performance can reveal the impact of corporate social responsibility. In the current study, I argue that the companies added in the FTSE4Good Global Index experience increased share price returns and improved operating performance. I expect that companies' share price and operating performance to increase (decrease) once they are added (deleted) in (from) the index. I also examine the impact of CSR performance (ESG rating) on Tobin's Q and ROA. Furthermore, I compare the operating performance of FTSE4Good and non-FTSE4Good Companies; this is because the measurement of performance of the FTSE4Good Global Index companies can be biased if benchmark companies are ignored. The use of a performance

benchmark increases the validity and reliability of the investigation since changes in the firms' financial performance might not be solely due to the CSR reason but caused by industry/sector-wide events such as business/corporate strategies, exogenous management capability, potential investments, risks, any events which are beyond managerial control, etc. For example, a sample firm may have experienced superior (inferior) financial performance even before the event of CSR, caused by the investment in the profitable (loss-making) project/product/services. To avoid this bias, I measure abnormal stock market returns, impact on financial performances, and operating performance for CSR firms in the period pre- and post- their addition and deletion from the index and compare it to a matching/benchmark company. Benchmark companies that are of the non-FTSE4Good index added are selected on the basis of the industry, size, book to market, etc. In line with prior studies (Li et al., 2018; Kang et al., 2016; Attig et al., 2013; El Ghoul, 2011; Brammer and Pavelin, 2008; Manescu and Starica, 2007; Waddock and Graves, 1997), the current study use the following the controlling variables to control the relationship between CSR and CFP.

Industry: The level of CSR investment and the financial result both vary according to nature and the types of industry (Waddock and Graves, 1997; Brammer and Pavelin, 2006; McWilliams and Siegel, 2001). For example, the CSR initiatives of a firm in the financial sector industry may differ from a firm involved in the manufacturing industry. On the other hand, regulations and legislation also vary accordingly and can have a direct impact on CSR involvement (Griffin and Mahon, 1997). Brammer and Pavelin (2006) find that companies in higher social and environmental impact tend to participate/invest more in CSR activities. Similarly, a company may experience growth in financial

performance if the industry that the company belongs to is experiencing unusual growth. As such, I use the industry as one of the criteria to select matching/benchmark companies.

- Company Size: The size of the companies also affects the companies' involvement in CSR initiatives. Larger firms are more exposed to public and stakeholder scrutiny and face a greater risk of litigation and are more likely to focus on social and environmental issues (Endrika et al., 2014; Clarkson et al., 2011). Generally, larger firms tend to invest more in the CSR activities than that of the small firms (Margolis et al., 2009, Orlitzky et al., 2003; Waddock and Graves, 1997). Bigger size firms generally have the more surplus (slack) resource and are able to invest in the community and society (Dhaliwal et al., 2011; Brammer and Pavelin, 2008; Preston and O'Bannon, 1997). Also, the accounting figures are also linked with the size as bigger firm generally generate more profits. In line with prior literature (El Ghoul et al., 2011; Waddock and Graves, 1997; Orlitzky et al., 2003; Wahab and Elsayed, 2015), I use firms' total assets as a proxy for size. Furthermore, I use size as one of the criteria for selecting matching/benchmark firm to investigate the CSR-related abnormal operating performance after the event.
- Leverage: Similar to size and industry, business leverage has a similar impact on CSR and financial performance. In line with previous studies (Qui et al., 2016; Du et al., 2017; Feng et al., 2017; Lourenco et al., 2012), I use total debt to total assets as a proxy of leverage. The leverage profile of a company linked with the CSR. Companies with lower leverage position are most likely to engage in the CSR and vice versa. For example, a company with a higher level of leverage position (debt to assets ratio) tend to have increased pressure from the creditor and vice versa (Barmmer and Pavelin, 2006). On the other hand, firms with low debt to assets ratio tend to enjoy easy access to additional funds. Firms with low-level leverage can raise funds for potential investment and also

invest in CSR initiatives to support their existing investment. Furthermore, highly geared companies tend to have a higher probability of future bankruptcy risk. Jensen and Mecklin (1976) argue that highly geared firms minimise their agency cost by investing in CSR initiatives. Consistent with prior studies (Li et al., 2018; Feng et al., 2017; Clacher and Hagendorff, 2012; El Ghoul et al., 2011), I use leverage as a control variable to examine the impact of CSR on firms' financial performance.

Book to the Market (B/M) value of equity: In this study, I use the book to the market value of equity as control variable which is the proxy of the firms' growth (El Ghoul et al., 2011; Dhaliwal et al., 2006). The B/M is a ratio used to find out the value of companies by comparing with book value with its market value. It is calculated by dividing the companies' common shareholders' equity by its market capitalisation value. A higher value implies firms' strong financial health/profitability and the possibility of resources available for further potential opportunity/investments (Fama and French, 2002). Firms with the strong financial resource are more likely to implement CSR practices. Prior literature suggests that past financial performance is directly linked to future CSR investment (Waddock and Graves, 1997; Ortilizky et al., 2003). Also, Bushee and Neo (2000) suggest a negative relationship between book to market value and share price volatility. A firm with a higher book to market value experience lower share price return volatility and vice versa. Firms with higher growth rate have the certainty of expected cash flow and high share price (Kothari et al., 2009). Barber and Lyon (1997) argue that higher book to market firm outperforms low book to market firms. In order to examine the operating performance of CSR firms, it is important to compare CSR firms' operating performance against non-CSR companies with a similar book to market value. Hence, in line with previous studies (Groening and Kanuri, 2013; Ramachander et al.,

2012; Andrikopoulos, 2009; Kothari et al., 2009) I use the book to market value as a similar firm-matched control variable.

- Profitability: Profitability is measured by the operating profit margin. Operating profit margin is defined as the operating profit (EBIT) relative to net sales reported by the company in a year. The firm's better financial performance potentially provides additional resources to invest in the CSR. Firm's profitability is a determinant of both CSR and CFP (Clacher and Hagendorff, 2012; Waddock and Graves, 1997; McGuire et al., 1988). Since, firm's profitability can influence the relationshp between CSR and CFP and I use as control variable.
- Growth: The growth is defined as the percentage changes in the yearly net revenue.
 Firms growth has a significant impact on both financial performance and the CSR of the firm (Clacher and Hagendorff ,2012; Brammer and Pavelin, 2008; Waddock and Graves, 1997). Consistent with prior studies, I used the growth as a control variable as growth influence firms financial performance and investment in CSR (Clacher and Hagendorff, 2012;, Feng et al., 2017; and Li et al., 2018). Also it predicts the cross-section more pronouncedly (Cooper et al., 2008).
- Capital expenditure divided by sales (Capex): This study also uses the capital expenditure to sales ratio as a control variable. Capital expenditure to sales ratio is a measure of the firms' slack resources. Firms with additional resources tend to invest in CSR initiatives (Dhaliwal et al., 2011; Braymer and Pavalein, 2008; Preston and O'Bannon, 1997). This ratio measures the level of firms' investment into its future by comparing the capital expenditure with net revenue. This ratio represents the firm's investment of its resources to capital expenditure subsequently may limit its ability to utilise its resources

towards other alternatives such as CSR (Li et al., 2018; Cai et al., 2012; Simpson and Khoers, 2002).

• Employee: The employee represents the number of employees. The employee size is recognised as a determinant of financial performance (Waddock and Graves, 1997; Surroca et al., 2010; Feng et al., 2017). In line with the prior studies (Feng et al., 2017; Surroca et al., 2010), I use the employee size as a control variable and calculated as a log of the total number of employees.

3.3. Theoretical Framework

The theoretical discussion of CSR evolved tremendously from the 1950s, since the seminal work of Bowen (1953). According to Bowen (1953) "Social responsibility is businessmen obligation to implement those practices, policies, decisions, and actions that are consistent with social objectives and values". Davis (1960) firstly mentioned the possible link between CSR and firm's economic return, but it was Johnson (1971) who explicitly expressed positive association by arguing that social programs are business managers' conduct to add profit to their company. Nevertheless, the explanation of the relationship between CSR and firms' financial performance from the theoretical concept is highly ambiguous (Santos, 2014; Clacer & Hagendroff, 2012; Ziegler, 2012; Waddock & Graves, 1997) and empirically inconsistent (Orlitizky et al., 2003, Margoslih et al., 2009, 2004) because studies have used several theoretical frameworks in their investigation.

The debate 'for and against of CSR' is paramount in literature and as well as in the corporate world during the 1950s. The critics of CSR, also known as the neo-classical approach (aligned with the shareholder value theory) argues that the CSR-CFP relationship is negative. This group of arguments emphasises that CSR is an additional expense for the

business and can deteriorate firm's internal control system (Henderson, 2005; Jensen, 2000; Ulhmann, 1985; Friedman, 1970). Milton Friedman (1970), the most influential supporter of this view, argues that in a free economic system the social responsibility of business is to increase its profit, that is to use its resources and structure its operation in a way that maximizes corporate profit as long as the firm stays within the "rule of the game" (Friedman, 1970, p.1). He further asserts that corporate managers are obliged to act in the interest of their owners as they are agents of them and anything beyond the benefit of the shareholder is an act of dishonesty and should be deemed as unethical (Friedman, 1970).

Moreover, the agency theory, with regards to the CSR, argues that that corporate managers allocate the firm's resources to the socially responsible initiatives for their personal benefit, i.e. increase their reputation. Otherwise, their discretion to utilise the company's resources to social events should be justified by the benefit (Jenson, 2000; Henderson, 2005). Hence, the higher degree of corporate involvement in socially responsible activities may lead to a reduction in competitiveness and profitability, decrease in the value of the firm (Nollet et al., 2016; Barnea and Rubin, 2010, 2006) and eventually create a competitive disadvantage for the firms (Aupperle et al., 1985).

The recent environmental and social concerns, such as the increased threat of global warming, the global economic/financial crisis and corporate scandals have raised the debate and research on the business-society relationship. Prior studies argue that companies do incur additional costs (direct and the agency cost) in implementing CSR (Nollett et al., 2016; Reinhardt and Stavins, 2010) but they also benefit from these activities. Investors are seeking a more sustainable approach to investment and use CSR performance as criteria in decision making (Berthelot, Coulmont & Serret, 2012; Hubbard, 2009; Soppe, 2004; Barker, 2003).

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The stakeholder theory integrates the social element in the business operation and by explaining the relationship between firms and their several stakeholder groups. Freeman (1984) asserts that a business must not only focus on the shareholder interest; rather, they should go beyond and address the need and expectation of several stakeholders. As such, stakeholders are group or individuals who are directly or indirectly linked to the organisation and can influence or be affected by the firms' operation (Freeman, 1984). As stakeholders may have conflicting interest and demands, it is crucial for companies to address them effectively and efficiently. Their expectations and interests towards the organisation differ depending upon the individual stakeholder and the type of industry where the organisation is operating. For example, the demands and expectation of stakeholders in the oil and gas industry may not be similar to the stakeholders of the financial sector.

Donaldson and Preston's (1995, p.71) suggests that corporate executives must induce constructive contributions for their stakeholders to attain their firm's objectives. Stakeholders' satisfaction, confidence, support, and participation, all determine the survival and continuity of a firm in the society (Freeman et al., 2010; Jensen, 2010; Agle et al., 2008; Deegan, 2006; Clarkson, 1995; Ullman, 1984). Stakeholders are a primary source of firms' resources and hold a significant power that can influence the survival and growth of the firm (Deegan, 2009; McWilliam et al., 2006; Mitchell et al. 1997). Hence, companies should continuously involve in socially responsible activities that address the needs and interests of several stakeholders'; otherwise, they will lose all resources and support that is necessary for them. According to instrumental stakeholder theory, CSR activities are the mechanisms of maintaining the relationship among firms' multiple stakeholders which in turn lead them to the better financial outcome (Wang et al., 2015; Wood, 2010; Margolis and Walse, 2007; Ortliziky et al., 2003; Berman et al., 1999; Waddock and Graves, 1997; Jones, 1995; Donaldson and Preston, 1995; Wood and Clarkson, 1995). Stakeholder management is one of the key success factors in a competitive business environment. Hence, there is a change that the primary objective (shareholders' wealth maximisation) of a firm might not be met without considering its wider stakeholders (Jenson, 2010; Jamali, 2008, p.217). Firms' stakeholder management through commitments to environmentally and socially responsible initiatives build a healthy relationship, improve loyalty and confidence, which consequently improve companies' reputation. Firms good reputation among stakeholders enhance (Lourenco et al., 2012, p.419), which in turn leads to the competitive advantage over competitors (Porter and Krammar, 2006). Based on the above rationale, in the long term, firms should enjoy the improved financial performance as manifested by potential addition (deletion) to the SRI index.

Similarly, studies in the past have examined the stock market reaction to several corporate events (including CSR events). These studies often use the efficient market hypothesis, signalling theory, and resource-based theory to explain stock price behaviour. Particularly in the CSR literature studies use the stakeholder theory, legitimacy theory, resource-based, view etc. to explain the importance (value) of adopting the CSR strategies/initiatives and its impact on the stock market performance (Kang et al., 2016; Su et al., 2016; Nollet et al., 2016; Lyon Shimshack; 2015; Krüger, 2015; Becchetti et al., 2012; Cheung, 2011; Clacher and Hagendroff, 2012; Brammer and Millington, 2008). In this study, I focus on the firms' stock price behaviour during CSR-related disclosures' announcements on the basis of the signalling hypothesis. The latter one (signalling hypothesis) provides a unique, practical and empirically testable perspective on problems of

social selection under conditions of asymmetric information (Connelly et al., 2011, p.63). The signalling hypothesis explains the behaviour of two parties or individuals when they have separate access to different information (Spence, 2002). According to this, one party sends a piece of a message (signal), and the other party receives and interpret the message. According to Spence (1973), the signalling hypothesis helps to understand how investors or decision-makers interpret and respond to a particular situation where information is asymmetrically provided and is also incomplete. The fundamental principle of the signalling hypothesis is the information asymmetry and its reduction. This occurs when different parties/individuals have unequal knowledge on the subject matter with one party being better informed than the other. This creates an imbalance in power, adverse selection and moral hazard problems (Akerlof, 1970).

Arguably, information plays a significant role in the investment decision-making process. An investor takes the investment decision after the careful consideration of publicly available information regarding the company. In order to reduce the risk of their stock portfolios, investors should be able to identify firms' observable features (i.e. signal) and how these affect the conditional probability of firms performance. Signalling hypothesis provides a base for predicting how the stock of a firm should behave to a firmspecific event.

In this study, I examine how the firm's share price reacts to the announcement of the firm's CSR-related performance. Corporate engagement in the CSR initiatives and their reporting would most likely introduce aspects of information asymmetry affecting all stock market participants. This is because, the latter (e.g. investors, and other stakeholders) may not be able to internally process how firms involved in CSR are benefitting; hence, interpreting firms' decision to implement CSR initiatives as a case of resource wastage. To this extent, there are important questions that need to be answered. For example, do shareholders care about firms' CSR involvement and/or do firms' additions, and deletions from the FTSE4Good Index lead to increased market performance?

According to the signalling hypothesis, the stock market uses signals to value the CSR disclosure/ announcement, and its participants would search for the signals that differentiate the high CSR performing firms to low CSR performing ones. From the stock market perspective, firms' disclosure of CSR-performance could trigger a vague of complementary effects. For instance, a positive CSR performance could create a positive 'halo' effect that could provide a yardstick for subsequent investment decisions (Bergh and Gibbons, 2011; Lourenco et al., 2011). Also, companies with good CSR reputations are perceived as having strong internal resources and management capabilities so as to capitalise on potential investments and other corporate expansion opportunities that could arise from such positive CSR status. Based on this logic, CSR can then be interpreted as a signal of managerial optimism about the firms' future. Complimentary with the resource-based theory (Barney, 2001, Barney, 1991; Russ and Fouts, 1997; Hart, 1995), the firms' ability to retain/gain a competitive advantage depends on its retained resources. If these retained resources are valuable, rare, inimitable and non-substitutable, then this firm will potently enjoy a significant competitive advantage within its industry (Barney, 1986). The theory asserts that managers are considered as a key to developing new competitive capabilities that may lead to a reduction in operating and financing costs, subsequently leading to higher operating profits and market returns. The CSR literature often emphasises involvement in socially responsible initiatives as a form of competitive resource that helps to promote firms and allow them to enjoy a competitive advantage amongst their peers (Porter and Krammar, 2011). Hence, this leads to an improved stock market return because the stock market interprets the CSR as management optimism about the firm's prospects (Bergh and Gibbons, 2011).

Similarly, the disclosure of CSR-related information reduces the information asymmetry among the firms' stakeholders (Corderio and Tewari, 2015; Ramachander et al., 2012) and improve the firms' relationship with all interested parties. Hence, additions and/or deletions to the FTSE4Good index signal firms' capability of being socially responsible regarding business operation and potential future performance. Consistent with the signalling hypothesis/theory, this disclosure of firms' CSR-related performance conveys favourable information. For example, the addition in the FTSE4Good index signals the firm's regular and consistent commitment/investment in socially responsible initiatives and possible availability of necessary financial resources to accomplish that. Such availability of resources (for good CSR initiatives) could be a signal of good financial health at present and for the future (i.e. ability to invest further to positive-value generating CSR-related projects in the future. Firms' participation in the socially responsible cause/initiatives in the future could lead to improvements in customer loyalty, employee productivity, reduction in potential charges and fines, improved supplier relationship etc. As a result, firms will improve the present value of their future cash flows, boost shareholders/investors' confidence and ceteris paribus, maximise the corporate value.

By contrast, deletion from the FTSE4Good index would contain exactly the opposite message to the market as this might reflect not only relatively low financial capabilities but also a possible challenging future for these firms with increased uncertainty in future cash flows and a loss in investors' and shareholders' confidence. To

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sum up, based on the signalling hypothesis, if investors believe that the firm's involvement in CSR is beneficial and could lead to improved financial performance, then firms added in the FTSE4Good Index should experience abnormal stock return in the period subsequent to this corporate event.

Chapter 4: An empirical investigation of the impact of CSR index additions and deletions on firms' long-term operating performance.

4.1. Introduction

In light of the several corporate and environmental scandals in recent years, the impact of company's operation on the environment, society and community have gained significant attention from several stakeholders, including practitioners, academics, policymakers, investor, and the public.⁷ This increased awareness has compelled companies to adopt socially responsible business practices so as to persuade relevant stakeholders that they are committed to making a positive impact on society and the environment. Hence, apart from the primary corporate objective of maximising shareholders' wealth, companies in today's business environment are initiating several programmes to address the demand and expectations of their communities and the society at large including several primary and secondary stakeholders.

According to Grant Thornton (2018), Corporate Social Responsibility⁸ has now become a necessity and not a choice. Corporate relationship with stakeholders is

⁷ For example, the Volkswagen carbon emission, Lehman Brothers, WorldCom, Enron, and other.

⁸ The corporate social responsibility (CSR) is an instrument of balancing the economic, environmental and social imperatives (UNIDO, 2016) by building and strengthening the

becoming the cornerstone of the company's overall success, and managers should develop objectives that stakeholders would support (Feng et al., 2017). The performance of businesses is becoming more dependent on how several stakeholders perceive and react on the way that companies operate in society. According to the Nielsen, global socially responsible consumer report (2015, p.2) consumers are not only willing to buy but also pay extra for products and services from companies that give back to society. This survey also reports that participants prefer to work and invest in the companies that implement a socially responsible business model. The conclusion of this report is consistent with the argument that the stakeholders' expectation towards the company and social issues determines firms' ability to sell their products and services (Freeman, 1984).

On the other hand, USSIF (2018) reports that the sustainable, responsible, and impact investing has increased significantly from \$2 trillion in 2013 to \$10 trillion in 2018 (p.1). Similarly, in Europe, it rose from \notin 2.646 trillion in 2015 to \notin 4.239 trillion euro in 2017 (EUROSIF, 2018, p.16). The evidenced increase to the popularity in a sustainable and socially responsible investment over recent years indicates that investors are shifting their funds towards companies that focus on sustainable, and responsible investment.

Hence, stakeholders are evaluating companies not only based on their financial position but also on their contribution they to make a positive impact on the environment, society and community. The CSR reputation or firms involved in such initiatives signal managerial optimism towards growth and long-term sustainable business success. For businesses, developing models that ensure and promotes business operations that are

relationship between businesses and their several stakeholders by fulfilling social and communal expectations to make positive changes.

socially responsible and sustainable entities is becoming the mainstream of corporate agenda so as to maintain their corporate goodwill. However, the question of whether or not implementing a CSR-friendly business model ensure profitability for such companies is still important.

According to CSR literature, there are two sides of the argument on CSR-CFP relationship. The advocates of stakeholder theory perceive CSR as an instrument of good financial performance (Donaldson and Preston, 1995; Jones, 1995; Waddock and Graves, 1997).⁹ The primary objectives of a firm are not attainable without consideration of its stakeholders because stakeholders hold key resources that a business requires to survive and grow in the current dynamic environment. In contrast, proponents of shareholder theory argue that CSR is a cost for companies and consequently destroys the primary objective of maximising shareholders' wealth (Friedman, 1970; Sundaram and Inkpen, 2004; Smith, 2003). Hence, managers should not invest in CSR unless it provides a positive economic outcome to the shareholders; otherwise, CSR is a signal for a potential agency problem within the business (Friedman, 1970).¹⁰

In an effort to explain the relationship between the CSR and financial performance, several studies have been conducted but produced mixed conclusions (Feng, Xiaodan, and Kreuze, 2017; Wang, Dou, Jia, 2015; Margolis et al., 2009; Peloza,

⁹ Implementing CSR initiatives lead to the reputational advantage, cost reduction, risk minimization, competitive advantage and reduction in impact of negative events Shane and Spicer, 1983; Waddock and Graves, 1997; Hillman and Keim, 2001; Turban and Greening, 2001; Porter and Krammar, 2006).

¹⁰ The social responsibility of business is to increase its profit (Friedman, 1970).

2009; Orlitzky et al., 2003). The inconsistencies in the result could be due to the methodological and conceptual differences adopted in alternative CSR measurements used in these studies (Wartrick and Cochran, 1985; Lee et al., 2009; Alikaj et al. 2016). For instance, comparing the performance of CSR versus non-CSR firms and ignoring the firms' specific factors could lead to inconsistency in the findings. Also, the CSR participation varies across firms because of their individual micro-characteristics such as industry, size, growth and resources availability. The CSR-CFP literature can further be extended by taking all of these factors to consider during the empirical examination. Prior studies demonstrate that control variables such as industry, size, growth (Waddock and Graves, 1997; Brammer and Pavelin, 2006; McWilliams and Siegel, 2001; Margolis et al., Elfenbein, and Walsh, 2009, Orlitzky et al., 2003; El Ghoul et al., 2011; Dhaliwal et al., 2006) can help explaining the impact of CSR on the financial performance.

In a recent study (Feng et al., 2017) report a heterogeneous association between the overall CSR activities and financial performance across industry arguing that CSR and its impact on financial performance vary across industries. Nevertheless, up to this point, no study has comprehensively documented the potential variation in the relationship between CSR and firms' operating performance using company-specific characteristics and a matching portfolio approach. Shen and Chang (2009) attempted to examine the CSR-CFP relationship in a sample of 80 companies from Taiwan using the propensity score as a matching methodology (Dehejia and Wahba, 2002) instead of firmspecific micro-characteristics. This study reported a mixed conclusion and consistent with the rest of the literature results. The authors have laid the foundation for further research using multi-country sample data using matching criteria.

Following the earlier argument on the link of CSR involvement and managerial optimism towards the future and growth, prior studies have examined the impact CSR related news, ranking, and index membership to market performance (Cordeiro and Tewari, 2015; Lurenco et al., 2014; Becchetti et al., 2012; Deng et al., 2013; Jiao, 2010). In line with the signalling hypothesis, Curran and Moran (2007) and Robinson et al., (2011) examine the impact of CSR index membership to stock returns. For instance, Robinson et al., (2011) document that favourable CSR performance news can have a significant impact on the firms' stock returns. Authors concluded that positive CSR news is viewed as a credible signal and rewarded positively by the market. Also, if firms' involvement in CSR signals the managerial commitment and vision for the future, then it should be reflected in the operating performance. With regards to the latter to the best of my knowledge, only one study examines the impact of CSR index membership on the firms' operating performance, measured by earning per share (EPS) (Kappou and Oikonomou, 2016). The authors examine changes in EPS and report deterioration in the operating performance after deletion from the CSR index (p.533). However, the impact of CSR on firms operating performance using firms multi-factor/multi-dimensional matching approach based on firms micro-characteristics is still unexplored. This gap in the literature is addressed in this study. It is also important to investigate the impact of index variations on a different aspect of operating performance as such changes can have a significant impact on stakeholders' perception towards the firm and could lead to changes in operating performance.

Using a sample of companies from 26 countries, that have been added to and deleted from FTSE4Good global index between 2002 and 2016, I adopt an event study

methodology (Barber and Lyn, 1996)¹¹ to estimate the abnormal operating performance as the difference between the operating performance of FTSE4Good Global companies and their matching portfolios based on four key micro-characteristics, namely industry, size, PTBV and momentum. I find that the differential performance is positive and statistically significant at the 5% level in most cases for the ratios of cash flow per sales, operating margin, total debt to total capital and return on invested capital (ROIC) when compared to all matched benchmark criteria. Secondly, using the signalling theory, I investigate possible changes in the abnormal operating performance after the firm's additions and deletions from the FTSE4Good index. The results suggest a positive and statistically significant 'index addition' effect on the firms' operating margin, operating cash flow-per-sales, the current ratio and the debt-to-capital ratio. I also report a significant improvement in the firms' liquidity position after the addition in the CSR index and providing new insight/evidence in the CSR-CFP literature. Also, the result report that this abnormal operating performance deteriorates significantly after the deletion from the FTSE4Food index, as well as that this performance difference varies across the firm matching benchmark used.

I make several contributions to the CSR-CFP literature. First, prior studies mainly focus on comparing the performance of CSR and non-CSR companies have paid less attention to the matching approach using firm-specific characteristic. I extend this line of enquiry by examining abnormal operating performance using firm-matching procedure portfolios and further examining the effect of index addition on the abnormal operating

¹¹ This method is widely used in finance when examining the effect on firms' long term operating performance. For further reading; Barber, B.M., and Lyon, J.D., (1996).

performance. In this study, I also respond to Shen and Cheng's (2009, p.149) call for additional examination using large sample size and a longer period of data and extend Kappou and Oikonomou's (2016) study on the impact of firm's addition to social index on firms' operating performance. Second, this study reports for the first time in the literature that the firms' liquidity position improves significantly after the addition in the CSR index. Finally, compared to all prior studies that are country-specific, I examine 26 countries allowing to extend the generalisability of the economic impact of CSR.

This rest of this chapter is structured as follows. Section 2 discusses the relevant literature on the CSR-CFP relationship. Section 3 presents the theoretical perspective and introduces the testable hypotheses. While data and methodology are presented in section 4. Section 5 discusses the main findings. Finally, section 6 concludes the chapter.

4.2. Literature review

Balancing the expectations of stakeholders is one of the most significant challenges for any organisations that require regular commitment and management efforts. In a nutshell, the manager should aim to address stakeholders according to their interest, power, urgency and salience characteristics (Mitchell et al., 1997) since they actively monitor corporate behaviour and events irrespective of whether it is related to finance, environmental or any other social agenda. Any changes in the relationship between stakeholders and corporation may hurt the firm's performance. Therefore, firms should implement CSR initiatives as a way to respond to stakeholders' expectation and hence maintain healthy the relationship between the two parties.

Prior literature on the CSR-CFP relationship produced the mixed results. Although the majority of studies suggest a positive association (Van Beurden and

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Gossling, 2008), there are a few also indicating a negative and/or neutral relationship (Orlitizky et al., 2003; Margolish et al., 2009). For example, Peloza (2009) reports that among 128 studies examining the association between CSR and CFP, 59% suggest a positive, 27% report a neutral and 14% to suggest the negative correlation between them.

This study outlined several benefits to firms of implementing CSR. One of the key advantages of investing in CSR initiatives is to build a strong relationship with stakeholders and improve firm's reputation (Bear et al., 2010, Branco and Rodrigues, 2006; Fombrun and Shanley, 1990, Stanaland et al. 2011). Furthermore, implementing CSR initiatives can lead to a reduction of cost through the efficient use of resources, improved efficiency, reduced risk and less influence impact of negative events. These have a direct and indirect impact on the financial and operational performance of companies (Isaksson et al., 2014; Tarabella and Burchi, 2013; Lourenco et al., 2012; Robinson et al., 2011; Carroll and Shabana, 2010; Crane et al., 2009).

Improved stakeholder management is an indicator of excellent corporate management practices (Lourenco et al., 2012; Waddock and Graves, 1997; Hillman and Keim, 2001. Barone et al. (2007, p.444). It asserts that the firm's image and brand name differentiate businesses from their counterparts leading to competitive advantage (Porter and Krammar, 2006). This is because better CSR reputation can improve stakeholders' trust, confidence, support and participation to company's operations, consequently creating valuable goodwill (Godfrey et al., 2005; Brammer and Millington, 2005). Furthermore, certain stakeholders, such as customer, suppliers, and employees, are found to be very sensitive to environmental and social issues. These stakeholders want to be associated with companies that implement favourable environmental and socially-friendly business practices because they enjoy the social image and brand name that

comes out of it (Martinez-Ferrero et al., 2016; Carmeli et al., 2006; Brammer and Millington, 2004; Russo and Fouts, 1997; Pava and Krusz, 1996; Preston and O'Bannon, 1978). Addressing stakeholders' expectation and demands through socially responsible practices leads to a positive impact on consumers' trust, loyalty on firm's products and improved overall perception towards the firms (Pino et al., 2016; Becker-Olsen et al., 2005; McWilliams et al., 2006; Folkes and Kammins, 1990; Murray and Vogel, 1997; Fomburn and Shanely, 1990).

Sen and Bhattacharya (2001, p.225) examine the relationship between CSR and consumer attitude regarding perception towards the firm's products and services and report a positive association between these two. They suggest that companies' irresponsible and unethical activities may negatively impact customer's trust and loyalty, subsequently leading to decreased corporate revenues since consumers appear to punish socially irresponsible companies by boycotting their products and services. This is also corroborated by Austin et al. (2006). On the other hand, firms with better CSR practice in their operation increase sales through increased consumer loyalty (Pivateol et al., 2008; Bhattacharya, Korschun and Sen, 2009) as customers are willing to pay the premium price for the products and services produced by socially responsible businesses (Du, Bhattacharya, and Sen, 2010; Austin et al., 2006, Smith, 2003). The demand for Fairtrade products in the UK is an excellent example of consumers' changing attitude and preferences to socially responsible business goods and services. A study by Smith (2003) on consumers' buying behaviour of free-range eggs in the UK suggests that although the price of the free-range eggs is much higher, its sales consist 35% of overall egg market. Similarly, subsequent studies also provide evidence that firms' participation on charitable donation increases their following year sales revenue and abnormal stock returns (Lev et al., 2010; Godfrey et al., 2009; Brammer and Millington, 2008). Similarly, Kaspereit (2016) argues that firms with high CSR practices are less likely to encounter revenue losses due to the loss of organisational legitimacy. Therefore, companies' participation in socially responsible initiatives improves financial performance (Ortlizky et al., 2003, Robert and Dowling, 2002; Waddock and Graves, 1997) as it can also reduce corporate costs through improved operational efficiencies. For example, Laczniak and Murphy (1991) show that companies implementing socially responsible and ethical business practices would lessen the probability of incurring a high social cost such as fines leading to improved performance. For example, developing proactive strategies towards environmental and social compliance could prevent firms from possible fines and other cost related to damages (Hart, 2005; Berman et al., 1999; Shane and Spicer, 1983). On the other hand, a firm could save cost through the efficient use of energy and materials, waste reduction and minimisation of insurance claims (Ambecand Laoie, 2008; Miles and Covin, 2000; Porter and Van der Linde, 1995). Similarly, firms may benefit from lower tax schemes and financial assistance from the government to implement environmental and social responsible operating practices (Berman et al., 1999). Investment in employee welfare programs like training and development, health and safety, rewards and work environment improve efficiency through increased employee productivity, turnover, efficiency, lower absenteeism and innovation-related behaviour that strengthen firms' capabilities (Costa, 2015; Turker, 2015; Turban and Greening, 1996). Prior studies suggest that companies with high CSR engagement can attract the highly-skilled employee and become more desirable employers (Martin, 2006; Backhaus et al., 2002; Turban and Greening, 2001). CSR also promote existing staff morale and goodwill (Waddock and Graves, 1997; Hart, 1995; McGuire et al., 1988). In a recent study, Sun and Yu (2015) document a positive relationship between CSR and employee performance. They suggest that employees in socially responsible companies are more innovative and productive, consequently leading to better operating performance compared to non-CSR firms (Sun and Yu, 2015, p. 262) because of reduction in costs associated with injuries/accidents and lower risk of workers' health and safety (Aldana, 2011; Cochran, 2007; Turban and Greening, 1996).

The third benefit of implementing CSR is the reduction in the impact of adverse events on corporate performance. According to Shane and Spicer (1983), the firm's commitment to CSR and its disclosure affects the general stakeholders' perceptions of the company's compliances to socially responsible issues. Moreover, CSR initiatives provide a way of reducing downside business risk and are an essential element of the risk management function of a firm (Husted, 2005, p.176). To that end, CSR practices (e.g. philanthropies) are found to improve information transparency, and business accountability, corporate strategy (Jensen and Mecklin, 1976) as well as reduce the impact of adverse events which may affect firms' profitability (Heal, 2005). Any violation of the environmental and social system could destroy the reputational image of the firm and can lead to a decline in revenues¹² (Wei et al. 2013; William and Barrett, 2000). Using

¹² Most recently, Volkswagen was fined with \$10 billion (Reuter, 2016 Viewed on 27/06/2016) suffering a significant drop in the sales revenue for 2015 by 4.8% to 5.82 million from 6.82 million cars year-on-year (BBC, 2016, viewed on 02/02/2016) due to the carbon emission scandal. Similarly, the Deepwater Horizon's oil spill costs BP Plc a total of \$18.8 billion (WSJ, 2015 Viewed on 02/03/2016) consisting mostly of fines and the bill to clean up the oil spill.

accident data for 119 Chinese listed firms between 2005 and 2012, Wei et al. (2013) investigate the impact of corporate disasters, media coverage on stock market return. Their results suggest a significant adverse effect of such events on stock market performance. Therefore, implementing CSR strategies motivate managers towards a proactive (forward-looking) culture and act as a contingency to such possible negative events in the future (Waddock and Graves, 1997).

Prior literature also suggests that CSR firms enjoy the benefit of improved credit rating because credit agencies also tend to consider social performance when evaluating companies' creditworthiness (Jiraporn et al., 2014; Attig et al., 2013; Spicer, 1978). Therefore, firms with good CSR practices are benefitting from a reduced cost of capital (Sharfman and Fernando, 2008; El Ghoul et al., 2011; Dhaliwal et al., 2011, Goss and Roberts, 2011; Chava, 2010). Based on the above discussion, a firm can then achieve superior operating performance as a result of the perceived benefits of investing in CSR. Any CSR-related corporate events, behaviours, and actions convey management's capability and strength to run a business. While positive changes in CSR, improve stakeholders' confidence towards firms' management and vice versa. Hence, to retain the stakeholders' support and trust, it is necessary that a company should communicate their CSR commitment and performance on a regular basis.

Prior studies on the impact of index changes on Operating Performance

One of the most efficient and widely used means of communicating the socially responsible commitment to stakeholders is the announcement of company's membership in socially responsible organisations or socially responsible stock indices (SRI thereafter) such as FTSE4Good, DJSI, Calvert Social Index. Socially responsible indices are a series

of Environment, Social, and Governance (ESG) dimensions. Since the first introduction of an SRI by Kinder, Liebenberg and Domini (KLD) in 1990, e.g. Domini 400 Social Index, the attraction of investors towards these socially responsible indices has increased significantly. Companies are evaluated, ranked and listed according to their performance and commitment to the environment and society. Because of the growing popularity of socially responsible investments in recent times, new SRIs have been introduced such as the Dow Jones Sustainability Index (1999), Calvert Social Index (2000), the FTSE4Good Index Series (2001), and most recently the MSCI ESG index (2014). These indices are demonstrating companies' level of commitment and investments towards ESG criteria (Belghitar et al., 2014; Slager and Chaopple, 2015; Becchitti et at., 2008; McWilliam and Siegel, 2002). SR index membership becomes an essential measure for investors to make financial decisions based on the company's ability to integrate relevant nonfinancial information for CSR performance (Elliot et al., 2014; Lopez et al., 2007). A firm can obtain such membership only after meeting a certain level of socially-responsible performance over a period, while, any variation in the index configuration means a significant change in the firm's social performance. Prior studies suggest that an announcement regarding the changes in index configuration can reduce information asymmetry (Dhaliwal et al. 2014; Cho, Lee, and Pfeiffer, 2013; Healy and Palepu, 2001). It further affects the trust and confidence of the general public or other stakeholders (i.e. employees, customer, supplier, creditors, governments) which might have a direct and or indirect impact on the firms' operating performance.

Prior literature has examined the CSR-CFP relationship using a wide range of accounting-based operating performance measures such as return on assets (ROA), return on equity (ROE), return on sales (ROS), sales growth, net income and profit-before-tax

(Dam and Scholtens, 2015; Galleo-Alvarez et al., 2013; Harjoto and Jo, 2011; Lee and Jhang, 2008; Ruf et al., 2001; Berman et al., 1999; Judge and Douglas, 1998; Waddock and Graves, 1997; Simerly, 1994; Dooley and Lerner, 1994; Cochran and Wood, 1984). Among these, limited studies have focused on examining the impact of SRI on operating performance. One of the seminal studies by Cochran and Wood (1984) documents a positive relationship between the ratio of earnings-to-sales and operating-to-assets ratios with SRI rankings. Lee and Jhang (2008) support Cochran and Wood (1994) by documenting a similar relationship using the accounting rate of return (ARR) as a proxy for operating performance.

Shen and Chang (2008) used a firm-matching approach to examine the impact of CSR on firms' performance. They compare the performance of CSR performance against the performance of non-CSR companies using propensity score matching (PSM) and suggest that the pre-tax income to sales and profit margin of CSR companies is significantly higher than that of non-CSR companies. However, they limit their investigation to single country data (Taiwan) and minimal sample size (80 CSR and 2,480 non-CSR companies). Also, they primarily focused on the comparison between two matching groups. Similarly, Lopez et al., (2007) compare the performance of CSR businesses, listed in DJSI (Dow Jones Sustainable Index) with non-CSR firms listed in DJGI (Dow Jones Global Index) for the period between 1998 and 2004. The authors suggest no difference between the two groups of firms, in terms of total assets, capital and revenues but a statistically significant difference in the profitability of the former group of firms. As the authors argue, the DJSI firms experience only a temporary negative impact on the profitability which may be due to the costs associated with the index membership (Lopez et al., 2007, p.298). However, a recent study by Demetriades and

Auret (2014) produced mixed results by reporting that the ROCE of DJSI companies is 11.18% higher than the non-CSR companies, but the ROA of DJSI firms is 1.82% lower than that of the traditional companies (Demetriades and Auret, 2014). This corroborates earlier findings by Beccheetti et al., (2008) who examine the effect of Domini Social Index 400 (DSI 400) affiliation on the firms' performance using a sample of US firms between 1990 and 2004. After controlling for size, industry and business cycle, the study shows that companies' affiliation with the DSI significantly reduces firms' returns on equity. Interestingly it reveals the existence of a positive and statistically significant effect on the net sales per employee indicating employees of CSR firms are highly productive and efficient in utilising companies' resources. Similarly, the exit from the index produces substantially adverse effects on the total sales per employee, return on equity and return on investment/capital employed. These findings are directly opposed to those reported by Ziegler (2012) for the Dow Jones Stoxx 600 index, which shows a positive impact of firms' addition in the SRI in terms of returns on assets. However, the impact on Tobin's Q was insignificant in statistical terms. Hence their study suggests a significantly positive impact on ROA for continental European firms but not for the Anglo-Saxon European companies. Further, Kappu and Oikonomou (2016) examined the "index effect" on operating performance measured by the earning per share (EPS). They reported that the EPS increased by 5.96% after the addition and decreased by 6.54% after the deletion from the index. However, differential means are not statistically significant.

From the above review, I can conclude that the impact of SRI additions/deletions on firms' financial performance is rather mixed. This inconsistency in the results could be due to the methodological and conceptual differences adopted by the various studies (Lee et al., 2009; Wartick and Cochran, 1985). The majority of these studies have used relatively small samples and typically investigate the profitability in the short-term. Similarly, most studies comparing the performance of CSR and non-CSR firms have typically ignored the various micro-characteristics of those firms such as companies' size, industry sectors, the value effect and possible momentum in the benchmark selection process although these factors could have a significant impact on the firm-matching procedure. For example, firms' size may convey the ability to afford the CSR initiatives. Normally, large companies have more resources available to invest in CSR projects that may reduce the risk of potential fines and cost, which consequently leads to improved profitability (Clacher and Hagendoff, 2012). Therefore, consideration of such factors in the benchmark firms' selection could improve the reliability of the results.

On the other hand, the result of past studies is found to be country-specific, leading to a lack of generalizability across other markets, and geographical areas. Almost all of these studies are based on a single country/market (USA, UK, or other European countries). The result could be different in a different region like other emerging and developing economies because the CSR differs from country to country (Moon, 2004). There is insufficient research carried out using the FTSE4Good index, mostly concentrating on market performance and within the UK domain. Hence, the investigation of the accounting-based performance of companies listed in the FTSE4Good Global Index in this study allows better examination of the CSR-CFP relationship since it includes a widely disperse universe of stocks across different industries and geographical locations.

4.3. Theoretical Framework and development of hypotheses

The stakeholder theory, along with resource-based theory, is been used widely in the literature as a basis for exploring the CSR-CFP relationship. In this study, I use the stakeholder theory alongside the signalling hypothesis to propose the theoretical framework and the development of the testable hypotheses. Stakeholder theory has been used to explain the firms' involvement in socially responsible business practices. It integrates social element in the business operation and explains the relationship between companies and their several groups/stakeholders. Freeman (1984) asserts that a business must not only focus on the shareholder interest, rather they should go beyond and to the need and expectation of several stakeholders. As such, stakeholders are group or individuals who are directly or indirectly linked to the organisation and can influence or be affected by the firms' operation (Freeman, 1984). Stakeholders may have conflicting interest and demands, and it is crucial for companies to address them effectively and efficiently. Their expectations and interests towards a firm differ depending upon the individual stakeholder and the type of industry that a company operates. For example, the demands and expectations of the customer vary to the expectation of employees and so on. Similarly, the expectation of stakeholders in the oil and gas industry may not be similar to the stakeholders of a firm in the financial sector.

Donaldson and Preston (1995, p.71) suggest that corporate executives must induce constructive contributions for their stakeholders to attain their firm's objectives. The stakeholders' satisfaction, confidence, support, and participation determine the survival and continuity of a firm in the society (Freeman et al., 2010; Jensen, 2010; Agle et al., 2008; Deegan, 2006; Clarkson, 1995; Ullman, 1984). Stakeholders are a primary source of firms' resources and hold a significant power that can influence the survival and growth of the company (Deegan, 2009; McWilliam et al., 2006; Mitchell et al. 1997). Hence, companies should continuously involve in socially responsible activities that address the needs and interests of several stakeholders; otherwise, they will lose all resources and support that is necessary for their operation.

Stakeholder management is one of the key success factors in a competitive business environment. The primary objectives (shareholders' wealth maximisation) of a firm cannot be met without considering its stakeholders (Jenson, 2010; Jamali, 2008, p.217). They are the key drivers that lead to change and could intervene in management decisions and plans if their needs are not satisfied. Firms' commitments to environmentally and socially responsible initiatives improve companies' reputation among their stakeholders (employee, customer, suppliers, financiers, government) and build a healthy relationship. Firms good reputation among stakeholders enhance corporate internal and resource capability (the firm's know-how and organisational culture (Lourenco et al., 2012, p.419)), which in turn leads to the competitive advantage over competitors (Porter and Krammar, 2006). According to instrumental stakeholder theory, CSR activities are the mechanisms of maintaining the relationship among firms' multiple interested parties and lead them to a better financial outcome (Waddock and Graves, 1997; Jones, 1995; Donaldson and Preston, 1995; Wood and Clarkson, 1995). Based on the above rationale, firms added in SRI indices should enjoy the superior operating performance as compared to their non-SRI added counterparts. The testable hypothesis is:

H1: There is a positive difference in the operating performance of companies associated with the FTSE4Good index and those of matched companies that are not added in the FTSE4Good. As the disclosure of CSR-related information reduces information asymmetry among the firms' stakeholders and improves the firms' relationship with all interested parties, the association with the FTSE4Good index signals companies' capability of being socially responsible in their business operations and potential future out-performance. Also, the FTSE4Good announcement is a source of quality information that stakeholders could get freely regarding firms' CSR performance.

Hence, consistent with the signalling hypothesis/theory, the disclosure of companies' CSR-related performance not only conveys the quality of information but also influence stakeholders. For example, the addition to the FTSE4Good Global index signals the possibility that a firm will consistently commit adequate resources in socially responsible initiatives/leadership. This potential availability of resources for CSR initiatives could also be a signal of managerial optimism towards the firm's future growth and investment opportunities (through sustainable and responsible business operations). This signal, per se, could lead to improvements in customer loyalty, employee productivity, relationship with business partners, and a reduction in potential charges and fines. For example, according to the Nielson global survey (2012, p.3) consumers prefer to buy goods and services and even if they pay a premium price from those companies that initiate/make a positive impact in the world. This could lead firms to improve the present value of their future cash flow, boost shareholders/investors' confidence in improving operating performance.

By contrast, deletion from the FTSE4Good index signals exactly the opposite message to the stakeholders regarding firms' CSR commitment and could lead to an opposite outcome on the firms' performance. It can act as a negative signal reflecting not only relatively low financial capabilities but also a possible challenging future for these companies with increased uncertainty in future cash flows and a reduction in stakeholders' confidence.

To sum up, based on the signalling theory, stakeholders' awareness of the firm's involvement in CSR is beneficial and act as a signal of improved future operating performance. Addition in (deletion from) the FTSE4Good Index should then result in a positive (negative) abnormal operating performance in the immediate period after the event. That is,

H2: The operating performance of companies added in the FTSE4Good Index improves significantly in the period after the event.

H3: The operating performance of companies deleted by the FTSE4Good Index deteriorates significantly after the event.

4.4. Data and methodology

Prior studies examining the CSR-CFP relationship have mostly used singlecountry data, most frequently from the US. This study uses the 'FTSE4Good Global Index', a popular SRI index that includes a list of companies from all over the world, that demonstrate high environmental, social and governance practices. It was established in 2001 and consist of five sub-index such as the FTSE4Good Europe Index, the FTSE4Good Japan Index, the FTSE4Good UK Index, the FTSE4Good US index, and the FTSE4Good Global Index that covering four major geographical regions those of UK, Europe, US and the Asian emerging market (FTSE4Good, 2015). As of 31st March 2016, the total number of constituents in the FTSE4Good Global Index is 791. The most recent and updated model of FTSE4Good ESG rating contains over 300 indicators and 14 different CSR themes under these three pillars. The criteria include anti-corruption, biodiversity, climate change, corporate governance, customer responsibility, health and safety, human rights and community, labour standards, risk management, supply chain, transparency, and water use, pollution and resources (FTSE Russell, 2016).¹³ Furthermore, all companies operating in sectors such as Tobacco, Weapons, and Nuclear Power are deleted from the index.

An independent committee (include experts and senior practitioners, FTSE clients, the investment community, academia, the business community, unions, and NGOs, etc.) assess the socially responsible practices of the company through the information that is publicly available and collected via corporate websites, annual report, questionnaire, etc. Based on this information, they rate companies between 0 and 5, where 5 is the highest rating and 0 for the lowest performer or no disclosure. Any company with an average FTSE ESG rating of 3.2 (or above) is added to the FTSE4Good Index, subject to a certain additional requirement.¹⁴ On the contrary, any company rated below 3.2 is classified as in risk of deletion from the FTSE4Good index (FTSE Russell, 2016, p.5). The FTSE4Good index reviews its constituents twice a year (i.e. semi-annual review) and provides other information such as changes in the system and criteria for addition and deletion, etc.

¹³ Please see the Index Addition Rules that were updated in September 2014. Source: Index Addition Rules for the FTSE4Good Index Series v1.7, January 2006, www.ftserussell.com

¹⁴ Company must also fulfil the additional requirements which are in section 4 of the Index Addition Rules for the FTSE4Good Index Series v1.7, January 2006, which can be accessed on www.ftserussell.com In this study, I use the FTSE4Good index semi-annual review and relevant modifications (addition and/or deletion) as a proxy of the CSR performance. Companies which are added (deleted) in the index are high (low) CSR performers with an increased (reduced) focus towards their various stakeholders. The examination of this study covers the period from March 2002 to December 2015. During this period, there are 956 companies added and 532 deleted from the FTSE4Good global index. Among the 956 additions, I only use 819 companies as 137 companies are added and deleted multiple times within the three years.

Similarly, companies are deleted from the index primarily due to a lower score in CSR metrics. Among 532 deletions, I only use 462 records as these deletions are purely due to the inability of those firms to meet the strict CSR addition criteria (a valid CSR reason) or their scoring/rating is below the threshold point, meaning the lower CSR performance. The rest of these records firms are dropped from the index due to different reasons such as been acquired (M&As activities) and other non-CSR related reasons. I also remove all those firms that have been deleted multiple times over the post-event measurement period in line with previous event study literature (Kothari and Warner, 2008; McWilliams and Siegel, 1997; Fama and French, 1969). The final sample of this study also contains firms that are already liquidated or bankrupt. Further, my data collection procedure is in line with the prior studies (Gilbert and Strugnell, 2010; Carpenter and Lynch, 1999; Elton et al., 1996) that focus on the elimination of the possible survivorship bias. The data cover companies from 26 countries (Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Luxemburg, Netherlands, New Zealand, Norway, Portugal,

Singapore, South Korea, Spain, Sweden, Switzerland, the United Kingdom and the United States).

To examine the operating performance of those firms after added in (deleted from) the FTSE4Good Global Index, I adopt Barber and Lyon's (1996) approach of using 'level' and 'change' models to estimate the abnormal operating performance. Barber and Lyon (1996) have introduced three important steps in conducting an event study with the purpose of examining operating performance, and these are i) selection of the measurement of operating performance, ii) determining a benchmark against which to measure actual performance (developing a model of expected performance and iii) selection of appropriate statistical tools.

According to Table 4.1 (Appendix A) the first four indicators of operating performance, cash flow per sales, current ratio, and working capital growth are used to explain the firms' efficiency and their ability to manage/generate their liquidity. Similarly, operating margin and ROIC are used to explain the company's profitability. The debt to capital ratio is used to measure the company's financial leverage. This study uses annual operating performances obtained from Thomson Reuters Datastream.

[Insert Table 4.1 about here]

In this study, I compare the operating performance of the FTSE4Good companies against non-FTSE4Good benchmark companies using firm-specific characteristics matching principle. Prior studies have compared the financial performance of CSR against non-CSR benchmarks in several ways. For instance, Lopez et al., (2007) compared the financial performance of CSR company (sample Dow Jones Sustainable Index) against non-CSR (companies from Dow Jones Global index), whereas Demetriades and Aruet (2014) also compared the performance of DJSI against the nonDJSI firms. Similarly, Belighitar et al., (2014) compared the FTSE4Good index return against the FTSE All share and FTSE-100 index. The major weakness of the aforementioned studies is that they suffer from the confounding effect as they do not take into account of other corporate events when analysing the CSR-CFP relationship. The confounding effects occur when the effect or association between the outcome and exposure is distorted by the existence of an additional variable (Austin, 2011; D'Agostino,1998). Hence, the confounding effect in CSR-CFP relationship occurs when the impact of CSR on firm's financial performance is distorted by the presence of other variables such as non-CSR related corporate events such as mergers and acquisition, expansion or business. Also, CSR-CFP relationship is often influenced by subjectspecific characteristics when analysing CSR-CFP relationship (Becchetti et al., 2012; Cheung, 2011; Oberndorfer et al., 2013). Very limited studies have used standardised matching principle in CSR-CFP literature to examine the CSR-CFP relationship such as Shen and Chang (2009) used propensity score matching methodology (PSM) to compare the financial performance of CSR companies against non-CSR firms. The PSM methodology reduces the effect of confounding in an observational study (Austin, 2011), but it does not provide the closest matching to the firm's specific characteristics. The CSR-CFP relationship is greatly affected by the firm's micro-characteristics (Kang et al., 2016; Lee and Grewal, 2004). For example, the firm's investment in CSR and its financial performance depends on the nature industry it is operating, the availability of finance or its size, its growth (value) (Hart, 1995; Brammer and Millington, 2003; Barnett, 2007; Sweeney and Coughlan, 2008). The accounting and finance literature extensively used firm-specific characteristics as a benchmark matching criteria as this increase the validity and reliability of investigation especially in comparing the performance with benchmark

portfolio (Ritter, 1991; Barber and Lyon, 1996; Jegadeesh, 2000; Ngatuni et al., 2007; Andrikopoulos, 2009; Gregory et al., 2010). The use of firm-specific characteristics as matching criteria in CSR-CFP investigation will also increase the reliability of comparison between CSR and non-CSR companies. Hence, in this study I follow the matching criteria based on i) same-industry, ii) same-momentum decile portfolio performance, iii) same-B/M decile portfolio performance, iii) same-size decile portfolio performance, iv) industry and size (two dimensional), and v) industry and B/M (two dimensional).

In order to investigate whether the FTSE4Good Global companies (after addition and deletion) are performing better or worse, it is important to indicate what performance is expected in the absence of that event (Barber and Lyon, 1996). Hence, in line with prior literature (Andrikopoulos, 2009) the abnormal operating performance is calculated as the difference between the operating performance of the sample company and the median operating performance of the matched benchmark companies.

In detail, if I assume that the expected performance of an FTSE4Good Global company i at time t is denoted as while the performance of a non-FTSE4Good Global company i at time t in the benchmark portfolio j (size, industry), etc. then, the operating performance for a 'level' type model is calculated as follows:

$$E(PF4G_{i,t}) = PNF4G_{i,t}^{j}$$

$$\tag{4.1}$$

where, E(..) is the expectation operator, and the superscript *j* is the comparison group =1,2,3,4,5,6 (1=size, 2=industry, 3=momentum, and 4=book to market value, 5=industry-size, 6=industry-book to market).

The abnormal operating performance is the difference between the level of performance of the FTSE4Good Global companies (addition/deletion) and the performance of the benchmark portfolio algebraically illustrated as;

$$APF4G_{i,t}^{L} = PF4G_{i,t} - PNF4G_{i,t}^{J}$$

$$(4.2)$$

where, is the abnormal operating performance for firm i at time t is the level of performance of FTSE4Good Global firm i at time t, and, is the operating performance of benchmark companies i at time t.

Similarly, for a 'change'-type model, the abnormal operating performance can be calculated as the difference between the annual changes in the operating performance of FTSE4Good firms and the benchmark portfolio company, or

$$APF4G_{i,t}^{C} = \frac{PF4G_{i,t} - PF4G_{i,t-1}}{PF4G_{i,t-1}} - \frac{PNF4G_{i,t}^{J} - PNF4G_{i,t-1}^{J}}{PNF4G_{i,t-1}^{J}}$$
(4.3)

$$APF4G_{i,t}^{C} = \Delta PF4G_{i,t} - \Delta PNF4G_{i,t}^{J}$$

$$\tag{4.4}$$

where the abnormal operating performance for the firm *i* at time *t* under change type model is $APF4G_{i,t}^{C}$. The performance of FTSE4Good firm *i* at time *t* and *t-1* are denoted by $PF4G_{i,t}$ and $PF4G_{i,t-1}$ respectively. $PNF4G_{i,t}^{j}$ is the performance of the benchmark portfolio for firm *i* at time *t* and $PNF4G_{i,t-1}^{j}$ is the performance at time *t-1*. In line with prior literature (Loughran and Ritter, 1997; Andrikopoulos, 2009), the models of calculating abnormal operating performance comprise of a series of both level and change models.

[Insert Table4.2 about here]

Table 4.2 presents the models of the firms expected differential operating performance. Following Barber and Lyon's (1996) 'level' and 'change' type model, I calculate the expected differential operating performance between the FTSE4Good firms

and their corresponding non-FTSE4Good benchmark firm portfolio. According to Table 4.2, models 1 to 6 examines the differential operating performance using 'type' model. The 'type' model consists of the items such as operating profit margin, cash flow per sales, total debt to total capital ratio and ROIC. Similarly, models 7 to 12 are used to calculate the differential operating performance under 'change' model. I use working capital growth in 'change' model to calculate differential operating performance, where the differential operating performance is the difference between yearly operating performance change of FTSE4Good firms and annual operating performance change of benchmark portfolio.

In the case where the abnormal operating performance of a firm *i* at *t* under both models is equal to zero, this indicates no difference in changes in operating performance between the FTSE4Good firm and the benchmark portfolio. To test the null hypothesis, that the average abnormal operating performance of FTSE4Good-added firm is equal to zero, I use a parametric test statistic. Assuming that the sample data are normally distributed, then Z-statistics or

$$Z = \frac{\overline{APF4G_{tt}}}{\sigma(APF4G_{tt})/\sqrt{n}}$$
(4.5)

where n is the sample size, is the mean abnormal operating performance of sample firms, is the standard deviation of cross-sectional abnormal performance of sample n. Due to the problem of positive skewness in accounting measures, I use median operating performance, and the testable hypotheses are:

$$H_o: APF4G_{it} = 0$$
 and
 $H_1: APF4G_{it} \neq 0.$

The abnormal operating performance equal to the difference between the operating performance of FTSE4Good and non-FTSE4Good companies. To test this hypothesis, I use the Wilcoxon signed-rank test statistics, algebraically formulated as,

$$Z^* = \frac{T - \bar{X}_T}{S_T} \tag{4.6}$$

The Wilcoxon T value calculated as the ratio of the smaller value of the sum of ranks with a positive difference and the sum of ranks of with negative difference; is the mean, calculated as, n is the number of matched pair added in the investigation, and is the standard deviation, calculated as,

$$S_T = \sqrt{\frac{n(n+1)(2n+1)}{24}} \tag{4.7}$$

In this study, I assume that there is a 95% level of significance, and if the Z-score lies between -1.96 and +1.96¹⁵, I do not reject the null hypothesis. However, I expect to reject the null hypothesis, meaning the operating performance for FTSE4Good Global companies is higher than that of the median operating performance of similar benchmark non-FTSE4Good companies.

4.5. Results

4.5.1. Descriptive Statistics

In this chapter, I examine the impact of corporate social responsibility on firms' operating performance. All tables with my results are presented in appendix A of this chapter. Tables 4.3 and 4.4 present the summary of descriptive statistics for all indicators

¹⁵ for a two-tailed test with 95% confidence level, the critical value lies between -1.96 and +1.96

used to evaluate the operating performance of the sample firms. Due to the existence of outliers in our sample, I adopt a 5% winsorisation. These tables report means, median, standard deviation, maximum, minimum of each measure in each benchmark criteria alongside data normality indicators. For example, according to Table 4.3 in case of the FTSE4Good added companies, both mean and median values are positive and higher than those of the matched benchmark of non-FTSE4Goodcompanies in all the performance measures except for the case of the current ratio and the working capital ratio. On the other hand, Table 4.4 reports a positive median for deleted companies but mostly lower than their benchmark portfolio. For example, according to Table 4.3, the median cash flow per sales of the FTSE4Good companies (11.470) is lower than that of size-matched benchmark portfolio (13.565). Similarly, the median of an operating margin of FTSE4Good (8.755) is also lower than that of the median of size-matched benchmark portfolio (11.130). In all cases, standard deviations for each performance measures under all benchmark portfolio is indifferent near to zero, suggesting that the distribution of the performance returns are highly dispersed. Also, both Table 4.3 and Table 4.4 report high values for Kurtosis across all performance measures and under all benchmark criteria for both addition and deletion companies. This suggests that the sample of our study is not normally distributed.

On average, the descriptive statistics reveal a positive skewness suggesting data are not symmetrical. Our Jarque Bera test results reveal a statistically significant finding (pvalues<0.05) in all cases with positive skewness and a positive kurtosis for the data set. Hence, the use of the Wilcoxon sign rank test for our hypothesis testing is justified by the non-normality of the sample data even though the sample size is relatively large. The Wilcoxon signed-rank test is a non-parametric test normally use to compare the matched, related, paired samples. It is used to compare the median or mean of paired samples and examine the significant differences. Since I am comparing the median of two matched samples (FTSE4Good versus a firm-matched benchmark of non-FTSE4Good), the Wilcoxon Test fits best to compare the difference of our sample.

[Insert Tables 4.3 and 4.4 about here]

The result on the performance differences between FTSE4Good and non-FTSE4Good firm, one sample test and the Wilcoxon signed-rank test are reported in Tables 4.5 and 4.6 for the one-dimensional matching and Tables 4.7 and 4.8 for two-dimensional matching procedures respectively.

4.5.2. Operating performance

Tables 4.5 presents the results of the average difference in performance, for each of the measures using single-dimensional benchmark criteria for the period between t=0 and t+36 months after the addition events. According to Table 4.5, there is a positive difference in the operating performance between FTSE4Good and non-FTSE4Good firms in terms of operating profit margin, cash flow per sales, total debt to capital, and ROIC indicates that FTSE4Good firms perform better than the non-FTSE4Good firms. In most of the comparison criteria, the differential operating performance was significant at 1% level. For example, according to Table 4.5, the differential operating profit margin while compared with similar-industry portfolio are 9.65, 9.544, 7.644 and 7.685 at t=0, t+12, t+24 and t+36 months, respectively.

On the other hand, the result of the current ratio and working capital growth both were mixed. The differential current ratio is negative for the entire study period under the matched industry. According to Table 4.5, the differential current ratio when compared with matched industry at t=0, t+12, t+24 and t+36 are -0.059 (z value of -3.338), -0.029 (z value

of -2.530), -0.046 (z value of -3.044) and -0.018 (z value of -2.720) respectively. Also, similar performance is noticed in the year of addition (t=0) when compared with the matched momentum and the matched PTBV benchmarks. For the rest of the one-dimensional approach, the difference in the current ratio is positive and statistically significant at the 5% level. In the case of working capital growth, the differential working capital growth is positive under matched industry and mostly negative compared with the rest of the benchmark portfolio. The results are statistically significant at 1% level under industry match benchmark. The results are consistent with Demetriades and Auret (2014) and Lopez (2009), report that the operating performance of CSR firms is higher than non-CSR firms measured ROCE and profitability, respectively. Also, our result corroborates Shen and Chang (2009), who concluded that CSR companies perform significantly better than that of non-CSR companies in terms of income to sales ratio, current ratio and profit margin.

I also examine the firms' operating performance after the addition in the FTSE4Good index. According to Table 4.5, the excess operating margin for the entire benchmark criteria and sustains positive throughout the study period. Also, the post addition difference in operating margins decreased immediately after the addition. This decline in the operating margin is due to firms additional spending in CSR initiatives and programmes at the beginning of the addition period. The post addition differential is operating margin rise from t+24 in most of the cases. For example, according to Table 4.5, the post differential operating margin reaches to a maximum 9.886 (t value 11.003 and z-value -14.69) at t+24 under PTBV matched decile portfolio and 2.607 (t value 6.10 and z value -4.90) at t+36 compared with size-matched portfolio decile. Both the values are statistically significant at the 1% level for the one-sample t-test and the Wilcoxon signed-rank test. A similar trend is also reported when comparing to the rest of the benchmark portfolios. The increase in the operating

margin in subsequent years might be due to cost-saving, improved efficiency, efficient use of resources, reduction in the cost of negative events, increased employee productivity (Aldana, 2011; Laczniak and Murphy, 1991; Turban and Greening, 1997), all possibly facilitated by the adoption of CSR programmes. The result of the excess operating profit margin supports the conclusion of Brik et al., (2011); Fombrun and Shanley (1990) that CSR has a positive impact on operating profit margin in the longer term.

[Insert Table 4.5 about here]

Similar to the operating margin, Table 4.5 presents the excess abnormal *cash flow per sale* for the FTSE4Good companies. The differential cash flow per sales remains positive compared to all matched portfolios for the entire year, suggesting FTSE4Good companies perform better than the non-FTSE4Good companies. The cash flow per sales decreased in the first year and then increased in t+24. Theoretically, cash flow per sales increases as net sales increases; if not, it could be either the changes in the selling term or the bad management of the debtors. However, the decline in the operating cash flow could be due to firms spending operating activities such as employee welfare, health and safety programs, training and development (also known as CSR activities).

According to Table 4.5, the post addition differential cash flow per sales increased significantly at t+24 on both when compared with the matched industry and matched PTBV portfolio. However, while compared with size-matched and momentum matched decile portfolio, the excess cash flow per sales significantly increased immediately after the addition and up to t+24 and deteriorated afterwards. According to Table 4.5, the post-addition excess performance reached a maximum of 9.035 (t-value 9.7270) at t+24 under the matched industry. Similarly, compared with remaining matching portfolio, the maximum differential cash flow per sales reached at t+24 with 7.0446 (t-value 11.818),

2.8226 (t-value 6.1016) and 9.6402 (t-value 11.041) under, momentum decile, size-matched and PTBV matched decile portfolio respectively. These increments are statistically significant at the 1% level. Although the post-addition differential cash flow per sales remain positive for the entire period, the worst performance is reported at t=0 under the sizematched portfolio of 2.0436 (t-value 4.7635).

The result for the current ratio in Table 4.5 shows the lowest differential *current ratio* is at t=0 under all benchmark portfolio. This suggests that companies have relatively low cash and cash equivalent on their account as they have invested heavily in CSR initiatives. The post-event differential current ratio for the companies added in the FTSE4Good is negative for the entire event period under industry-matched portfolio and positive under remaining benchmark portfolio. Predominantly, the abnormal current ratio is increasing under all matching benchmark portfolios reaching a maximum at t+36 under all matched portfolio except the case of the matched-momentum where a supreme of 0.0339 (z-value -2.532) reached at t+24.

According to Table 4.5, the abnormal performance reached to a high of 0.1630 (z value -1.863) at t+36 under the size decile portfolio and 0.0207 (z-value -2.845) at t+36 under PTBV matched decile portfolio. Compared with matched industry, the FTSE4Good underperform than the matched benchmark portfolio where the differential current ratios at t=0, t+12, t+24 and t+36 are -0.059 (z-value -3.338), -0.029 (z-value -2.530), -0.047 (z-value -3.044), and -0.018 (z-value -2.743) respectively. However, the underperformance is improving and reaching a minimum of -0.018(z-value -2.720) at t+36, suggesting the improvement after the addition. The improved sign of the current ratio after the addition means CSR companies tend to manage cash and cash equivalent after they are added in the index. The improvement in the current ratio reflects the improved resource utilisation, and

internal management capability (good debtor and creditor management) is the result of good CSR practice (Costa, 2015; Turker, 2015, Turban and Greening, 1997).

The results for the case of the working capital growth show a mixed picture. For example, according to Table 4.5, when compared to their industry-matched peers, the working capital growth is positive but negative when compared to the rest of the matched benchmark portfolios. A negative but statistically insignificant difference in the working capital growth is reported until t+12 under the matched momentum, size and PTBV portfolio of -0.092 (z-value -0.363), -0.17 (z-value -0.672) and -0.096 (z-value -0.378) respectively. Table 4.5 also shows that at t+24 FTSE4Good companies have experienced positive excess working capital growth under all benchmark criteria (0.15 for size-match, 0.066 for momentum-match, 0.063 for size-match and 0.065 for PTBV-match). However, compared to the median of the industry-matched companies, CSR firms perform better with positive excess working capital growth immediately after the event i.e. 0.365 (z-value -4.854) at t=0, 0.260 (z-value -2.840) at t+12, 0.150 (z-value -1.227) at t+24 and 0.135 (z-value -2.743) at t+36. Under matched industry median benchmark criteria, the abnormal working capital growth is ranging from a maximum of 0.3656 (t-value 3.080 significant at the 1% level) at t=0 and a minimum of 0.1354 (t-value 1.408) at t+36. The worst post abnormal working capital is reported under the matched industry-size of -0.170 (z-value -0.672) at t+12.

In terms of gearing, the post addition differential total *debt to total equity ratio* is positive under all matching benchmark criteria. According to Table 4.5, the post-addition excess performance is a maximum 9.6978 (t-statistics 9.777 and z value -8.575) at t+12 when compared with the median of matched PTBV decile portfolio. A minimum of 0.0109 (z-value -1.145) differential total debt to total capital is reported at t+24 under matched industry portfolio, but it is not statistically significant. Also, the post-addition maximum differential total debt to total capital under momentum decile and Size matched decile is reported as 9.0086 (t-value is 9.8019) at t+12 and 2.1740 (t-value is 2.4207) at t+12 respectively. It implies that CSR companies are heavily debt-funded. It does not mean that they are risky companies, instead can be categorised as less risky from a lender point of view. The reason behind the positive abnormal total debt to total capital ratios is that CSR companies are less risky (Porter and Kramer, 2006, 2011; Godfrey, 2009) and with improved credit-worthiness (Attig et al., 2013).

Further, CSR initiative tends to improve the relationship with financiers (Spicer, 1978) and they enjoy the additional source of finance with a lower cost of capital (El Ghoul et al., 2011; Dhaliwal et al., 2012) compared with their non-CSR counterparts. The increase in post-addition sales, improved current ratio, and total assets growth contribute to the decline in the gearing ratio as a company have used their fund to repay. Hence, the declining in total differential debt to the total capital after the addition in the FTSE4Good suggests that the company is managed better and have managed to pay their debt and loans.

Consistent with Demetriades and Auret (2014), Beccheeti et al., (2008) and Brik et al., (2011), the result of this study suggests that the CSR has a positive impact on *ROIC*. Table 4.5 suggests that FTSE4Good companies experience a higher return on invested capital (ROIC) compared to the non-CSR companies by reporting positive excess ROIC compared with all benchmark categories. The excess ROCI is the result of implementing the good CSR practices which improve the internal resources and management capability (Barnett, 2007; Bansal and Roth, 2000) that enhance firm's ability to utilise the capital in profit-generating investments. Compared with all benchmark portfolio, the differential ROIC is positive for the entire study period. Our result suggests that companies tend to

experience higher/improved ROIC performance compared to their non-CSR, which is confirmed by the Wilcoxon signed-rank test and significant at the 1% level in most cases. Further, it supports the result of Salama et al., (2011, p.199) that firms involved in the social responsibility experience positive/higher ROIC. According to Table 4.5, the post addition excess ROIC reaches to a maximum of 4.637 at t+24 compared with industry median portfolio and a minimum of 2.801 (t-value 7.214 and z-value -7.747) compared with matched PTBV decile portfolio. Although the difference in ROIC is positive, it declined at t+12 month and increased afterwards under all the matched benchmark criteria. One of the main reasons for the declining ROIC is the decline in the post addition operating profit and the increase in the debt for the CSR firms. The post addition differential ROIC reaches to a maximum at t+24 when compared with all benchmark criteria. For example, Table 4.5 shows a maximum differential ROIC of 4.636 (t-value 10.390 and z-value -10.430) under industry-matched, 3.254 (t-value 10.338 and z-value -11.092) under momentum-matched, 0.954 (t-value 3.018 and z-value -3.358) under size-matched and 3.304 (t-value 8.809 and z-value -8.988) under PTBV-matched benchmark portfolio.

I further examine the performance using the two-dimensional model to confirm the result from one-dimensional benchmark comparison. Consistent with single-dimensional analysis, FTSE4Good companies also outperform non-FTSE4Good counterpart under both benchmark criteria (matched industry-size and matched industry-PTBV) of two-dimensional analysis. According to Table 4.6, a positive operating profit margin for the entire period when compared with the non-FTSE4Good benchmarks. The differential operating margin reached a maximum of 145.35% (t-value 2.207) statistically significant at the 1% level at t+12 when compared with matched industry-PTBV. Also, a maximum of 3.2339 (t value 1.9682) at t+12 under matched industry- size.

[Insert Table 4.6 about here]

The differential cash flow per sale of companies added in the FTSE4Good remains the positive under all benchmark criteria for entire years. Compared to the matched industrysize, the cash flow per sales deteriorates on the year of addition with an excess of 1.4103 at t=0 from an excess of 2.8084 at t=-12. According to Table 4.6, although improvement is noticeable to 2.8930 (z value of -2.064) in the first year of addition, then has declined in subsequent years. The post-event performance is improved when compared to the matched industry-PTBV benchmark. Table 4.6 reports that the post-addition excess cash flow per sales under matched industry-PTBV benchmark reached to a maximum of 78.337 (t value 2.363 and z-value -7.522) at t+12 and a minimum 16.747 (t-value 3.126 and z-value -6.759) at t+24. In both cases, the result is statically significant at the 1% level under the Wilcoxon sign rank test. Table 4.6 also reports the worst excess performance of added companies when compared with the matched industry-size benchmark of 0.8055 (t value 1.055) at t+32 but is not statistically significant.

The differential current ratio for the companies added in the FTSE4Good is negative for the entire event period under all the matching criteria under two-dimensional analysis. This means that regarding current ratio, CSR firms do not perform better than that of their non-CSR counterpart. Compared with matched industry-size and industry-PTBV, the differential current ratio deteriorates significantly (at 1% level) from t-36 to t=0. Although the differential current ratio is negative in the period between t=0 and t+36, the result report improvement in the underperformance. On average, the post-addition underperformance of current ratio is ranging from a minimum -0.088 (t-value -1.63) at t+36 to a maximum -0.118 (t-value -2.307 and z-value -1.734) at t+12 under matched industry-size. Similarly, when compared with matched industry-PTBVE, the underperformance ranges from a minimum of -0.499 (t-value -5.043, z-value -4.293) at t+12 to a maximum of -1.098 (t-value -4.79) at t=0. Table 4.6 suggests the improvement in the current ratio; the result is significant at 5 % at t+12 and t+24 compared with the matched industry-size.

Moreover, results are statistically significant at 1% level at all point compared against the matched industry-PTBV benchmark. The results of the two-dimensional matching criteria support the conclusion of Shen and Chang (2009, p.145) who report that the mean differential performance regarding current ratio is negative when CSR companies are just compared to non-CSR companies. So, the two-dimensional analysis is consistent with Shen and Chang (2009) and conclude that CSR firms tend to underperform than that of non-CSR companies regarding current ratio. This indicates that CSR companies invest their cash reserve to the CSR initiatives, which may consequently leave less cash and cash equivalent in their account. The improvement of the current ratio after the addition means they tend to manage cash and cash equivalent after they are added in the index.

The result of the working capital growth shows the mixed result for the post-event differential performance under two-dimensional analysis. The result reports mean excess working capital growth compared with matched industry size benchmark is positive before addition in the FTSE4Good index and deteriorate/underperform immediately afterwards. The FTSE4Good added companies underperform regarding working capital growth and consistent with the current ratio compared to the matched industry-size and industry-PTBV benchmark criteria. Table 4.6 shows that at t+24 FTSE4Good companies have experienced positive excess working capital growth of 0.272 (t-value 1.639 and z-value -1.057) at t+24 under matched industry-size and 0.113 (t-value 0.902 and z-value -0.200) at t+24 under matched industry-PTBV. The two-dimensional comparison results for working capital growth are not statistically significant in either of these benchmark criteria.

Consistent with one-dimensional benchmark results, Table 4.6 reports that the post addition differential total debt to total capital ratio is positive under all twodimensional analysis except at t+24 when compared to matched industry-size. The postaddition performance is a maximum 1.98 (t-value 0.660 and z-value -0.5550) at t+36 when compared with matched industry-size. Table 4.6 reports a maximum of 4.412 (tvalue 3.045 and z-value -3.073) at t+36 when compared with matched industry-PTBV. This result is consistent with Salama et al., (2011) and Wang and Qian (2011), who suggest that the gearing ratio is positively associated with CSR. The improvement in gearing ratio is due to the funds available in reduced rates for CSR firms compared to non-CSR counterparts (El Ghoul, 2011; Dhaliwali et al., 2012).

According to Table 4.6, the post-addition differential ROIC is positive under both matched benchmark but only statistically significant when compared with the matched industry-PTBV. The two-dimensional analysis corroborates the results one-dimensional analysis that the FTSE4Good firms perform superior to their matched non-FTSE4Good counterparts. Table 4.6 reports that differential ROIC increased significantly and reached a maximum of 5.529 (t-value 4.902 and z-value -3.075) at t+12. Although, a maximum of 0.503 differential ROIC is reported at t+24 when compared with matched industry-size but not statistically significant. Hence, from the above, the post-addition result is consistent with Kappu and Oikonomou (2016) and Ziegler (2012), who report increased EPS and ROA respectively after the addition in the SRI index.

I also analysed the operating performance of firms after they are deleted from the FTSE4Good index. According to Table 4.7, the differential operating margin for the firms deleted from the FTSE4Good index is positive when compared with all matching benchmark in the entire period except matched size decile portfolio. Compared with the matched size

decile portfolio, the post deletion differential operating margin is negative. According to Table 4.7, the minimum differential operating margin reached to -1.962 (t value -3.045 and z value -2.935) at t+12 under marched size decile portfolio. Table 4.7 shows that differential operating margin is deteriorating significantly at t+12 in case of all the benchmark criteria, implying that firms suffer declining in the operating margin is from 6.727 to 5.312 (t-value 9.370 and z-value -9.895) at t+12 when compared with the momentum-matched portfolio. Similarly, at t+12, under industry-matched, size-matched and PTBV-matched portfolios the differential operation margin is reduced to 4.351 (t-value 5.197 and z-value -8.375), -1.962 (t-value -3.045 and z-value -2.935) and 4.707 (t-value 5.598 and z-value -7.233) respectively.

[Insert Table 4.7 about here]

According to Table 4.7, the post-event excess cash flow per sales for companies deleted from the FTSE4Good index also remain positive in all the benchmark criteria. The differential cash flow per sales is also deteriorating immediately after the deletion under all matching portfolio except size-matched portfolio. Table 4.7 shows the biggest drop in differential cash flow per sales from 6.879 to 5.595 (t-value 3.970 and z-value -6.461) at t+12 when compared with the industry-matched portfolio. The similar trend is evidenced under momentum-matched and PTBV-matched portfolio, the differential cash flow per sales is reduced to 5.514 (t-value 6.705 and z-value -9.024) and 4.620 (t-value 5.202 and z-value -6.911) respectively. However, Table 4.7 also shows that the abnormal cash flow per sales is increased significantly at year t+12 under the size-matched portfolio. This increase in the differential cash flow can be due to the number of reasons such as increased cash collection from debtors/increased working capital. However, the most significantly the decline in the

cash flow per sales is due to a significant decline in sales revenue as firms manifested by low CSR publicity (firms deletion from the SRI index). It is also worth to note that companies have performed better than the benchmark under all benchmark portfolios but in a declining trend.

The differential current ratio is also negative for the entire event period for FTSE4Good deleted companies when compared with PTBV-matched portfolio but positive while compared with the rest of the benchmark portfolios. According to Table 4.7, the differential current ratio is deteriorated immediately after the deletion under industry-matched, size-matched and PTBV-matched portfolio. Table 4.7 shows that the difference in the current ratio is declining from t+24 and reaches a minimum of -0.064 (z-value -2.270) at t+36. Similarly, a minimum differential current ratio of -0.025 (z value -2.526), 0.0585 and -0.094 (z value -3.730) all at t+24 under momentum, size and PTBV matched portfolios respectively.

In the case of working capital growth, Table 4.6 shows the negative differences in working capital growth in most of the benchmark cases, implying that deleted companies are underperforming compared to their benchmark portfolios. However, the differential performance in increasing after the event. This means after the deletion; firms are not spending their cash and cash equivalents (resources) on the CSR programmes, that consequently shows higher liquidity after the event. Table 4.7 shows that the post deletion excess performance reached a maximum of 0.0455 and 0.0310 at t+24 when compared to momentum- matched and PTBV- matched portfolio respectively, but both are not statistically significant. Compared with an industry- matched portfolio, companies have experienced underperformance after the deletion for the entire event period and a maximum underperformance of -0.978 at t+36.

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The differential total debt to total capital ratio is deteriorating significantly at 1% under all benchmark criteria and even negative differential ratio compared with the median of the matched industry benchmark. Table 4.7 shows the declining in post deletion ratio after t+12 under all the benchmark criteria. The difference in total debt to total capital ratio reached to a minimum of -0.065, 13.029, 4.7998, and 13.342 when compared with the median of matched industry, momentum, matched the size and matched PTBV portfolio respectively. All these values are statistically significant at the 1% level. It can be noticed that the declining trend of the differential gearing ratio is more statistically significant after the deletion. Such a significant reduction in the excess debt to capital ratio may be due to the loss of the lender confidence and increased risk when companies are deleted from the CSR index.

According to Table 4.7, the post-event abnormal ROIC is negative for the entire period when compared with size-matched decile portfolio but are positive when compared with the rest benchmark criteria. The differential ROIC decreased significantly at t+12 under industry-matched and PTBV-matched benchmark portfolios. However, the improvement is noticed afterwards in both cases and reached to a maximum of 3.0015 (t-value 4.4534 and z-value -5.229) and 1.906 (t-value 3.059 and z-value -4173) at t+36 when under industry-matched and PTBV-matched portfolio respectively. Similarly, Table 4.7 reports that the post deletion differential ROIC is also improving significantly under momentum and size-matched portfolios. Such improvement in the differential ROCI could be due to the reduced finance cost and significantly declining in company borrowings.

I further examine the operating performance using the two-dimensional model to confirm the result from one-dimensional benchmark comparison. Table 4.8 presents the

results of the average difference in performance, for each of the measures using twodimensional benchmark criteria for the period between t=0 and t+36 months after the deletion events. According to Table 4.8, the difference in operating profit margin is negative throughout the study period but only statistically significant at t=0. Although, table 4.8 reports improvement in operating performance and reached to -1.815 (t-value -1.872 and z-value -1.999) at t+12, for the rest, no significant changes after the deletion event under the matched industry-size benchmark. On contrary, although the differential operating margin is positive when compared with industry-PTBV matched benchmarks, Table 4.8 reports a significant decline in differential operating margin from 38.470 to 20.355 (t-value 3.264 and z-value -5.200) at t+12 months after the deletion event and reached to a minimum of 18.430 (t-value 2.443 and z-value -4.468) at t+36 months.

Like operating margin, Table 4.8 presents negative differential cash flow per sales under industry-size matched benchmark but reports positive differential cash flow per sales when compared with industry-PTBV matched counterparts. According to Table 4.8, the difference in cash flow per sales deteriorating significantly after the event at t+12 months under both benchmark criteria. For example, difference in cash flow per sales declines from -1.143 to -2.320 (t-value -2.306 and z-value -2.606) under matched industry-size and from 33.769 to 6.102 (t-value 2.105 and z-value -3.729) under industry-PTBV matched benchmarks.

In the case of current ratio, Table 4.8 reports the negative difference in current ratio under both benchmark criteria. Under matched industry-PTBV, the difference in current ratio declined significantly from -0.432 to -0.529 (t-value -4.243 and z-value - 3.101) at t+12 months. Same pattern is evidence under matched industry-size at t+24 months where difference in current ratio declined to -0.269 (t-value -3.580 and z-value -

2.497). Consistent with the current ratio, the difference in working capital growth is also negative under both benchmarks. Under matched industry-PTBV, the post-event difference in working capital growth declined significantly from -0.443 to -0.919 (t-value -2.121 and z-value -2.060) at t+12 and no significant changes afterwards. However, under matched industry-size, Table 4.8 reports no significant changes after the deletion from the FTSE4Good index.

According to Table 4.8, the difference in total debt to total capital is positive under both benchmark criteria. Table 4.8, reports that post-event gearing ratio is declining significantly throughout the study period and reaches to a minimum of 4.024 (t-value 2.158 and z-value -2.599) at t+24 and 6.126 (t-value 2.589 and z-value -2.542) under matched industry-size and matched industry-PTBV benchmark criteria respectively.

Table 4.8 reports the negative difference in ROIC under matched industry-size and positive under matched industry-PTBV. However, the difference in ROIC is declining significantly at both benchmark criteria. For example, according to table 4.8, at t+12 months the difference in ROIC reduced from -2.953 to -3.043 (t-value -4.415 and zvalue -3.376) under matched industry-size and from 2.926 to 2.842 (t-value 2.312 and zvalue -2.682) under matched industry-PTBV. The post-event operating performance under the two-dimensional analysis corroborates the result of one-dimensional. Overall, that operating performance deteriorates significantly after deletion from the FTSE5Good index.

4.5.3. Discussion

In this study, I examine the impact of CSR index membership on the firms' operating performance, using several accounting measures such as *operating margin*,

cash flow per sales, current ratio, working capital, total debt to total capital and ROIC. The overall result suggests the FTSE4Good companies perform significantly higher in most cases when they are compared with their non-FTSE4Good-matched counterparts. Tables 4.5 and 4.6 report post-addition differential performance is positive and statistically significant at 5% level in most cases for *cash flow per sales, operating margin, ROIC, and total debt to total capital* when compared to all matched benchmark criteria. Therefore, the first null hypothesis (*H1*) is accepted. Alternatively, the operating performance of companies added in the FTSE4Good index. Our results are consistent with Shen and Chang (2009) who test the performance of CSR companies with a matched benchmark of non-CSR companies and suggest that CSR firms perform better regarding all ROA, ROE, operating profit margin and gross margin indicators. Unlike Lopez et al., (2007) and Demetraides and Auret (2014) this study confirms that CSR firms outperform their non-CSR benchmarks regarding operating margin, ROCI, gearing and cash flow per sales indicators.

In Tables 4.5 and 4.6, I also report the negative difference in the performance between CSR and non-CSR firms regarding *current ratio*, *working capital growth*. In our views, this underperformance can be due to the significant commitment of resources and investment needed to pursue the CSR related programs. Although the difference in the *current ratio and working capital growth* are all negative, they tend to increase after the addition in the FTSE4Good index. The most significant improvement in the post-addition operating performance for CSR firms is reported up to t+24 and decline afterwards. In a few occasions, the performance difference was increasing during the entire period of 36 months. Particularly, the operating performance of the *cash flow per sales, current ratio*, sales growth, operating margin, assets growth and Debt to capital indicators has increased significantly for the first year after the CSR index additions. The analysis of liquidity position (current ratio, cash flow per sales, working capital) provides new insight into the CSR-CFP relationship. I find that the liquidity ratios have improved significantly after the addition in the CSR index. For example, the post-addition differential cash flow per sales and the current ratio under the one-dimensional comparison are all positive. Table 4.5 reports that the incremental cash flow per sales reached a maximum of 9.6402, and a difference in the *current ratio* reaches a maximum of 0.1630 when compared to their matched PTBV decile portfolio and size decile portfolio respectively. Both these values were statistically significant at the 1% level. Similar results are also reported for differential cash flow per sales under the twodimensional approach. However, FTSE4Good companies tend to underperform in all cases when compared with their two-dimensional benchmark. An improvement in the differential current ratio is also reported after addition. Also, the working capital growth is increasing after the addition in the FTSE4Good index. The improvement in working capital growth is not statistically significant. The current study also reveals that post addition differential total debt to total capital ratio is positive in all benchmark criteria. The result of this analysis suggests that FTSE4Good companies tend to enjoy an additional source of capital for their investment needs. It is possible that the significant difference in the debt to capital ratio is the result of stakeholders' (lender, financier, investor) confidence towards CSR companies documented in prior literature (Spicer, 1978; Weber and Gladstone, 2014; Brammer and Pavelin, 2006).

On the other hand, especially with regards to the index membership, studies in the past have not examined the impact of CSR index deletion on firms' operating

performance. The result Tables 4.7 and 4.8 report a significant deterioration on the performance after the deletion from the FTSE4Food index which is consistent with Beccheeti et al., (2008) who suggest that the exit from the social index could produce a substantially adverse effect on ROE and ROIC. Hence, the confirmation of the third hypothesis (H3) means the operating performance of companies deleted by the FTSE4Good index deteriorates after the event. Deleted firms still perform better than that of their matched counterparts even after the deletion from the FTSE4Good index. Hence, even though the companies are deleted because of not maintaining CSR level, the existence of a positive difference in performance.

The analysis of this study is consistent with the instrumental stakeholder theory, which asserts that companies' participation in the CSR related initiatives can lead to improved financial performance (Donaldson and Preston, 1995; Jones, 1995). Especially, Jones (1995) argues that firms control their agency and transaction costs by improving stakeholder relationships. For the stakeholders, news such as any corporate announcement or changes in the index is a key source for evaluating the firms' performance. Stakeholders tend to react to the related information as it can have a significant impact on firms' long-term performance. The positive difference in the operating performance of the FTSE4Good companies may be perceived as a way to improve stakeholder confidence.

Our results are consistent with previous studies (Demetriades and Auret, 2014; Shen and Chang, 2009; Lopez, 2007) that examine the performance of CSR and non-CSR companies, and suggests that the CSR firm performs better than the non-CSR firms. Compared to prior studies (Demetriades and Auret, 2014; Lopez, 2007), I use more robust comparison approach of firm's specific/micro-characteristics for selecting the matching benchmarks to ensure the sterilisation of CSR effect. By doing so, I control the sample to improve the reliability of the analysis of the CSR impact. For example, comparing the performance of the FTSE4Good company with companies from the same industry, size, etc. I provide a more robust analysis. Shen and Chang (2009) used sales, assets, income factors and management abilities as a matching criterion. However, not all these factors necessarily reflect firms' intensity of implementing CSR. For example, companies with similar sales, income and similar management structure/abilities do not necessarily determine the level of CSR strategies. On the contrary, CSR intensity can vary by factors such as a type of industry they are operating, the company size and growth (Waddock and Graves, 1997; Stanwick and Stanwick, 1998; Brammer and Millington, 2008;). I do not also limit our analysis to CSR against non-CSR firms, but I further extend our analysis in the examination of both cases of addition/deletion from the CSR index. Compared to Becchetti et al., (2008), the current study not only examines the long-term effect of CSR deletions but also compare the performance of CSR-deletion to their matched benchmark.

4.6. Conclusion

This study extends the current literature on the link between the CSR-CFP by examining the impact of CSR on firms' long-term operating performance. I use the FTSE4Good index's additions and deletions as a proxy for CSR performance, where addition in the index can reflect high CSR performance and vice versa. Firms' association with a socially responsible index (SRI) is a strong indication of their commitment, dedication and investment to the environment, society and community. Hence, consistent with the instrument stakeholder theory, I argue that the operating performance of companies added in the FTSE4Good index is higher than that of the matched firms that are not listed in the FTSE4Good index. By utilising a large cross-country data sample, our result concludes that the CSR firms perform better than their non-CSR counterparts. Regarding the addition effect, I find the mixed result (some indicators increase significantly, but others are not). However, in the case of deletions, this event can have a detrimental effect on the operating performance of the firm as the performance difference appears to deteriorate significantly in the period after the deletion from the socially responsible index. In my view, this decline in operating performance is attributed to stakeholders potentially penalising companies on negative CSR performance through; the consumer is boycotting their products and services, employees leaving jobs, investor withdrawing their funds, suppliers stop supplies, regulatory bodies imposing huge fines, etc.

The results of this study have important implication for several interested parties and organisations. Prior literature suggests that stakeholders tend to follow CSR related information very carefully and react accordingly. Hence, positive changes will be welcomed (rewarded), and any unfavourable changes in CSR-performance will be punished heavily. The results of this study report, for example, a positive change in the liquidity and efficiency for the CSR firms. Such variations in firms' liquidity performance can lead to increased confidence in their suppliers and finance providers. From an investors' point of view, information regarding changes in the CSR index membership not only affects current performance but can also affect future performance and prospect of such firms.

On the contrary, the significant decline in the operating performance following the deletions from the CSR index can adversely affect the stakeholders' trust, confidence and the firms' overall reputation. Hence, one of the most valuable lessons for corporate executives is that consistency in the CSR engagement/investment is vital. Firms' engagement in CSR-related initiatives and investment should be viewed as a cornerstone of long-term business success.

Appendix A

Accounting indicators	Description
Operating Profit Margin	Operating profit margin is the percentage of a firm's EBIT relative to net sales reported by company i at year t , calculated as;
	$OPM_{i,t} = (EBIT_{i,t}/NS_{i,t})X \ 100$
Operating Cash Flow per Sales	Operating cash flow per sale is the ratio of operating cash flow divided by the net sales of a company i at year t and calculated as:
Current Ratio	$OPCFPS_{i,t} = OPCF_{i,t}/NS_{i,t}$ The current ratio is the ratio of current assets divided by the current liabilities of a company <i>i</i> at year <i>t</i> and calculated as
Working Capital Growth	$CR_{i,t} = CA_{i,t}/CL_{i,t}$ It is defined as the increase in the reported working capital of a firm <i>i</i> at year <i>t</i> and calculated as
	$\Delta WC_{i,t} = (WC_{i,t} - WC_{i,t-1})/WC_{i,t-1}$
Total Debt Total Capital	Total debt to total capital is the percentage of a firm's total debt relative to total capital reported by company <i>i</i> at year <i>t</i> , calculated as;
Return on Invested Capital	$TDTC_{i,t} = TD_{i,t}/TC_{i,t}$ The Return on Invested Capital is the percentage of firms' operating profit (EBIT) to total capital (debt + shareholder equity) of a firm <i>i</i> at year <i>t</i> , calculated as $ROIC_{i,t} = EBIT_{i,t}/TC_{i,t}$

Model	Abnormal operating performance	Description/comparison group
1	$APF4G_{i,t}^{L} = PF4G_{i,t} - PNF4G_{i,t}^{1}$	Level of difference to matching industry median.
2	$APF4G_{i,t}^{L} = PF4G_{i,t} - PNF4G_{i,t}^{2}$	Level of difference to matching industry-size.
3	$APF4G_{i,t}^{L} = PF4G_{i,t} - PNF4G_{i,t}^{3}$	Level of difference to matching industry-B/M.
4	$APF4G_{i,t}^{L} = PF4G_{i,t} - PNF4G_{i,t}^{4}$	The level of difference to matching size decile portfolio.
5	$APF4G_{i,t}^{L} = PF4G_{i,t} - PNF4G_{i,t}^{5}$	The level of difference to matching B/M decile portfolio.
6	$APF4G_{i,t}^{L} = PF4G_{i,t} - PNF4G_{i,t}^{6}$	The level of difference to matching Momentum decile portfolio.
7	$APF4G_{i,t}^{C} = \Delta PF4G_{i,t} - \Delta PNF4G_{i,t}^{1}$	The difference between yearly operating performance change of sample firm and annual operating performance change of matching industry median.
8	$APF4G_{i,t}^{C} = \Delta PF4G_{i,t} - \Delta PNF4G_{i,t}^{2}$	The difference between yearly operating performance change of sample firm and annual operating performance change of matching industry-size.
9	$APF4G_{i,t}^{C} = \Delta PF4G_{i,t} - \Delta PNF4G_{i,t}^{3}$	The difference between yearly operating performance change of sample firm and annual operating performance change of matching industry-B/M.
10	$APF4G_{i,t}^{C} = \Delta PF4G_{i,t} - \Delta PNF4G_{i,t}^{4}$	The difference between yearly operating performance change of sample firm and annual operating performance change of size decile portfolio.
11	$APF4G_{i,t}^{C} = \Delta PF4G_{i,t} - \Delta PNF4G_{i,t}^{5}$	The difference between yearly operating performance change of sample firm and annual operating performance change of B/M decile portfolio.
12	$APF4G_{i,t}^{C} = \Delta PF4G_{i,t} - \Delta PNF4G_{i,t}^{6}$	The difference between yearly operating performance change of sample firm and annual operating performance change of Momentum

Table 4. 2 Models of calculating abnormal operating performance

	Size-ma			-matched	Momentur		PTBV-1			Size matched		& PTBV
	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH
Cash Flow	v Per Sales											
Mean	14.14	12.43	14.16	7.42	14.12	8.07	14.00	6.52	13.71	13.74	13.98	-7.16
Median	12.41	11.71	12.19	6.51	12.34	7.09	12.27	7.27	11.57	11.47	11.67	9.01
Std. Dev.	12.07	4.01	17.03	10.89	16.80	6.00	16.61	10.04	14.53	13.90	15.51	153.53
	0.49	0.75	-2.06	-7.99	-2.10	-0.74	-2.23	-5.84	-1.16	0.50	-1.90	-10.43
Kurtosis	5.49	3.49	33.87	118.81	34.14	28.80	35.32	47.88	31.50	12.96	43.29	119.41
Jarque-	179.61***	63.04***	23554.44***	332012.2***	25010.93***	16914.54***	26965.21***	54481.4***	16489.53***	2019.76***	28735.66***	245362.4***
n	605	605	583	583	608	608	608	608	484	484	421	421
Current R	atio											
Mean	1.55	1.42	1.59	1.56	1.60	1.55	1.61	1.61	1.54	1.78	1.54	2.68
Median	1.36	1.43	1.37	1.54	1.36	1.49	1.36	1.49	1.38	1.39	1.37	1.51
Std. Dev.	0.77	0.21	0.84	0.46	0.90	0.28	0.92	0.46	0.75	1.26	0.75	6.15
	1.33	-0.16	1.48	0.57	1.78	0.51	1.84	1.70	1.20	2.17	1.23	8.7
Kurtosis	5.31	3.37	5.79	3.60	7.20	3.89	7.51	8.69	4.69	8.29	5.01	90.50
Jarque-	264.38***	4.92***	337.01***	33.70***	650.06***	38.76***	727.88***	941.41***	149.27***	810.19***	157.77***	124031.9***
'n	511	511	489	489	515	515	514	514	416	416	374	374
Total Debt	t to Total Ca	pital										
Mean	38.01	34.94	38.34	27.62	38.27	29.34	38.26	29.21	37.45	37.84	37.28	32.60
Median	37.25	35.43	37.46	27.01	37.25	28.03	37.23	28.93	36.98	34.31	37.09	30.81
Std. Dev.	25.64	8.97	25.88	16.95	26.08	11.20	26.11	13.34	25.36	29.50	25.84	26.44
	0.26	0.49	0.26	0.71	0.33	0.65	0.33	0.31	0.30	1.86	0.29	0.52
Kurtosis	2.24	4.38	2.25	3.83	2.47	4.55	2.46	3.71	2.37	13.12	2.23	2.52
Jarque-	21.23***	72.52***	19.35***	61.72***	18.33***	102.34***	18.38***	22.33***	15.44***	2332.46***	16.62***	23.65***
'n	603	603	550	550	605	605	604	604	482	482	433	433
Operating	Margin											
Mean	11.89	10.03	12.14	3.22	12.02	5.56	12.00	3.29	11.71	11.43	11.61	-13.43
Median	9.76	9.08	9.68	4.79	9.73	5.28	9.71	5.81	9.42	9.50	9.34	7.03
Std. Dev.	10.63	3.70	12.04	19.51	12.27	6.50	12.27	15.37	11.31	11.45	11.06	187.3
	1.05	0.52	1.09	-9.17	1.27	-3.64	1.27	-6.91	1.14	-1.85	1.05	-11.47
Kurtosis	5.84	2.56	7.27	98.84	10.08	46.95	10.09	56.86	7.66	30.32	7.61	144.3
Jarque-	313.73***	32.52***	562.05***	232495.1***	1429.66***	50192.61***	1436.99***	78203.29***	545.02***	15356.67***	454.45***	363848.3***
'n	604	604	586	586	607	607	607	607	485	485	426	420

Table 4. 3 Descriptive statistics of FTSE4Good index companies and their non-FTSE4Good benchmark at the year of addition.

Table 4.3(cont.)

	Size-ma	atched	Industry	-matched	Momentun	n-matched	PTBV-r	natched	Industry & S	ize matched	Industry	& PTBV
	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH
ROIC												
Mean	7.67	6.96	7.51	3.78	7.65	4.62	7.65	4.29	7.98	7.78	7.73	5.64
Median	6.32	6.05	6.06	4.24	6.28	4.46	6.30	5.14	6.13	6.10	5.91	6.18
Std. Dev.	14.16	3.07	14.41	5.08	14.14	4.16	14.16	7.20	13.37	8.33	11.89	15.87
Skewness	-0.71	0.58	-0.71	-2.10	-0.70	-2.03	-0.70	-2.81	1.24	0.91	3.89	-2.35
Kurtosis	42.11	2.69	41.74	10.34	42.13	14.85	42.07	14.97	43.37	7.56	39.21	20.60
Jarque-Bera	37708.43***	35.30***	34681.61***	1653.02***	37880.63***	3877.37***	37693.08***	4313.09***	30736.39***	453.99***	22341.39***	5405.54***
n	591	591	554	554	593	593	592	592	451	451	391	391
Working Ca	pital Growth											
Mean	-0.23	0.02	-0.15	0.01	-0.20	0.00	-0.23	0.00	-0.17	-0.08	-0.18	-0.31
Median	0.01	0.05	0.02	0.04	0.01	0.02	0.01	0.03	0.01	0.01	0.02	0.03
Std. Dev.	1.79	0.10	1.55	1.83	1.68	0.11	1.79	0.17	1.48	1.44	1.69	4.05
Skewness	-3.80	-1.26	-2.84	-2.44	-3.53	-1.72	-3.79	7.07	-1.83	-0.44	-2.84	-6.00
Kurtosis	32.70	11.72	29.08	66.34	33.23	9.99	32.66	108.77	21.73	15.67	26.94	70.45
Jarque-Bera	19769.95***	1735.28***	14067.04***	79694.01***	20438.33***	1285.26***	19797.77***	240536.5***	6085.72***	2696.51***	8879.87***	68836.54***
'n	505	505	474	474	509	509	507	507	401	401	352	352

	Size-ma		Industry		Momentun			matched	Industry	& Size	Industry	& PTBV
	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH
Cash Flow Pe												
Mean	13.46	13.218	12.856	6.67	13.258	6.965	13.214	6.9	12.639	14.007	13.076	-10.527
Median	11.47	13.565	10.79	6.41	11.56	7.47	11.47	8.35	10.31	11.78	10.52	8.43
Std. Dev.	16.446	4.255	17.144	12.763	16.862	8.049	16.866	11.658	15.169	12.939	15.068	144.19
Skewness	3.225	0.461	2.692	-4.239	2.636	-2.306	2.641	-5.844	3.289	-0.435	4.459	-8.326
Kurtosis	35.063	3.754	32.156	34.177	32.456	12.5	32.449	46.572	40.552	10.784	44.429	73.935
Jarque-Bera	13503.65***	17.9***	10841.96***	12874.71***	11603.21***	1445.16***	11599.81***	26372.49***	13989.49***	590.5***	14965.82***	44241.85***
n	303	303	296	296	311	311	311	311	231	231	200	200
Current Rati												
Mean	1.679	1.526	1.639	1.566	1.673	1.596	1.674	1.738	1.626	1.832	1.619	2.144
Median	1.455	1.53	1.445	1.54	1.455	1.6	1.45	1.66	1.435	1.51	1.46	1.71
Std. Dev.	0.895	0.244	0.797	0.45	0.888	0.268	0.887	0.483	0.75	1.134	0.722	1.678
Skewness	1.559	0.56	1.381	0.67	1.588	0.038	1.588	0.49	1.128	1.715	1.213	2.329
Kurtosis	6.157	4.168	5.35	4.299	6.284	3.3	6.298	6.559	4.238	6.252	4.673	9.618
Jarque-Bera	216.56***	28.81***	140.22***	37.13***	233.05***	1.07	234.97***	152.7***	55.17***	186.21***	64.81***	488.44***
n	264	264	256	256	268	268	269	269	200	200	179	179
Total Debt to	Total Capital											
Mean	40.402	33.551	40.901	23.448	39.779	26.36	39.867	25.084	39.663	35.776	39.279	31.163
Median	39.58	33.77	39.82	25.13	39.742	25.93	39.75	24.81	39.22	33.18	39.16	26.365
Std. Dev.	26.327	7.942	26.58	13	23.899	10.922	23.807	12.515	25.029	27.027	23.797	28.904
Skewness	1.203	0.498	1.215	0.238	0.196	0.544	0.201	0.406	0.823	0.611	0.196	0.619
Kurtosis	8.126	4.742	8.092	3.301	2.412	4.222	2.424	4.066	5.898	2.719	2.452	2.799
Jarque-Bera	410.14***	51.47***	389.94***	3.88	6.52**	34.9***	6.43***	23.42***	107.4***	15.21***	3.94	13.61***
n	307	307	294	294	313	313	313	313	232	232	208	208
Operating M												
Mean	9.082	10.634	8.605	3.57	9.254	3.33	9.202	3.55	9.214	11.266	8.536	-9.531
Median	8.755	11.13	8.32	4.235	8.875	4.828	8.845	5.86	8.32	8.5	8.12	5.52
Std. Dev.	13.406	3.787	13.975	11.631	11.922	10.361	11.917	14.172	11.304	10.479	11.72	138.46
Skewness	-2.922	-0.086	-2.829	-4.841	-1.069	-3.148	-1.06	-6.464	-0.199	1.314	-1.585	-9.84
Kurtosis	28.801	2.379	25.706	41.187	11.71	14.656	11.714	51.127	7.476	5.267	14.093	101.404
Jarque-Bera	8864.5***	5.26*	6730.54***	19076.6***	1038.97***	2266.91***	1038.73***	32076.76***	191.02***	113.91***	1103.58***	83502.92***
n	304	304	295	295	310	310	310	310	227	227	199	199

Table 4. 4 Descriptive statistics of FTSE4Good index companies and their non-FTSE4Good benchmark at the year of deletion.

Tal	ble	4.4	(cont.)
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	Size-ma	tched	Industry	-matched	Momentum	-matched	PTBV-n	natched	Industry & S	ize matched	Industry	& PTBV
	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH	FTSE4G	BENCH
ROIC												
Mean	4.689	7.828	4.425	3.561	4.631	3.295	4.603	3.898	5.523	8.41	4.292	2.15
Median	5.63	8.3	5.38	4.72	5.585	4.195	5.49	5.363	5.82	7.34	5.115	5.15
Std. Dev.	11.819	3.303	12.013	5.769	16.421	5.684	16.414	7.971	10.455	9.64	10.39	19.308
	-1.288	0.068	-1.229	-1.924	0.311	-2.051	0.316	-3.504	-0.627	0.548	-1.792	-4.58
Kurtosis	8.132	2.434	7.733	7.623	37.389	8.236	37.455	19.059	6.654	5.078	9.52	33.468
Jarque-	399.69***	4.11	337.8***	429.65***	14688.62***	549.23***	14745.06***	3811.63***	133.69***	49.46***	415.15***	7591.33***
п	291	291	285	285	298	298	298	298	215	215	180	180
Working (Capital											
Mean	-0.244	0.034	-0.23	0.133	-0.262	-0.031	-0.262	-0.001	-0.273	0.167	-0.149	0.128
Median	-0.027	0.048	-0.021	-0.009	-0.032	0.009	-0.032	0.022	-0.021	0.044	-0.034	0.024
Std. Dev.	3.067	0.091	3.104	5.945	3.052	0.135	3.052	0.152	3.491	1.579	2.622	0.939
	-4.524	-0.163	-4.507	3.125	-4.509	-1.505	-4.509	2.904	-4.099	0.482	0.042	2.674
Kurtosis	60.44	12.055	59.544	79.654	60.626	6.666	60.626	39.794	48.359	19.433	28.443	24.725
Jarque-	36347.84***	882.51***	34151.47***	61613.77***	37139.15***	245.62***	37139.46***	15147.5***	16997.37***	2167.71***	4504.33***	3483.1***
n	258	258	250	250	262	262	262	262	192	192	167	167

Time	Indu	strv Median-r	natched	Μ	lomentum-ma	tched		Size-match	ed		PTBV-match	ed
	u-diff.	t-value	Sign Z test	u-diff.	t-value	Sign Z test	u-diff.	t-value	Sign Z test	u-diff.	t-value	Sign Z test
Operatir	ng Margin											
t=0	9.650	11.390***	-16.899***	6.941	14.167***	-15.787***	2.029	5.506***	-2.831***	9.336	12.836***	-15.777***
t+12	9.544	8.548***	-15.730***	6.878	12.920***	-14.963***	1.732	4.345***	-2.299*	9.163	11.555***	-14.836***
t+24	7.644	13.176***	-15.346***	6.467	14.824***	-14.817***	2.465	6.037***	-4.453***	9.886	11.003***	-14.688***
t+36	7.685	11.158***	-14.499***	6.163	11.431***	-13.508***	2.607	6.103***	-4.902***	8.466	10.338***	-13.501***
Cash Flo	ow Per sale	S										
t=0	10.614	8.241***	-15.854***	6.609	11.825***	-14.850***	2.043	4.763***	-3.362***	8.459	12.645***	-15.542***
t+12	8.82	9.407***	-15.391***	6.767	12.760***	-15.110***	2.389	6.101***	-4.296***	8.208	12.235***	-14.856***
t+24	9.039	9.727***	-14.326***	7.044	11.818***	-14.346***	2.822	6.444***	-4.947***	9.64	11.041***	-14.418***
t+36	8.949	6.312***	-13.142***	6.513	6.984***	-13.731***	2.63	5.022***	-4.254***	8.126	7.766***	-13.488***
Current	Ratio											
t=0	-0.059	-1.949**	-3.338***	-0.003	-0.102	-3.550***	0.108	3.820***	-1.109	-0.068	-1.851	-4.541***
t+12	-0.029	-0.822	-2.530**	0.014	0.425	-2.395**	0.156	4.851***	-1.928	-0.02	-0.577	-3.230***
t+24	-0.047	-1.26	-3.044***	0.033	0.949	-2.532**	0.151	4.555***	-1.980*	0.002	0.052	-2.720***
t+36	-0.018	-0.508	-2.720***	0.015	0.407	-2.800***	0.163	4.650***	-1.863	0.02	0.503	-2.485*
Working	g Capital G	rowth										
t=0	0.365	3.080***	-4.854***	-0.18	-2.442**	-2.350**	-0.228	-2.990***	-3.823***	-0.201	-2.661***	-2.293**
t+12	0.26	1.63	-2.840***	-0.092	-0.86	-0.363	-0.17	-1.304	-0.672	-0.096	-0.89	-0.378
t+24	0.15	0.797	-1.227	0.066	0.764	-0.100	0.063	0.719	-0.091	0.065	0.744	-0.029
<u>t+36</u>	0.135	1.408	-2.743***	-0.074	-1.066	-1.452	-0.078	-1.122	-1.295	-0.081	-1.158	-1.648
Total De	ebt to Total	Capital										
t=0	-0.001	-0.04	-0.82	9.587	10.800***	-9.425***	2.59	3.040***	-2.292*	10.251	10.635***	-9.606***
t+12	0.014	1.164	-0.88	9.008	9.801***	-8.399***	2.174	2.420**	-1.413	9.697	9.776***	-8.575***
t+24	0.01	0.745	-1.145	8.062	8.487***	-7.289***	1.364	1.471	-0.641	8.686	8.696***	-7.561***
t+36	0.027	2.368**	-3.449***	8.176	8.224***	-6.768***	1.435	1.497	-0.639	8.671	8.341***	-7.184***
ROIC												
t=0	5.055	9.636***	-11.179***	3.039	7.073***	-10.872***	0.444	0.982	-1.045	3.568	6.693***	-8.222***
t+12	4.342	11.984***	-12.011***	2.971	10.662***	-11.152***	0.791	2.841***	-2.515**	3.023	8.545***	-8.134***
t+24	4.636	10.390***	-10.439***	3.254	10.338***	-11.092***	0.954	3.081***	-3.358***	3.204	8.809***	-8.988***
t+36	4.482	9.206***	-9.974***	2.994	8.803***	-9.501***	0.876	2.957***	-3.059***	2.809	7.213***	-7.471***

Table 4. 5 One dimensional mean differential operating performance of companies added in the FTSE4Good Global Index.

Time	Μ	atched industry and s	size	Ma	tched industry and P	TBV
	μ-diff.	t-value	Sign Z test	μ-diff.	t-value	Sign Z test
Operating Mar	gin					
t=0	1.351	2.129**	-1.642	33.494	4.503***	-8.306***
t+12	3.233	1.968**	-1.294	145.352	2.207**	-6.736***
t+24	1.33	1.423	-1.887*	20.283	3.481***	-6.049***
t+36	1.091	1.348	-1.229	49.945	2.038**	-6.488***
Cash Flow Per	sales					
t=0	1.41	1.96*	-1.877	26.233	3.840***	-8.100***
t+12	2.893	1.906*	-2.064**	78.337	2.363**	-7.522***
t+24	1.431	1.553	-1.139	16.747	3.126***	-6.759***
t+36	0.805	1.055	-0.863	37.884	2.216**	-7.051***
Current Ratio						
t=0	-0.274	-5.141***	-3.355***	-1.098	-4.799***	-5.484***
t+12	-0.101	-2.176**	-1.528	-0.499	-5.043***	-4.293***
t+24	-0.118	-2.307**	-1.734	-0.666	-4.707***	-4.246***
t+36	-0.088	-1.634	-1.295	-0.543	-5.259***	-4.116***
Working Capit	al Growth					
t=0	-0.094	-1.097	-1.85*	0.124	0.713	-1.17
t+12	-0.114	-0.904	-0.587	-0.109	-0.764	-1.408
t+24	0.113	0.902	-0.2	0.272	1.639	-1.057
t+36	-0.206	-1.454	-1.486	-0.037	-0.356	-1.015
Total Debt to T	otal Capital					
t=0	1.189	1.019	-1.78	5.358	4.478***	-4.770***
t+12	1.537	1.309	-1.504	5.243	3.941***	-4.117***
t+24	-0.642	-0.504	-0.048	3.619	2.499**	-3.166***
t+36	1.984	0.66	-0.55	4.412	3.045***	-3.073***
ROIC						
t=0	-0.027	-0.055	-0.049	5.477	5.632***	-3.067***
t+12	0.216	0.572	-0.162	5.529	4.902***	-3.075***
t+24	0.503	1.253	-1.51	5.461	4.521***	-2.673***
t+36	0.037	0.094	-0.575	2.769	3.955***	-3.195***

Table 4. 6 Two-dimensional mean differential operating performance of companies added in the FTSE4Good Global Index.

Time	Indus	try Median-n	natched	Мо	mentum-mat	ched		Size-matche	d]	PTBV-match	ed
	μ-diff.	t-value	Sign Z test	µ-diff.	t-value	Sign Z test	μ-diff.	t-value	Sign Z test	μ-diff.	t-value	Sign Z test
Operating I	Margin											
t=0	5.160	4.961***	-9.358***	6.727	10.297***	-11.203***	-1.296	-1.854	-2.523**	6.395	6.516***	-8.323***
t+12	4.351	5.197***	-8.375***	5.312	9.370***	-9.895***	-1.962	-3.045***	-2.935***	4.707	5.598***	-7.233***
t+24	5.269	5.605***	-8.658***	5.748	10.501***	-9.930***	-1.056	-1.737	-1.777	6.186	6.734***	-7.829***
t+36	5.188	5.008***	-7.965***	4.475	5.532***	-8.520***	-1.137	-1.476	-0.795	4.777	4.717***	-7.214***
Cash Flow	Per sales											
t=0	6.879	3.224***	-8.899***	5.732	4.391***	-9.977***	-0.654	-0.511	-0.921	5.733	3.900***	-8.117***
t+12	5.595	3.970***	-6.461***	5.154	6.705***	-9.024***	4.163	0.885	-1.180	4.620	5.202***	-6.911***
t+24	14.125	2.077**	-7.986***	4.995	6.844***	-9.434***	0.066	0.093	-0.273	5.206	5.504***	-7.750***
t+36	6.861	2.526**	-7.808***	9.873	1.639	-8.026***	5.196	0.847	-0.315	9.835	1.605	-6.665***
Current Ra	tio											
t=0	0.001	-0.007	-1.167	0.061	1.281	-1.884	0.152	3.023***	-0.129	-0.080	-1.603	-4.052***
t+12	0.013	0.288	-0.640	0.044	0.871	-1.283	0.117	2.329**	-0.164	-0.036	-0.697	-2.910***
t+24	-0.028	-0.654	-2.190**	-0.025	-0.538	-2.526**	0.058	1.264	-0.517	-0.094	-1.882	-3.730***
t+36	-0.064	-0.378	-2.270**	-0.020	-0.369	-2.827***	0.162	2.630***	-0.087	-0.055	-0.98	-3.125***
Working Ca	apital Grow	vth										
t=0	-0.402	-1.292	-2.359**	-0.253	-1.808	-1.542	-0.305	-2.161**	-3.614***	-0.281	-2.001**	-2.612***
t+12	-0.264	-1.686	-2.707***	-0.088	-0.608	-0.495	-0.114	-1.442	-1.579	-0.116	-0.796	-1.552
t+24	-0.218	-1.756	-2.489**	0.045	0.574	-1.091	-0.008	-0.186	-0.011	0.031	0.391	-0.553
t+36	-0.978	-0.859	-1.465	0.011	0.075	-0.816	-0.081	-0.970	-0.672	-0.079	-0.606	-0.040
Total Debt	to Total Ca	pital										
t=0	-0.047	-3.658***	-4.255***	14.811	11.899***	-10.223***	8.577	6.337***	-5.493***	15.712	12.287***	-10.495***
t+12	-0.032	-1.868	-3.639***	15.916	11.487***	-9.823***	8.157	5.996***	-5.159***	16.137	11.526***	-9.759***
t+24	-0.047	-3.655***	-3.473***	14.705	10.275***	-8.914***	6.559	4.748***	-3.963***	14.796	10.239***	-8.682***
t+36	-0.065	-3.765***	-4.733***	13.029	8.839***	-7.722***	4.799	3.265***	-2.449**	13.342	9.002***	-7.628***
ROIC												
t=0	2.413	3.700***	-3.981***	2.012	2.670***	-5.436***	-2.646	-4.564***	-5.016***	1.327	1.454	-2.316**
t+12	1.686	2.467**	-4.249***	2.432	5.342***	-5.983***	-2.103	-4.099***	-3.583***	1.279	2.331**	-2.765***
t+24	2.898	4.955***	-5.184***	2.501	5.097***	-6.470***	-1.218	-2.494**	-1.480	1.600	2.954***	-4.062***
t+36	3.001	4.453***	-5.229***	2.599	4.528***	-6.006***	-0.793	-1.332	-0.502	1.906	3.059***	-4.173***

Table 4. 7 One dimensional mean differential operating performance of companies deleted from the FTSE4Good Global Index.

Time	Μ	atched indust	ry and size	Matched in	dustry and P	ГВV
	m-diff.	t-value	Sign Z test	m-diff.	t-value	Sign Z test
Operating Margin	1					
t=0	-2.300	-2.771***	-3.108***	38.470	3.109***	-4.533***
t+12	-1.815	-1.872*	-1.999**	20.355	3.264***	-5.200***
t+24	-1.062	-0.790	-0.769	40.698	2.182**	-5.610***
t+36	-1.139	-1.107	-0.319	18.430	2.443*	-4.468***
Cash Flow Per sal	es					
t=0	-1.143	-1.098	-1.744	33.769	3.325***	-5.447***
t+12	-2.320	-2.306**	-2.606***	6.102	2.105**	-3.729***
t+24	-1.401	-0.878	-0.603	38.693	1.863	-5.264***
t+36	-3.432	-1.899	-1.105	27.077	2.455**	-4.577***
Current Ratio						
t=0	-0.201	-2.817***	-2.814***	-0.432	-4.244***	-3.155***
t+12	-0.142	-1.937*	-1.063	-0.529	-4.243***	-3.101***
t+24	-0.269	-3.580***	-2.497**	-0.503	-4.779***	-3.496***
t+36	-0.136	-1.787	-1.259	-1.080	-3.255***	-3.300***
Working Capital (Growth					
t=0	-0.466	-2.506**	-2.232*	-0.443	-2.383**	-2.519**
t+12	-0.137	-1.146	-1.676	-0.919	-2.121**	-2.060**
t+24	-0.112	-1.367	-0.470	0.015	0.172	-0.013
t+36	0.168	1.320	-1.983**	0.163	1.345	-2.206**
Fotal Debt to Tota	l Capital					
t=0	7.427	4.504***	-4.725***	9.795	4.965***	-5.429***
t+12	5.562	3.145***	-3.587***	8.659	4.370***	-4.326***
t+24	4.024	2.158**	-2.599***	7.039	3.518***	-3.312***
t+36	2.735	1.446	-1.421	6.126	2.589**	-2.542**
ROIC						
t=0	-2.953	-4.415***	-3.813***	2.926	1.945	-1.190
t+12	-3.043	-4.004***	-3.376***	2.842	2.312**	-2.682***
t+24	-1.316	-1.848	-1.253	3.945	3.617***	-3.553***
t+36	-1.204	-1.699	-1.019	3.822	2.666***	-2.215**

Table 4. 8 Two-dimensional mean differential operating performance of companies deleted from the FTSE4Good Global Index.

Chapter 5: The impact of Corporate Social Responsibility on stock return: evidence from FTSE4Good Global index.

5.1. Introduction

In the aftermath of the recent global financial crisis, companies are putting significant resources and effort into issues like corporate governance, social responsibility and sustainability. Firms engagement in these issues is influencing corporate success because they improve firms' intangible assets, such as their reputation and goodwill. Non-financial performance, such as that on corporate social responsibility issues, is one of the key ways to maintain and improve corporate reputation (Carroll and Shabana, 2010). The primary objective of CSR is to satisfy organisational stakeholders by addressing their needs and expectations. It is imperative for all companies to set their objectives consistent with stakeholders' expectations and maintain a strong relationship with them in order to improve their corporate reputation in the community and society.

Since corporate reputation is vital for success, companies communicate their CSR commitments, investment and performance to win stakeholders' confidence and loyalty to ensure success. In recent years, companies are keen to be associated with and become listed in one of the socially responsible indexes such as the FTSE4Good, DJSI, MSCI, etc. Socially responsible indices (SRI thereafter) are becoming popular among stakeholders as they reflect the socially responsible performance of firms through ranking and rating. Company's addition in such a social index is assumed to be a good CSR indicator of commitment and performance. Being added (or even the announcement regarding firms' potential membership within a social index) signals strong CSR performance (Flower and Hope, 2007) and it is the most convenient source of firm's

performance on related social issues (Corderio and Tewari, 2015). Social indices' information also reduces possible information asymmetry regarding firms CSR performance (Du et al., 2017; Corderio and Tewari, 2015). To this extent, the announcement of possible index changes further signals the managerial vision toward the firm's future and could lead to changes in the investors' perception towards those firms.

In the past, studies have examined the impact of CSR events (including index addition) on the firm's financial performance. Extant studies have examined the impact of firms' addition and deletion on short-term market return and have reported a mixed conclusion (Becchetti et al., 2012; Lurenco et al., 2012; Cheung, 2012; Doh et al., 2010; Curran and Moran, 2007)¹⁶. A limited number of studies also focuses on the UK setting (Clacher and Hagendorff, 2012; Curran and Moran, 2007), Germany (Obrendorfer et al.,2013), and rest of the world (Park and Lee, 2018; Nakai et al.,2013) with most of these studies short-term stock performance consequent upon social index changes. To the best of my knowledge, there are limited studies that have examined long-term stock performance after social index changes. For example, Robinson et al. (2011) report a positive cumulative stock return in 60 days after the addition in DJSI. The finding of Robinson et al., (2011) is corroborated by Park and Lee, (2018), who reported the significant positive return of 33.8% in 36 months from addition in SRI Korea. On the contrary, according to Kappu and Oikonomou (2016), there are no significant changes in the stock price in 15 days and 125 days subsequent addition of firms in the MSCI KLD 400 index. In the case of deletions, the authors report a significant negative return up to

¹⁶ These studies are within the index configuration and are country specific using primarily US data.

14% in 125 days after the deletion announcement and corroborated by Park and Lee (2018), who report significant negative stock return in 6 months and 30 months after the deletion forms the index. Such variance in the result could be due to the number of factors considered in the individual study. One of the notable differences between Robinson et al. (2011) and Kappu and Oikonomou (2016) is the estimated window adopted. Kappu and Oikonomou (2016) use estimation period between t+125 days and T+375 days as an estimation window, whereas Robinson et al., (2011) use period between t-60 days and t-1 days. Also, both studies use the cumulative average abnormal return to calculate the long-term return.

Studies examining the impact of SRI index addition and deletion on firms' performance have a primary focus on the short-term stock return with limited attention to long-term stock performances. Also, most of the previous studies are focused on the US with limited use of the data outside the US. Still, there are numbers of issues remain unexamined, for example, do investors enjoy an additional premium in long-term for investing in the companies branded as good CSR performers? Do investors' reaction to CSR performance varies across the region/countries? These issues need to examine comprehensively using a holistic approach since the awareness and popularity of social and responsible business practice is spreading rapidly all over the world and the degree of companies' involvement in CSR can vary depending on the countries/region of operation (Moon, 2004).

In this study, I extended the investigation of short-term reaction to the long-term impact of the CSR index on stock return. This is because companies' investment in CSR gives them a competitive advantage in the long term (Porter and Kramer, 2011) and enhances long-term shareholder value by minimising potential corporate risk and costs

(Waddock, 2002; Smith, 2005). To do so, I utilise an event study methodology firstly examining a short term impact of SRI addition-deletion announcements using the cumulative average abnormal return (CAAR) model. I further extend my analysis on long term stock return using buy-hold abnormal return (BHAR) to examine the possible SRI addition hedge. To do so, I collect a dataset of the events/changes announcement from the FTSE4Good Global Index, which consists of companies from 26 countries that demonstrate strong ESG/CSR compliance in their business practices. The sample consists of companies from the Asia Pacific, Europe, and North America. I analyse short-term CAAR before and after the event and calculate post-event buy and hold abnormal return (BHAR) for up to 240 working days for addition and 210 days in case of deleted companies. The short-term stock return investigation reports statistically significant negative abnormal return immediately after the addition announcement (during T+3 days). The cross-country analysis reveals short-term stock performance, for the firms, especially in the UK, USA, Germany, Australia and the rest of Europe, results which are statistically significant at 5% level. In the short term, investors tend to penalise the firm's association/addition to the social index. In the case of the SRI deleted companies, no definite pattern emerged from the cross-country analysis. However, in the case of the companies form the UK and Japan, the results report a negative and statistically significant CAARs after the deletion from the SRI index.

This study also confirms that the short-term negative return for added companies is temporary. My examination on the impact of addition on firms' long-term stock return reports a positive and statistically significant BHARs for the period up to 240 days. Hence an investor could enjoy a premium up to a maximum of 4.41% within 240 trading days after the firms' addition in the social index. Similarly, a minimum of 1.39% abnormal return is reported for the first 90 trading days. On the other hand, in the case of the firms deleted from the social index tend to experience negative return up to 30 trading day from the event day but positive return afterwards. However, the positive returns are not statistically significant except for the first 150 trading days.

This study makes the following contributions to CSR-CFP relationship literature. First, prior studies examining the stock performance associated with the changes in the socially responsible index composition mainly focused on the short-term stock returns. I am among the first studies to reveal significant positive long-run stock returns after the addition in the CSR index. The result of this study confirms that firms' initiatives in the CSR pay off in the long-term. I also extend the current CSR-CFP literature by examining cross-country data and revealing investor reaction to the CSR announcement in the short term and as well as long term across all geographical locations.

The rest of this chapter is structured as follows. In following section 5.2, I discuss the relevant literature within the social index configuration. The theoretical perspective, as well as the hypotheses, are introduced in section 5.3. Section 5.4 presents the data and methodologies. Section 5.5 presents the main findings, and finally, Section 5.6 discusses and concludes this chapter.

5.2. Literature Review

Although CSR is voluntary, broader criticisms of companies' irresponsible and unethical acts have led firms to publish their policies, commitment, participation and performance regarding several social, ethical and environmental and/or expenditure. The CSR disclosure trend is increasing significantly in the recent years (KPMG, 2016, 2013) as stakeholders are explicitly demanding the transparency of policies, investment, and commitments made by the companies towards ensuring a positive impact on the society. Companies are using several methods of reporting CSR, including annual reports, website and sustainability reports which they make available to the public. The introduction of CSR reporting guidelines such as Global Reporting Initiatives (GRI) and the United Nation Industrial Development Organisation (UNIDO) has made a significant contribution to standardising CSR disclosure. However, CSR reporting quality and credibility is still a much-debated topic in CSR literature due to the complex measurement process that requires high skill, expert knowledge and high cost.

Stakeholders are out of reach to the quality and reliable CSR performance report. They must rely on either companies' report¹⁷ or through third-party assessment. In the past, only investment portfolio managers, investment companies or investment analyst used to undertake firms' CSR performance evaluation and are not available to the public. Due to increasing awareness among stakeholder regarding the impact of the business operation on the environment, and society, CSR reporting is becoming compulsory and no longer a choice (Thornton, 2018). Hence, several organisations and agencies (including not for profit) are conducting companies CSR performance measurement and evaluation.

Since the introduction of Kinder Liebenberg Domini (KLD), CSR performance ranking, rating and social index membership have gained significant popularity in recent years. Especially, the Dow and Jones sustainability index (DJSI), Morgan Stanley Capital International Global Socially Responsible Index (MSCI Global SRI), Calvert Social Index (CSI), and Financial Times socially responsible index (FTSE4Good index) are widely regarded for their comprehensive methodologies and process in evaluating firms

¹⁷ Annual financial report, compnay website and sustainability report.

CSR. These social indices evaluate companies on the basis of firms' commitment to several environmental, social and governance issues. The firm gets a membership (or get listing) in social index continuously if they implement strong CSR initiatives consistently. In contrast, any unfavourable changes in the CSR commitment consequently lead to the termination of membership. For example, the FTSE4Good index added companies that are widely recognised as being responsible globally due to their high commitment to the environment, society and governance issues. The FTSE4Good index has a comprehensive assessment methodology that examines firms CSR performance under 3 main pillars (environmental, social and governance) covering 14 CSR themes¹⁸. These themes are evaluated using over 300 indicators¹⁹. Further, these SRI indices release information regarding any changes in the index membership (i.e. addition and deletion). If a firm meets the addition criteria lead to the addition in the SRI index and vice versa.

The information regarding any changes in index composition are publicly available and may have a significant impact on the perception, confidence and reaction of several stakeholders towards firms. The release of third-party assessment on firms' socially responsible practices and commitments reduces the information asymmetry on

¹⁸ climate change, water use, biodiversity, pollution and resources, supply chain, health and safety, labour standards, human rights and community, customer responsibility, supply chain, anti-corruption, tax transparency, risk management, and corporate governance (FTSE Russell, 2016).

¹⁹ Please see the Index Addition Rules that were updated in September 2014. Source: Index Addition Rules for the FTSE4Good Index Series v1.7, January 2006, www.ftserussell.com

CSR performance (Doh et al., 2010). The positive changes (i.e. addition) signals firms improved CSR performance, meaning the increased commitment on issues related to the social, environmental and other governance issues. Hence, firms' addition in the CSR index improves firms' reputation towards stakeholders, which consequently improve the firm's performance. Porter and Kramer (2006) argue that the resulting higher CSR performance (CSR index addition) lead to competitive advantage as it helps companies differentiate themselves from companies which don not engage in environmental and social activities. For example, Nielsen (2012) reports that consumers prefer to purchase and willing to pay a premium price for the products and services offered by companies that give back to society for positive change (p.3). The study also reports an increased willingness of the public to work and invest in the companies that have strong CSR brand. Hence, engaging in CSR practices increases customer trust, loyalty and satisfaction on product/services (Sen et al., 2016, Du et al., 2017), and retain and improve skilled employee through improved CSR reputation (Turban and Greening, 1997; Martin, 2006; Costa, 2015; Turker, 2015).

Further, firms' participation in socially and environmental practices acts as an insurance-like policy which minimises the impact of negative events and crises (Godfrey et al., 2009). For example, news/disclosure of firms' improved commitment to CSR offsets the past corporate irresponsibility and also reduces the possibility of further negative impact (Kang et al., 2016). The announcement of changes in social index composition signals firms' future cash flow. For example, firms' addition in the social index could reveal better cash flow at present and commitment to improving in the future and vice versa. The better cash flow is the rationale from several factors related to CSR, such as managerial commitments to satisfy their stakeholders with the aim of future

growth and forward-looking vision. Also, firms' investment in improving CSR contributes to a reduction in the cost of capital required for the future projects/investments (El Ghoul et al., 2011; Dhaliwal et al., 2011). The firm's addition in the socially responsible index signals the management capability and their long-term vision towards firms' growth and financial sustainability.

5.2.1 Previous work on CSR index and market performance

Prior studies examining the relationship between CSR and firms' financial performance report mixed results (Orlitizky et al., 2003; Margolish et al., 2009). Especially, within the changes in socially responsible index composition, studies investigate the impact of index addition and deletion announcement on stock returns using sample of specific country/market (Park and Lee, 2018; Kappu and Oikonomou, 2016; Obrendorfer et al., 2013; Nakai et al., 2013; Becchetti et al., 2012; Lurenco et al., 2012; Clacher and Hagendorff, 2012; Cheung, 2011; Doh et al., 2010; Curran and Moran, 2007). For example, Doh et al., (2010) examine the impact of addition and deletion from Calvert social index to short returns. They reported no significant changes to stock returns after the addition, but companies experience a significant negative abnormal return of 1.2% at T+1 day after deletion announcement. Such a difference in the market reaction is due to the imbalance of information regarding the addition and deletion (Doh et al., 2010 p.1478). The author argues that a firm with a positive/improved CSR performance is less of a surprise for the market, as investor anticipated firms to be added in the index as the managers tend to share their CSR improvement before the announcement. However, in case of negative CSR performance, managers tend to underreport poor CSR performance, meaning that investor is kept in the dark with elicits market's significant negative reaction to CSR event (Doh et al., 2010).

Using the Dow Jones Sustainability Index, hereinafter, DJSI index, Cheung (2011) finds that addition (deletion) in the DJSI leads to a significant increase (decline) in stock returns on the day of the announcement. The author also asserts that such changes in the stock return are temporary, until the day of effective implementation of the DJSI changes. Using signalling sustainability leadership theme, Robinson et al., (2011) examine the impact of firms' addition and deletion from the DJSI index on short-term stock returns. Authors report an increase in share price for up to the 10 days after the announcement. This result is also corroborated by Nakai et al., (2013). In contrast, Oberndorfer et al., (2013) reported 2% negative and statistically significant (at 5% level) average cumulative abnormal return for six days event window (0-5) after the addition in the DJSI World index. The result of Obrendorfer et al., (2013) is corroborated by Park and Lee (2018), who report a significantly negative cumulative average abnormal returns of 0.4% (t-value -2.260) on the day of the announcement (p.1127). This implies that firms addition in SRI index is not rewarded by investors in the short-term.

Further, Kappu and Oikonomou (2016) and Park and Lee (2018) analyse the social index effect to stock returns over the short term and long term. Kappu and Oikonomou (2016) report no material changes in stock returns after the addition to the MSCI KLD 400 index. However, they find the negative and statistically significant abnormal return of -0.69% on the day of deletion. Also, Kappu and Oikonomou (2016) extend their investigation to long-term by investigating the CAAR for the event window between T+1 and T+125 days. They report no material changes in stock returns for their sample companies added in the MSCI KLD 400 index, but in the case of deleted firms,

they find a negative and statistically significant cumulative average abnormal return of -14% for the post-event window between event day (t) and t+125 days. In contrast, Robinson et al., (2011) report a significantly positive CAAR of 2.096% for the first 60 days post-event period for added firms and no material changes for the deleted companies for the same event period. This is corroborated by Park and Lee (2018), who examine the long-term stock return using a sample from South Korea. The authors report significantly positive abnormal returns of 0.338 for 36 months from addition in SRI index but report significantly negative abnormal returns of -0.072 for six months when companies deleted from the index.

From the above review, it is clear that the impact of changes in social index composition to stock returns is rather mixed. The mixed results could be the methodological issues among studies. For example, studies have adopted different and shorter event window period, which may not capture the significant impact of the particular window. McWilliams and Siegel (1997) assert that the event window should be long enough to capture the significant impact of an event on the price movement. Studies also have used different estimation window, which could lead to the inconsistency in the result. For example, compared to Robinson et al., (2011), Kappu and Oikonomou (2016) used different estimation window (i.e. t+125 to T+375), which could lead to different results in calculating the CAARs.

On the other hand, studies examining long-term stock returns used CAAR to calculate the long-term abnormal return. CAAR methodology may not be effective for long-term due to several biases such as skewness, new listing, and measurement (Ritter 1991, Lyon et al., 1999; Kothari and Warner, 2008) and according to Barber and Lyon (1997), buy and hold abnormal returns (BAHR) methodology is more powerful in

detecting the long term stock returns. Although Park and Lee (2018) use BHAR method, their study is based on a single country with a very small sample size (44 additions and 32 deletions). Secondly, they report significant positive abnormal returns of 33.80% for 36 months for added firms. Such significant changes in the stock returns cannot be only because of CSR additions. In fact, in the long term, firms may have other corporate events that contribute to a positive change in stock returns.

Also, a handful of studies focused on the UK context. For example, using the FTSE4Good Index, Curran and Moran (2007) and Clacher and Hogendrorr (2011) examine the changes in the stock prices. The former used the companies added between 2001 and 2002, while the latter used companies added between 2001 and 2008. Both studies did not find significant changes in the stock price with companies added in the FTSE4Good index. From my review, I found that studies have used relatively small sample size (Curran and Moran, 2007; Clacher and Hogendrorr, 2011; Doh et al., 2010) and confounding events issues (Becchetti et al., 2012, 2009; Cheung, 2011; Oberndorfer et al., 2013) which could lead to the wrong conclusion.

Further, most of the studies within social index re-composition focus on the US, and very limited have examined in the UK and other countries context. Such a limited focus on the country-specific sample may be conceptually deficient, especially in generalising the results and findings which may not be relevant to the wider geographical area. Hence, the need for a holistic approach to examining the SRI index affect stock returns is immense, especially using the cross-country setting covering the wider geographical coverage. Further, studies in CSR index configuration, primarily have concentrated on the investor's reaction in the short term and paid less attention to the fact that CSR has long term impact on the firm. They have also discounted cross-analysis studies that could highlight the effect of other confounding factors. Hence, the impact of the social index effect on firms' long-term stock returns and on comparative countries is yet to be examined.

5.3. Theoretical Framework

Prior studies examining the impact of CSR on stock returns have used stakeholder theory, shareholder value theory, legitimacy theory, resource-based, view etc. (Kang et al., 2016; Su et al., 2016; Nollet et al., 2016; Lyon Shimshack; 2015; Krüger, 2015; Becchetti et al., 2012; Cheung, 2011; Clacher and Hagendroff, 2012; Brammer and Millington, 2008). In this study, I focus on the firms' stock price behaviour during CSR-related disclosures/announcements using the signalling hypothesis. This perspective (signalling hypothesis) provides a unique, practical and empirically testable perspective on problems of social selection under conditions of imperfect information (Connelly et al., 2011, p.63).

The signalling hypothesis explains the behaviour of two parties or individuals when they have separate access to different information (Spence, 2002; Kirmani & Rao, 2000; Riley, 2001). According to this, one party sends a piece of a message (signal), and another party receives and interpret the message. According to Spence (1973, 1974), the signalling hypothesis helps to understand how investors or decision-makers interpret and respond to a particular situation where information is asymmetrically provided and is also incomplete. The fundamental principle of the signalling hypothesis is about information asymmetry and its reduction. The information asymmetry occurs when different parties/individuals have unequal knowledge of a subject matter, with one party being better informed than the other which creates an imbalance of power, adverse selection and moral hazard problems (Akerlof, 1970; Ndofor and Levitas, 2004; Bird and Smith, 2005).

Arguably, information plays a significant role in the investment decision-making process. An investor takes his/her investment decision after careful consideration of publicly available information regarding firms. To mitigate the risk of their stock portfolios, investors must be able to identify firms' observable and alterable features (i.e. signal) that affects the conditional probability of firms' performance (Bergh and Gibbons, 2011). The signalling hypothesis provides a base for predicting how the stock of a firm would behave to a firm-specific event (Spence, 2004; Bergh and Gibbons, 2011).

Since the availability of new information affects the stock price behaviour, I investigate how the firm's share price reacts to the announcement of the firm's CSR-related performance. Corporate engagement in CSR initiatives and their reporting can be important information or signal that can affect the decision of stock market participants. This is because investors and other stakeholders may not be able to observe how firms involved in CSR benefits the organisation. Hence, they may take the firms' decision to implement CSR initiative as a case of resource mismanagement. Also, prior literature reports that studies have primarily focused on the short-term stock return and gave lesser attention to the long-term impact on the share price. To this extent, there are important questions that need to be answered. For example, do shareholders care about firms' CSR involvement and do firms' additions and deletions from the SRI Index lead to any material changes to stock returns in the long-term?

On the basis of the signalling hypothesis, stock market uses signals to value the CSR disclosure/ announcement, and its participants would search for these signals that differentiate high and low CSR performers. From a stock market perspective, the firms'

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CSR performance-related disclosure could likely trigger a few complimentary effects. For instance, a positive CSR performance could create a positive 'halo' effect that could provide a yardstick for subsequent investment decisions (Bergh and Gibbons, 2011; Lourenco et al., 2011). Also, companies with good CSR reputations are perceived as having strong internal resources and management capabilities to capitalise on potential investments and other corporate expansion opportunities that could arise from such positive CSR status (Costa, 2015; Turker, 2015). Based on this logic, CSR can then be interpreted as a signal of managerial optimism about the firms' future. Complimentary with the resource-based view (Barney, 2001, Barney, 1991; Russ and Fouts, 1997; Hart, 1995), the firms' ability to retain/gain a competitive advantage depends on its retained resources. If these resources are valuable, rare, inimitable and non-substitutable, then this firm will potentially enjoy a significant competitive advantage in the industry (Barney, 1986; Peteraf, 1993; Peteraf and Barney, 2003; Newbert, 2007). The theory asserts that managers are considered as key in developing new competitive capabilities, which may lead to a reduction in operating and financing costs, which subsequently leads to higher cash flow and profit. Firms' opportunity of earning high cash flow and profit subsequently lead to a significant increase in the stock returns. The CSR literature often emphasises that firms' involvement in socially responsible initiatives enhance their competitive resource and capability that helps to promote them to gain a competitive advantage amongst their peers (Porter and Krammar, 2011). This also leads to an improved stock return because the stock market interprets CSR activities as firms' management optimism (Bergh and Gibbons, 2011).

Similarly, the disclosure of CSR-related information reduces information asymmetry among firms' stakeholders (Corderio and Tewari, 2015; Ramachander et al., 2012) and improve the firms' relationship with all interested parties. Hence, additions and

deletions from FTSE4Good index signal firms' capability of being socially responsible regarding business operation and potential future performance. Consistent with the signalling hypothesis/theory, this disclosure of firms' CSR-related performance conveys favourable information. For example, the addition in the FTSE4Good index signals the firm's regular and consistent commitment/investment in socially responsible initiatives and possible availability of necessary financial resources. Such availability of resources (for good CSR initiatives) could be a signal of good financial health at present with potential (i.e. ability to invest further in positive-value generating projects) for the future (Porter and Kramer, 2011). Firms' participation in the socially responsible cause/initiatives in the future could lead to improvements in customer loyalty, employee productivity, reduction in potential charges and fines and improved supplier relationship (Shiu, and Yang, 2017; Sen et al., 2016; Turban, 2001). As a result, firms will improve the present value of their future cash flows, boost shareholders/investors' confidence and maximise the corporate value. By contrast, deletion from the FTSE4Good index would contain exactly the opposite message to the market as this might reflect not only relatively low financial capabilities but also a possible challenging future for these firms with increased uncertainty in future cash flows as well as a loss in investors' and stakeholders' confidence.

Hence, the positive changes in the social index are the increase in the quality and importance of the CSR performance information (Du et al., 2017). The increase in the quality and salience of CSR performance may contain the value relevance signals. If market investors believe that the firm's involvement in CSR is beneficial and could lead to an improved future financial performance, then firms added in the FTSE4Good Index can experience a positive abnormal stock return in the long-run after the event. By contrast, the deletion from the FTSE4Good index leads to a negative return in the longrun. Hence, the testable hypotheses are as following:

H1: The stock returns of companies added in the FTSE4Good Index improves significantly in the long-term.

H2: The stock returns of companies deleted from the FTSE4Good Index deteriorates significantly in the long-term.

5.4. Data and Methodology

5.4.1. Sample selection

This study examines the impact of CSR (as firms' addition and deletion from the FTSE4Good index) on firms' long term stock return. I use the FTSE4Good's announcement regarding the changes to index composition as an independent event and examine how the stock market responds after the announcement. There are several reasons for selecting the FTSE4Good index as a proxy of CSR performance. The first reason is that the FTSE4Good index consists of companies demonstrating consistent and strong, socially responsible compliance in their operation. It has the most rigorous methodology in examining CSR compliance and are conducted by independent experts from industry professionals. Also, the information regarding FTSE4Good index changes is publicly available. Additionally, it consists of companies covering wider geographical regions. Most importantly, the FTSE4Good index sends a credible and valuable signal to stakeholders and market regarding firms' CSR compliance.

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All information regarding FTSE4Good Global index changes is available from the FTSE database²⁰. The FTSE database contains all official news and information from FTSE, including corporate changes and news or any other confounding events. Regarding FTSE4Good these include the announcement date, effective date, a list of companies added in and deleted from, the reason for deletion (if any), country of the company²¹. In this study, I define the event as follows:

- FTSE4Good Global Index addition announcement.
- FTSE4Good Global Index Deletion announcement.

The data of each of the above events are collected from FTSE database. The FTSE4Good index releases its review semi-annually (June and December). In this study, and consistent with the prior studies (Lourenco et al., 2011; Cheung, 2011; Kappou and Oikonomou, 2016) I adopt a multi-window period covering the pre-event period, announcement day and implementation date.

[Insert Table 5.1 about here]

Having defined an event (i.e. companies' addition and deletion from the FTSE4Good global index), the samples of this study are extracted from the FTSE4Good global index. Although there are 878 additions as of 5th June 2018, for short-term event examination I only include 725 additions and 577 deletions. However, for the long-term study, the sample period is July 2001 and December 2016 because, at the time of writing this study, the post-

²⁰ FTSE4Good Index started from 10 July 2001. Any announcement regarding the

FTSE4Good Index is available at http://www.ftse.com/products/index-

notices/home/getnotices/?id=FTSE4GOOD

²¹ Please see the appendix for the real sample of FTSE4Good changes announcement.

event (up to 240 days) financial data were not available for the companies that are added and deleted after June 2016. To examine the impact of CSR on long term stock return, I use 596 additions and 410 deletions. All daily equity price for the selected sample firms were obtained from Thomson's DataStream using their identifiers such as international security identification number (ISIN) and name for cross-matching purposes.

5.4.2. Empirical Model: short-term abnormal stock return

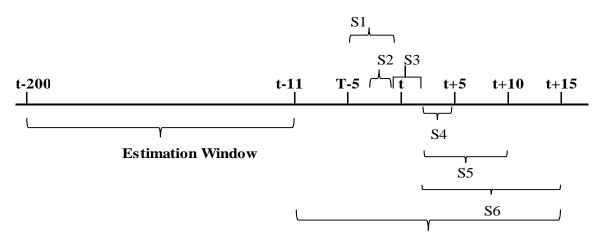
A short-term stock return methodology was firstly introduced by Brown and Warner (1985) and then widely adopted in the finance and accounting literature (Petmezas, 2009; Fuller et al., 2002). Short-term stock returns typically utilise a short event window covering a few days around the relevant event (e.g. 5 prior and 5 days post). In this study, I examine stock returns around FTSE4Good global firm additions and deletions' announcements. The main event window for this study is the period between 10 days prior and 15 days after the announcement. The estimation event period is the event window covers the period between 200 trading days prior and 11 trading days before the announcement²². I use two pre-event windows to capture the pre-event stock behaviour between t-5 and t-1. To capture the post-event stock movement, I use three different post-event windows between t+1 and t+15. The period between the date of announcement and the effective date varies for the sample of this study. On average, the FTSE4Good used 11 days to implement the changes. It is, therefore,

²² the estimation window more than 120 trading days is sufficient (Mackinlay, 1997) and the daily stock data less than one year are powerful in detecting the abnormal return since it more concentrate on event (Kothari and Warner, 2007, p.10)

the sub-event between t+1 and t+15 will also capture any movement around the effective/implementation date.

The timeline and event windows of this study can be presented as bellows:

Figure 5. 1 Observation windows



Main event observation window

Event window	Window Description
Estimation window	-200 working days to -11 working days (E)
Main event window	-10 working days to +15 working day (M)
Subevent window 1	-5 working days to -1 working day (S1)
Subevent window 2	-3 working days to -1 working day (S2)
Subevent window 3	-1 working day to +1 working day (S3)
Subevent window 4	+1 working day to +5 working day (S4)
Subevent windows 5	+1 working day to +10 working day (S5)
Subevent windows 6	+1 working day to +15 working day (S6)

I expand the event windows around the announcement date because the financial market may have received the information before the announcement, and they may have anticipated the news. It is, therefore, one would expect the abnormal return during the pre-announcement and the addition of 1 day before the announcement would allow us to test my

hypothesis. Similarly, incorporating several days of post-event and the date of effective implementation allows enough time for spreading and exchanging the information which could capture the delayed share price and therefore can test the market efficiency (Kothari and Warner, 2008; Mase, 2007; Thompson, 1985). The addition of 15 days post-announcement date will allow examining the post-event performance. Also, the days between the announcement date and the effective date will allow us to examine the arbitrage opportunity. Finally, the addition of the interval between 200 days prior and 11 before the announcement allows us to estimate the systematic risk (beta) of the stock so that I could check the robustness.

There are several methods reported in the literature for estimating market benchmark returns including as the use of the market model such as market model (McKinely, 1997; Brown and Warner, 1985; Sharpe, 1963), mean adjusted returns (Brown and Warner, 1980), and risk-controlled portfolio return (Lyon, Barber and Tsai, 1999), the CAPM (Treynor, 1962; Sharpe, 1964; Linter 1965; Mossin, 1966), the Fama and French's three-factor model (Fama and French, 1993). Among them, the use of the market model is the standard approach for estimating normal return in the study that examines the impact of events on the stock return (Duso et al., 2010; Kothari and Warner, 2005, 2008; Park, 2004; Armitage, 1995; McWilliams and Siegel, 1997). In the absence of the event, the normal returns are defined as the expected returns (MacKinely, 1997). According to MacKinely (1997) and Brown and Warner (1985), in the market model, the return on the stock price of a firm is calculated as

$$E(R_{it}) = \alpha_i + \beta_i(R_{mt}) + \varepsilon_{it}$$
(5.1)

where E(.) is the expectation operator. $E(R_{it})$, R_{mt} , and ε_{it} are the company's expected stock return, the returns on the market portfolio and disturbance term which should be equal

to zero. Similarly, α_i is the intercept and β_i is the slope of the relationship for stock *i* with respect to market return both of these can be estimated using OLS regression (where α_i and β_i are regression coefficient) for the period of the 200 trading days prior to the event windows. This would be the period between t-200 days and t-10 days.

The market model does not make any explicit assumption regarding the establishment of the equilibrium price of the stock (Strong, 1992) it is, therefore, no imposition from theory. Preferably it takes an account that the linear and constant relationship between individual stock returns and stock market index return (Brown and Warner, 1985). The market model is relatively more influential and has the best explanatory power to detect the effect of the event because using this model eliminates the portion of the return that is associated to the discrepancy in the return of the market. This consequently reduces the variation of the abnormal return (Mackinlay, 1997; McWilliams and Siegel, 1997; Binder, 1998). Hence, it is the most appropriate model to calculate the normal return and to estimate the abnormal return. Under the market model, the risk-free rate is suppressed. Also, the result may be biased for the stocks which are rising or expected to rise (bull market) and stocks which are falling or expected to fall (bear market) (Armitage, 1997, p.31). Fama's et al., (1969) seminal work is one of the earliest to use the market model in event study, where the abnormal return of stock has been examined around the stock split announcement by companies. This model has been widely used in CSR-CFP literature (Lyon and Shimshack, 2015; Kruger, 2014; Flammer, 2013; Ramchander et al., 2012; Clacher and Hagendorff, 2012; Curran and Moran, 2007).

5.4.3. Estimation of cumulative abnormal return

The abnormal return is the difference in the actual return and the expected return of the stock. The abnormal return on stock *i at* time *t* using the market model is calculated as;

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}) \tag{5.2}$$

where, AR_{it} is the abnormal return of stock *i* at time *t* and $\varepsilon_{it}=0$.

Kothari and Warner (2004) assert that the average abnormal return provides information regarding the impact of the event on change is the share price. The average abnormal return (mean abnormal return) can be calculated as;

$$AAR_t = \frac{1}{N} \times \sum_{i=1}^{N} AR_{it}$$
(5.3)

where AAR_t is the average abnormal return at time *t*, AR_{it} is the abnormal return of stock *i* at time *t*, and *N* is the numbers of sample companies' stock associated with the event.

Further, the cumulative average abnormal returns capture the share price reaction to the events (Duso et al., 2010; Kolari and Pynnonen, 2010; Kothari and Warner, 2007; 2004). It is a standard metric that used in CSR studies analysing on how much the share price deviates from the expected value between the period of the event or window (Lyon and Shimshack, 2015; Flammer, 2013; McWilliams and Siegel, 1997). It is an aggregate of the average abnormal returns over the event period (Kothari and Warner, 2007; McWilliams and Siegel, 1997). Given this study focuses on the impact of FTSE4Good addition and deletion to the share price for each window, I total up the daily average abnormal returns. Algebraically, the cumulative average abnormal return (CAAR) over event period T (starting on trading day *t-j* and ending on the trading day *t*) can be estimated as follows:

$$CAAR_T = \sum_{t=t-j}^{t} AAR_t \tag{5.4}$$

where $CAAR_t$ is the cumulative abnormal returns on event period t.

To test the null hypothesis, which means there is no impact of the event on return. The cumulative average abnormal return $CAAR_t$ at time *t*, equals to zero. If the sample data are normally distributed, I use a parametric test statistic;

$$Z_{CAAR} = \frac{CAAR_t}{\sigma(AAR_t) / \sqrt{n}}$$
(5.5)

where, $\sigma(CAAR_t)$ is the standard deviation of cumulative average abnormal return and calculated as;

$$\sigma(AAR_t) = \sqrt{var(AAR_t)}$$
(5.6)

Where, $var(AAR_t)$ is the variance of average abnormal return, and *n* is the total number of days in the event period.

In this study, I focus on examining the cumulative abnormal return for the event windows, as previously defined in this section. I have four event windows E (E=0,1, 2, 3). Among these, my focus is to investigate the abnormal return of event windows after the announcement event (i.e. at t=0, t+1 to t+5, T+1 to T+10 and T+1 to T+15). For instance, the cumulative average abnormal return for the third event window between T+1 and t+5 is

$$CAAR_{T+1 to T+5} = \sum_{t=T+5}^{T+1} AAR_t$$
(5.7)

moreover, cumulative abnormal return for the fourth event window E3,

$$CAAR_{T+1 \ to \ T+10} = \sum_{t=T_{10}}^{T_1} AAR_t$$
(5.8)

where $CAAR_{T+1 to T+5}$ and $CAAR_{T+1 to T+10}$ represent the cumulative average abnormal return for the post-event window from t+1 to T+5 and from t+1 to T+10, respectively. T is the announcement day.

In this study, I examine the impact of firms' addition in and deletion from the FTSE4Good Global Index, primarily focusing on the impact after the announcement date. The null hypothesis of this study can be described as there is no cumulative average abnormal return after the event. To test the null hypothesis, which means the mean of cumulative abnormal return is equals to zero, I use a parametric test statistic. If the sample data are normally distributed, then Z-statistics or

$$Z = \frac{CAAR_{S4}}{\sigma(CAAR_{S4})/\sqrt{n}}$$
(5.9)

where Z is the test statistics, will be tested at 95% confidence level using a critical value.

5.4.4. Empirical Model: Long-Term abnormal stock return

In this study, I further investigate the impact of FTSE4Good Global index's additions and deletions on long-term stock returns, where the stock return is calculated for longer event window which covers more than 30 days after the event. Barber and Lyon (1997) assert that the standard methodology of calculating the firm's long-term abnormal return leads to biases in the result due to a miss-specified test statistic and the ignorance of compounding effect in aggregating monthly or daily stock returns. Further, the cumulative abnormal return also has skewness bias, new listing bias and measurement bias (Kolari and Pynnönen, 2010; Kothari and Warner, 2008; Barber and Lyon, 1997; Lyon, Barber, and Tsai, 1999). To eliminate such bias, one should use a matched/controlled firm and the buy-and-hold returns of the sample firms and that of the matched/controlled firms. The buy and hold return of stock *i* at holding period of *t* (t=30,60,90,120,150,180,210,240 trading days) is calculated as;

$$BHR_{i,t} = \prod_{t=1}^{t} \left[\left(1 + R_{i,n} \right) \right] - 1 \tag{5.10}$$

where, $BHR_{i,t}$ is the buy-and-hold return of stock *i* at holding period *t*, $R_{i,n}$ is the return of stock *i* at time *n*.

The expected buy-hold-return is calculated as:

$$E(BHR_{i,t}) = \left[\prod_{t=1}^{t} \left[\left(1 + E(R_{i,n}) \right) \right] - 1 \right]$$
(5.11)

where $E(R_{i,n})$ is the expected return of stock *i* at time *n*. The expected stock return is the return of market index at time *n*

As defined, the abnormal return is the difference between realised buy-and-hold return and the expected buy-hold-return, expressed as:

$$BHAR_{i,t} = BHR_{i,t} - E(BHR_{i,t})$$
(5.12)

$$BHAR_{i,t} = \prod_{t=1}^{t} \left[\left(1 + R_{i,n} \right) \right] - \left[\prod_{t=1}^{t} \left[\left(1 + E(R_{i,n}) \right) \right] - 1 \right]$$
(5.13)

where, $BHAR_{i,t}$ is the buy-and-hold abnormal return of stock *i* at holding period *t*. The average buy-and-hold abnormal return is calculated as follows:

$$ABHAR_{i,t} = \frac{1}{N} \sum_{i=1}^{N} BHAR_{i,t}$$
(5.14)

where, $ABHAR_{i,t}$ is the average buy-and-hold abnormal return of stock *i* at holding period *t*, *N* is the total number of sample stocks over the holding period.

To test the null hypothesis, I use parametric test statistics:

$$Z = \frac{ABHAR_{i,t}}{\sigma(ABHAR_{i,t})/\sqrt{n}}$$
(5.15)

where Z is the test statistics, $ABHAR_{i,t}$ is the average buy-and-hold abnormal return of stock *i* at holding period *t*, $\sigma(ABHAR_{i,t})$ is the cross-sectional sample standard deviation of buy-and-hold abnormal returns, and N is the number of firms(stocks).

I assume that there is a 95% level of significance that the buy-hold abnormal return will be real, not due to change. If the Z-score lies between -1.96 and +1.96 (for a two-tailed test with a 95% confidence level, the critical value lies between -1.96 and +1.96), I do not reject the null hypothesis. However, I am expecting to reject the null hypothesis meaning the buy-hold abnormal stock return is not equals to zero. I expect a positive and significant long-term abnormal stock return for companies added in the

FTSE4Good Global Index and contrary companies that are deleted from the FTSE4Good Global index to experience negative long-term stock return.

5.5. Results

5.5.1. Short term stock performance

In this chapter, I investigate whether there is a significant stock market reaction on the CSR performance as an announcement of the social index additions and deletions. I examine both average abnormal returns (AARs) and cumulative average abnormal returns (CAARs) around (both prior and post) event announcement date. All tables with my results are presented in appendix B of this chapter. Table 5.2 reports average abnormal stock return of the companies added in the FTSE4Good Global Index and Table 5.3 reports cumulative average abnormal return (CAAR) over different event windows. Following Kothari and Warner (2007) and Mackinlay (1997), the estimation window more than 120 days and less than 1 year are more powerful in detecting stock return since it concentrates on the event. I use 190 days of estimation window between T-200 (200 trading days before event day 0) and T-11 (11 days before the event day 0). Looking to average abnormal return (AAR) between T-10 and T+15, the precise, a negative return pattern emerges around the announcement day. However, near to the event day(T=0), there was a positive return for a few days before the announcement. Also, negative average abnormal return around the event day, i.e. from 1 day prior and until two days (T+2) after the announcement. On the day of the announcement (T=0), the size of the average abnormal return was -0.009 but not significant. Table 5.2 reports a negative average abnormal return of -0.0011 (t-value -1.834) and -0.0019 (t-value -2.534) on the post-event days t+1 and t+2 respectively. This result corroborates Oberndorfer et al., (2013), who reported significant negative stock return after firms' addition in the DJSI.

[Insert Tables 5.2 and 5.3 about here]

Table 5.3 reports the CAARs under different event windows around the announcement day. I use the main event window of the period from 15 days before the event and 10 days after the event. To examine the impact of the event announcement, I use two event windows before the event day (0) three post-event windows. Table 5.3 reports a negative CAAR of -0.0079 (t-value -2.4814) for the main event window (-10 to 15 days). Similarly, for the sub-event window before the event day, i.e. (-5,-1) and (-3, -1) are also negative but not statistically significant. The CAAR for the subevent window covering one day prior and one-day post-event (T-1 and T+1) is negative of -0.0030 (tvalue -2.7735) and significant at the 1% level. Similarly, the CAARs of the event windows starting from T+1 and ending on T+5, T+10 and T+15 are also negative and statistically significant at 10%, 5% and 5% respectively. Most firms experienced a negative cumulative average abnormal return for the event day (i.e. 398 of 725, 54.90%, also the highest among the different event windows). In most of the event windows, companies experience negative CAAR than positive except the event for (-3,-1). From the above result, I found that the companies' stock experienced negative CAAR for the event windows after the addition announcement. Overall, the result is consistent with Oberndorfer et al., (2013), whose result also supports shareholder theory by confirming that the shareholders penalise the CSR index addition announcement in the short term.

I examine further by categorising my sample into subgroup according to the country of origin. Table 5.4 reports country-specific average abnormal return for the firms

after their addition in the FTSE4Good index. Table 5.4 shows that firms from the UK and the US experienced a significant negative average abnormal return on the day of the announcement. The average abnormal return on the day of the announcement is -0.0039 (t-value -2.1493) and -0.0022 (t-value of -2.518) in case of the UK and the US, respectively. In both cases, the AARs were statistically significant at the 10% confidence level.

[Insert Tables 5.4 and 5.5 about here]

However, In the case of Germany and Australia, Table 5.4 reports negative and statistically significant AARs at T+1, of -0.0073 (t value of -2.558) and -0.0073 (t-value -1.681) respectively. Similarly, the negative and statistically significant average abnormal return of -0.0028 (t-value of -2.584) at T+3 is reported in case of stocks from the rest of the Europe region. This study does not report any statistically significant changes in average abnormal return around announcement day in the case of France, and Japan. Also, it is worth to mention that the average abnormal return after the announcement is positive but not statistically significant for the Rest of Asia Pacific.

Table 5.5 reports the CAAR under the different windows in different regions. In the case of the UK and Germany, the CAARs around one day prior and one-day postevent (-1, 1) are also significantly negative of -0.0081 (t-value -2.1289) and -0.0139 (t-value -1.6599) respectively. The CAAR is also negative and statistically significant (at 10% level) for the post-event period between T+1 and T+5 in the case of Germany. Table 5.5 also reports negative and statistically significant CAAR of -0.0065 (t-value of - 1.9008) at window period between T+1 and T+5 for Rest of the Europe region. Table 5.5 reports negative and statistically significant CAARs in case of Japan and Rest of the Asia Pacific of -0.0136 (t-value -2.047) and -0.0268 (t value of -1.8902) respectively for the main event window (T-10 and T+15). Although negative CAARs reported in case of the rest of the countries, the results are not statistically significant.

[Insert Tables 5.6 and 5.7 about here]

I further examine the stock market reaction to negative CSR performance using deletion from the FTSE4Good index. Table 5.6 reports average abnormal stock return for the companies deleted from the FTSE4Good Global index. I analyse a total of 577 companies deleted from the FTSE4Good Global index between September 2001 and September 2017. The result does not exhibit any precise pattern of stock return. The average abnormal returns are positive (not statistically significant) before the announcement of the deletion (for T-3, T-2 and T-1). On the day of the announcement and T+1, the average abnormal returns are both negative, but again, these returns are not statistically significant. However, Table 5.6 reports the negative and statistically significant average abnormal stock return of -0.0010 (z-value -2.037) at 4th trading day and -0.0023 (t-value of -1.90) on the 6th trading day (T+6) after the deletion announcement/event day. Similarly, Table 5.7 reports negative and statistically significant CAAR of -0.0003 (z-value -2.0237) for post-event window covering t+1 and t+5. On the other hand, Table 5.7, reports no significant changes in the CAARs for rest of post-event windows after the deletion from the FTSE4Good index.

[Insert Tables 5.8 and 5.9 about here]

Table 5.8 reports the result of a cross-country analysis of the UK, US, Japan, the rest of Europe and the rest of Asia Pacific. The total number of companies deleted from the FTSE4Good Global index were very minimum for the rest of individual countries, and it is. Therefore, I categorised those into the rest of Europe and the Rest of Asia Pacific. Table 5.8 reports negative and statistically significant AAR for the UK (-0.0039, z-value

-2.0391) on the day of deletion announcement but no significant changes in the AARs on the day of the event for rest of the sub-categories. However, in the case of Japan, the AAR is negative of -0.0023 (t-value -1.691) at t+1 and -0.0043 (t-value -2.032, z-value -2.3202) at t+4, both returns are significant at the 10% level and the 1% level respectively. Similarly, firms from rest of Asia pacific also experience a negative and statistically significant AAR of -0.0019 (z-value -2.5582) at t+1 day, whereas firms from rest of Europe experience significantly negative return on t+3 day. Further, Table 5.8 reports a negative AAR of -0.0028 (z-value -2.-391) at t+3, and -0.0132 (t-value -2.725, z-value -3.1844) at t+10 in the case of the UK, this shows that investors are reacting negatively during the effective implementation period of the FTSE4Good changes.

According to Table 5.9, the CAARs covering the post-event windows are significantly negative in the case of the UK. For example, the CAARs for post-event window starting from t+1 to t+5, t+10 and t+15 are -0.0188 (t-value -1.7699, z-value - 2.0391), -0.0345 (t-value -2.0497, z-value -2.6117) and -0.0367 (t-value -2.0978, z-value -1.7527) respectively. This result for the UK implies that the investors in the UK do penalise firms' deletion from the FTSE4Good index. However, in the case of rest of the sub-group such as the US, Japan, Rest of Asia Pacific and rest of Europe, no clear pattern emerges in CAARs when firms are deleted from the FTSE4Good index.

5.5.2. Long-term stock performance

To explain the possible long-term stock performance of CSR firms, I use BHAR for both addition and deletion companies. Table 5.10 reports the mean BHARs for the companies added in the FTSE4Good index when compared with market returns. I examined the post-event stock performance up to 240 days. Compared with the market return, the post-event performance is positive and in increasing trend at all event windows. Although there are positive BHARs for the windows period up to post 60 days, these abnormal returns are not statistically significant.

[Insert Table 5.10 about here]

According to Table 5.10, the BHARs are significantly positive of 0.0139 (t-value 2.1969), significant at the 5% level for the event window starting from event day (t=0) to 90 days. Similarly, a significantly positive BHARs of 0.262 (t-value 3.1010) 0.0322 (t-value 3.2526), 0.0394 (t-value 3.162), 0.0398 (t-value 3.6508) and 0.0441 (t-value 3.6651) are reported for the events windows between 120, 150, 180, 210 and 240 days respectively, and all BHARs are significant at the 1% level. According to Table 5.10, an investor can enjoy a minimum of 1.39% abnormal returns for first 90 days of addition and a maximum of 4.41% of abnormal returns in event window between event day to 240 days. The result indicates that a negative return reported in the previous section (short-term returns) is temporary as companies experienced a significantly positive abnormal return of 1.39% (t-value of 2.1969) within 90 days of the event. This confirms the first hypothesis of this chapter that *the stock returns of companies added in the FTSE4Good Index improve significantly in the long term*. Hence, firms' addition to the SRI index is valued higher by investors over time.

[Insert Table 5.11 about here]

I further investigate long-term stock returns by categorising the FTSE4Good Global index sample into subgroups. Table 5.11 reports the average BHAR of Japan, US and Canada, UK, Europe and Asia pacific. According to Table 5.11, the average BHAR for Japan, Europe and the Asia Pacific are positive and statistically significant. Although

the average BHAR for the UK, US and Canada are all positive, returns are not statistically significant. The average BHAR from the UK, US and Canada report no price pattern of the stock changes in the long term after the firms added in the FTSE4Good Global index. For Japan, companies experience a positive and statistically significant return from 210 days after the addition in the FTSE4Good Global index. An investor can enjoy a minimum of 4.2% (t-value 1.8282, skewness adj. 1.9909) abnormal return over 210 days and a maximum of 4.90% (t-value 19755, skewness adj.- 2.2600) in 240 days after the addition announcement.

Table 5.11 also report a positive and statistically significant return from 150 days after the firms from the Asia Pacific (excluding Japan) are added in the FTSE4Good Global index. Companies experience a minimum (positive and statistically significant) average BHAR in 150 days (7.30%, t-value 2.3778, skewness adj- 2.7527) after the announcement. Investors in the Asia Pacific could enjoy a maximum of 8.62% (t-value 2.3591, skewness adj- 2.8082) (positive and statistically significant) average return in a matter of 180 days. The average BHAR remains positive and statistically significant afterwards.

Similarly, Table 5.11 reports that companies in Europe also experience positive and statistically significant average BHAR from 90 days after the announcement. Investors can enjoy a minimum of 2.10% (statistically significant at the 5% level) return in a matter of 90 days after the announcement. Table 5.11 reports an increasing trend in average BHAR over time as all average BHAR is positive and statistically significant at the 5% level. An investor can enjoy a maximum return of 5.05% (t-value 2.5176, skewness adj-2.8070) in 240 days after the addition of firms in the FTSE4Global index. Hence, the cross-country analysis confirms that companies in Japan, Europe and Asia pacific enjoy positive and statistically significant return in the long term after the companies from this country/area are added in the FTSE4Good Good index. Hence, firms' involvement in the socially responsible initiative is valued higher by investors over time.

[Insert Table 5.12 about here]

On the other hand, I further investigated whether stock market penalises companies' deletion from the FTSE4Good index. Table 5.12 reports an average BHAR over 210 days after the deletion of the index. Table 5.12 exhibit negative average BHARs up to 60 days after the announcement. The table reports a negative and statistically significant abnormal return of 1.09% (t-value of -1.6780) for the event window between 0 and 30 days. This also confirms that the investor penalises the firms' deletion from the FTSE4Good index. Although the average BHARs are positive afterwards, only within 150 days the firms experienced a significant positive return of 2.89% (t-value of 1.7497). For the rest of the event windows, the average BHARs is positive but not statistically significant.

[Insert Table 5.13 about here]

Table 5.13 reports the average BHAR of the UK, US and Canada, Europe, Japan, and the Asia Pacific. The result for the UK reveals that firms experience negative and statistically significant return up to 120 days after they are deleted from the FTSE4Good Global index. During 120 days after the event, an investor may suffer the loss of a maximum of 8.97% (t-value -2.4158, skewness adj- 2.6646) in 60 days after the firm deletion announcement. The negative and statistically significant return continue up to 120 days after the event. There is no price pattern of changes in the stock return after 150 days onwards.

Similarly, European companies also suffer significant loss of 2.67% (t-value 2.2515, skewness-adj -2.3790) within the first 30 days after they are deleted from the FTSE4Good Global index. Table 5.13 reports positive return after 30 days, but not statistically significant. The results for the US and Canada, Japan, and the Asia Pacific do not exhibit a precise pattern in the stock return after firms are deleted from the FTSE4Good Global index.

5.5.3. Robustness check using Fama and French three-factor model

To check the robustness of the main finding, I further re-examine the impact of firms' addition and deletion from the FTSE4Good Global Index on the firms' stock return using Fama and French (1992) three-factor model. The Fama and French (1992) model is superior and has more explanatory power compared to other assets pricing model (Fama and French, 1996; Hussain et al., 2002; Berkowitz and Qiu, 2001; Arx and Ziegler, 2012). Under the Fama and French (1992) three-factor model, the return of a stock is calculated as

$$E(R_{it}) = \alpha_i + \beta_{i1} (R_{mt} - R_{ft}) + \beta_{i2} SMB_t + \beta_{i3} HML_t + \varepsilon_{it}$$
(5.16)

where E(.) is the expectation operator, R_{it} , R_{mt} , are the company's (*j*) expected stock return at *t* (day), the returns on the market portfolio on *t*. Similarly, α_i is the intercept and β_i is the slope of the relationship for stock *i* with respect to market premium (the difference between the market return, R_{mt} and the risk-free rate, R_{ft}). The SMB_t is the difference between the return of 'small' firms portfolio and 'big' firms portfolio at *t*, β_{i2} is the slope of SMB_t , HML_t is the difference between the returns of a portfolio with 'high' book to market equity firms and returns of a portfolio with 'low' book to market equity firms, β_{i3} is the slope of HML_t , and ε_{it} is a disturbance term which should be equal to zero. All the unknown parameters are estimated using OLS regression model for the period between 200 trading days prior (t-200) and 11 days prior (t-11) to the event day. The daily Fama and French (1992) three-factors are retrieved from Fama and French data library²³ (Global, US, Europe, Japan, Asia Pacific ex-Japan) and Xfi Centre for Finance and Investment for the UK²⁴.

Using the Fama and French (1992) three-factor model, the abnormal return is the difference in the actual return and the expected return of the stock. The abnormal return on stock i at time t using the market model is calculated as;

$$AR_{i} = R_{i} - (\alpha_{i} + \beta_{i1}(R_{mt} - R_{ft}) + \beta_{i2}SMB_{t} + \beta_{i3}HML_{t})$$
(5.17)

where, AR_{it} is the abnormal return of stock *i* at time *t*.

Table 5.14 reports the average abnormal return after firms are added in the FTSE4Good Global index using Fama and French (1992) three-factor model. Consistent with the result under market model (Table 5.2), firms experience a significantly negative abnormal return on the day and after they are added in the FTSE4Good Global index. The AAR at t=0 day is significantly negative of 0.0025 (t-value -3.6954, z-value -4.8922). The significantly negative return continues for t+1 and t+2 days of 0.0032 (t-value - 3.9103 and z-value -4.8922) and 0.0004 (t-value-3.2428 and z-value -1.7049) respectively.

According to Table 5.15, the CAAR for the different main event window between t-10 day and t+15 days is negative and statistically significant (0.00125, t-value -2.7988 and z-value -2.6685). Consistent with CAAR result under market model (Table 5.3), all

²³ The Fama and French factors are available at

http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

²⁴ http://business-school.exeter.ac.uk/research/centres/xfi/famafrench/files/

the post-event windows CAARs under Fama and French three-factor model are negative and statistically significant.

The AAR and CAARS for country-wise investigation under Fama and French (1992) three-factor model are reported in Table 5.16 and Table 5.17, respectively. According to Table 5.16, firms in the UK, US, Germany and France experience negative and statistically significant average abnormal return of 0.0066 (t-value -2.0560 and z-value -2.1794) at t+1, 0.0038 (t-value -3.0822 and z-value -3.4462) at t=0, 0.0140 (t-value -2.6914) at t+1 and 0.0021 (z-value -2.2890) at t=0 respectively. Similarly, for Australia and the rest of Europe, the negative and statistically significant AAR is reported on day t+1 and t+2, respectively. However, there is no significant movement in the stock return for Japan and rest of Asia pacific immediately after the announcement. The AARs of under Fama and French (1992) three-factor model are consistent with the market model described earlier in section 5.5.1.

Table 5.17 reports the cross-country CAARs under Fama and French (1992) threefactor model. The post-event windows CAARs are consistent with the post-event window CAARs under market model (Table 5.5). It is worth to mention that the CAARs for France and Australia and Rest of Asia Pacific under Fama and French (1992) three-factor model reveals negative and statistically significant negative return for post-event windows covering t+1 and t+5 days.

On the other hand, Table 5.18 reports the AAR for the firms deleted from the FTSE4Good Global index. According to Table 5.18, no precise pattern emerges after the firms are deleted from the FTSE4Good Global index, but firms experience negative and statistically significant abnormal return for a few days immediately after the deletion announcement. Similarly, Table 5.19 reports negative and statistically significant CAARs

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for all of the post-event windows for the global sample, and it is consistent with the market model reported in Table 5.7, for example, the post-event window covering t+1 and t+5 report negative and statistically significant CAARs Under both models.

Consistent with the cross-country analysis under market model (Table 5.8), Table 5.20 reports significant negative AAR for the UK (-0.0050, z-value -1.7604 on the event day. Similarly, negative return continues for t+2 and t+3 days. Similarly, firms from the US, Japan and the rest of Europe experience negative return on t+1, t+4 and t+2 days respectively. Although, firms from the rest of Asia pacific experience negative return during the first few days after the deletion announcement, the AARs are not statistically significant. However, a positive and statistically significant AAR of 0.0104 (t-value 3.4452, z-value 1.7248) is reported for the rest of Asia Pacific in Table 5.20.

Similarly, the cross-country CAAR result of deleted firms under Fama and French (1992) three-factor model is reported in Table 5.21, and the results are consistent with the CAAR result of the market model (as of Table 5.9). In addition, Table 5.21 reports significant negative CAARs for all post-event windows the rest of Europe sub-category. Hence, in aggregate, the result for both additions and deletions under the Fama and French (1992) three-factor model is consistent with the market model.

5.5.4. Comparison of mean of CAARs, AARs, and BHAR of firms added to and deleted from the FTSE4Good Global index.

I further compare the performance of firms added and deleted from the FTSE4Good Global Index, this study further compares the mean difference of AARs, CAARs and BHARs of the added and deleted firms. This study uses all the AARs and

CAARs covering the main event window (-10, 15) and the all BHARs between event days to post-event 240 days. Table 5.22 presents the mean comparison test results for the firms added and deleted from the FTSE4Good Global index. According to Table 5.22 Panel A, the mean difference between the AARs of added firms and deleted firms under both model (market and Fama and French (1992) three-factor) are negative but not statistically significant. The AAR mean comparison result implies that no significant difference between the returns for firms added and deleted from the FTSE4Good Global Index.

Table 5.22, Panel B, reports the mean comparison of the CAARs for firms added and deleted from the FTSE4Good Global index. Under both market and Fama and French (1992) three-factor model, the mean difference in CAARs is negative and statistically significant. For instance, under the market model, the mean difference of CAARs between added and the deleted firm is -0.0025 (t value -2.8890, z value -2.390). Similarly, the mean comparison of CAARs result under Fama and French (1992) three-factor model also negative and statistically significant of -0.0052 (t-value -4.8500 and Z value -2.521) and consistent with the market model. The mean of added companies CAAR is less than the mean of deleted companies CAAR. The result of the mean comparison of CAAR reveals that negative return of stock return is stronger for added firms compared with deleted firms. Hence, in the short-term investors tend to heavily penalise those firms that are added to the FTSE4Good Global index.

I further compare the mean BHAR of firms added with the mean BHAR of deleted ones. Table 5.22, Panel C, reports a positive and statistically significant excess return for added companies when compared with firms deleted form the FTSE4Good Global index. The differential means of BHAR of 0.0127 (t-value 3.3570 and Z-value -2.521) and statistically significant at the 5% level. Hence, in the long-term, companies added to the FTSE4Good Global index enjoy significant positive return compared to the firms deleted ones.

5.6. Discussion and Conclusion

5.6.1. Discussion

The announcement of firms' addition and deletion from the social index signals firms' CSR commitment and valuable information regarding companies' future cash flow and growth. Particularly, positive (negative) announcement improves (reduces) firms' reputation and consequently leads to the better (worse) future cash flow in long-run. I argue that firms' commitment to CSR compliance reflects managers' commitment towards the sustainable future growth of the company through stakeholders' satisfaction. Since investors have a vested interest in both short-term and long-term gain; I evidence that positive news on CSR performance leads to a positive long-term return and vice versa. This is because investors tend to pay attention to CSR news and especially CSR reports that contain valuable and relevant information (Dhaliwal et al., 2011). In this study, I examined both short and long-term market reaction to the companies' association with socially responsible indices. To do so, I adopt an event study methodology using CAARs for short-term returns and BHARs for long-term returns, as well as the FTSE4Good index membership as a proxy of firms CSR performance using the crosscountry sample. The firms' addition in the FTSE4Good index represents the good CSR performance, while deletion from the index is a proxy for bad CSR performance.

Regarding the short-term market performance, I documented that addition in the FTSE4Good index does not produce a positive stock return for the investor in the short-

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term. Instead, it leads to a significant loss in the short-term. The negative reaction in the short-term is because investor looks the short-term profit and do take firms involvement in CSR as an additional cost for the business. Table 5.2 and Table 5.14 both report that the addition in the index leads to the significant negative abnormal return of -0.09% at t=0 under market model (as of Table 5.2) and -0.0025 at t=0 under Fama and French (1992) three-factor model (as of Table 5.14). Similarly, as of Table 5.3 and Table 5.15 report significant negative cumulative average abnormal return around the announcement. For example, under market model Table 5.3 report a negative and statistically significant CAAR of -0.003 (t-value -2.7735) for the event window period covering the announcement day, i.e., one day before and +1 days. Similarly, Table 5.15 reports a negative and statistically significant CAAR of -0.0054 under Fama and French (1992) three-factor model for the same event window. Also, the short-term cumulative average abnormal return for the post-event windows period (1,5), (1,10) and (1,15) are significantly negative and reached a maximum of -0.005% for the event window (1,15) under market model and -0.0193% under Fama and French (1992) three-factor model for the event window (1,10). The country-specific investigation under market model (Table 5.4) also reports significant negative average abnormal returns for the UK (-0.0039 and t-value -2.149 at t=0), the US (-0.0022 and t-value -2.518 at t=0), Germany (-0.0073 and t-value -2.558 at t+1), Australia (-0.0073 and t-value -1.681 at t+1), and rest of the Europe (-0.0028 and t-value -2.584 at t+3). Consistent with market model, the result under Fama and French (1992) three-factor model also reported similar tend as such UK (-0.0066 and t-value -2.8853, Z-value -2.1794 at t=0), the US (-0.0038% and t-value -3.0822, Z-value -3.4462 at t=0), Germany (-1.04 and t-value -2.6914 at t+1), Australia (-0.0118, t-value

-1.6869, z-value -2.1928 at t+1), and rest of the Europe (-0.0034 and t-value -1.6772, z-value -1.7714 at t+2).

Similarly, the CAARs for the event window that covers the event day (-1,1) is also significantly negative for the UK and Germany. Also, Table 5.3 also reports that CAARs for the main event window covering -10 days to +15 days are also significantly negative for Japan (-0.0136 and t-value -2.0407) and rest of Asia Pacific (-0.0268 and tvalue -1.8902). The robustness check result (Table 5.17) using Fama and French (1999) three-factor model reveals negative and statistically significant CAARs for event window (-1,1) for UK, UK, Germany, France, Australia, rest of Europe and Rest of Asia Pacific. In addition, CAARs for post-event windows are negative and statistically significant for most not all. This result rules out the possibility of the positive link between the social index addition and short-term stock return. Hence, I conclude that the stock market penalises the FTSE4Good index addition. The result of the current study is consistent with Park and Lee (2018), Oberndorfer et al., (2013), Cheung (2011), all report a significantly negative return for firms added in the social index.

On the other hand, the deletion from the FTSE4Good index does not lead any material changes to the stock performance in the short-term under the market model. Consistent with Robinson et al., (2011), Curran and Moran (2007), both AARs and CARRs do not change significantly after deletion from the FTSE4Good index, suggesting market participants do not react immediately on the deletion announcement. The robustness check under the Fama and French (1992) three-factor model, deleted firms experience a significantly negative average abnormal return on the day and 1-day post to the event. However, Table 5.18 does not exhibit any precise pattern as the trend in AAR is rather mixed.

The post-event CAARs for firms deleted from the FTSE4Good Global index under both models (market and three-factor) are statistically significant. For example, Tabe 5.7 reports significantly negative CAAR of -0.0003 (z-value -2.0237) for the event window covering (1,5) and consistent with CAAR result under Fama and French (1992) three-factor model (-0.0044, z-value -3.7500) for the same event window (Table 5.19). Similarly, the AARs and CAARS for sub-group categories, are also consistent under both models. This study finds the post-event AARs, and CAARs are negative and statistically significant for most after the but not all. This result corroborates the results of Park and Lee (2018), Kappou and Oikonomou (2016), Cheung (2011), Doh et al., (2010), Becchetti et al. (2009), who also report significant negative returns after the deletion from the social index.

The essence of this study is that it provides valuable insight into the firms' commitment to CSR compliance on their long-run stock returns. The result of this study suggests that addition to FTSE4Good global index is valuable for the companies, and they generate a significant positive abnormal return to shareholders/investors over the long-run. Investors could accumulate up to a maximum of 4.41% (as of Table 5.10) abnormal returns in a matter of a year (240 trading days) after the announcement. Table 5.10 also reports that longer the investor holds the FTSE4Good companies' stock, higher the return they can gain. My long-term stock return result is consistent with Park and Lee (2018) and Robinson et al. (2011), both report a positive abnormal return in the long-term for the firms added in the SRI index. The cross-country/region investigation reveals that the average BHAR for Japan, Europe and the Asia Pacific are positive and statistically significant (as of Table 5.11) over a longer period. Hence, for investors and stock market participants, the FTSE4Good index membership is a signal of the firm's

competitive/distinct capability, essentially lead to an improvement in the cash flow and strong growth. The higher abnormal returns in the long-term are the reflection for investor's attraction and confidence towards the socially responsible companies. However, firms deleted from FTSE4Good Global index do not have similar return compared with the added firms. Consistent with Park and Lee (2018) and Kappu and Oikonomou (2016), I report that deleted companies to experience a significantly negative return for first 2 months (60 trading days) after the announcement (as of Table 5.12). Table 5.13 also reports that firms in the UK and Europe experience negative abnormal returns up to 120 days and 30 days post-event, respectively.

I report that the short-term adverse reaction for added companies is temporary and do not continue for a longer period. The result for long-term stock return documented the positive return over a longer period, and interestingly the returns are getting higher and stronger as time elapsed. In aggregate investor can enjoy a maximum of 4.41% CAAR is reported in a matter of 240 trading days (i.e. one year). In addition, companies from the Asia Pacific (excluding Japan) are among top who can enjoy a maximum of 8.6% (as of Table 5.11) return within 180 days after firms' addition in the FTSE4Good Global index. Similarly, investors from Europe and Japan can enjoy a maximum of 5.05% and 4.9% positive return respectively, for the period of 240 days. Also, long-run stock return offsets the magnitude of the maximum temporary loss of 0.57% (as of Table 5.3) in the short-term implying the initial cost to CSR is later compensated by the higher long-run return. In this sense, the long-term result strongly supports the business case of CSR and consistent with the with enlightening stakeholder theory (Jensen 2001,2010), which asserts that multiple stakeholder's satisfaction is imperative for firms' long-term value maximisation. Hence, firms' addition in the social index signals valuable information to

the stakeholders which attract the investors towards CSR firms. Firms' CSR reputations are the reflection of their management capabilities, resource availability, continuous commitment to future growth and corporate expansion opportunities. The higher demand for CSR companies' stock by investors consequently guides to the significant increase in the stock return in the long-run. It is, therefore, the firm's addition and deletion in the social index reduces the information asymmetry among stakeholders (as well as shareholders, investors) and becoming important criteria for investment decisions.

5.6.2. Conclusion

In this chapter, I examine whether the CSR performance signals credible and valuable information to the shareholders and other stock market participants. The finding of this suggests that companies' commitment to addressing multiple stakeholder issues, expectation and retention of their loyalty benefited from increased financial performance over the long term. Especially, firms' commitment to the CSR compliance signals/reflects the firm's competitive capability and their vision to the long sustainable future business growth.

This study extends the CSR-CFP literature by investigating the impact of the firm's addition and deletion from the social index on the long-term stock performance. Although this study finds a significant negative return in the short term, it suggests that the firms listed in the social indices are valuable for companies as well as investors in long-term as the share price increases significantly over the long term. The long-term stock return is much higher than that of temporary loss (i.e. 4.41% of average abnormal return in a year compared to the -0.5% cumulative average abnormal loss in the short term). Hence, the CSR pay off in long-term as stakeholders have increased confidence

and loyalty towards the firm. Also, social index addition signals firms reduced risk and consequently attract investors.

Additionally, investors who would like to invest are heavily relied on socially responsible firms to balance and manage their portfolio. Further, my finding reports that no substantial evidence in stock price movement in short-term for those companies deleted from the social index. The long-term analysis for the same reveals that the adverse effect for the first few months but no significant changes in the stock price in the long-term. Hence, being deleted from the FTSE4Good global index does not have any influence on the behaviour of stock market participants over the long term.

The result of this study has several implications for the various parties and also for the corporate managers. The result of this study provides the evidence that firms addition in the FTSE4Good index leads to a continual rise in their share price in the market over the long-term but no significant changes in price after the deletion from the index. From the stock market, participants or investor point of view, acquiring the stock of added firms around announcement time and holding for long-term gives a significant return in a matter of months and years. The significant long-term abnormal return that I report in this study implies that the FTSE4Good index announcement regarding the addition and deletion do signal the valuable information. Moreover, investors do take such changes to the index configuration in evaluating and maintaining their portfolio because of such announcements signal to firms future/potential strategy for growth and improvement. Also, from the corporate managers' perspective, although maintaining the CSR brand is costly in the short term, but it eventually pays off in the long term as brand signals a corporate commitment to the environment, society, community and of course the future growth of the company. Managerial focus on CSR commitment leads to the improved stakeholder's confidence and investor attraction towards firms. Hence, consistency in CSR is vital for future growth.

In this study, I examined the impact of the social index on both short term and long term stock return. Despite my best attempt to improve the generalisability in an economic return of the CSR initiative through multi-country setting, there are still some ways that the CSR-CFP relationship can be improved or extended. For example, this study sample limited to 26 cross-country data all, especially from the developed economies. Future research could consider examining the CSR-CFP relationship in the emerging economies using multi-country setting, as such a market could have a different perspective on CSR. In this study, especially in long-term analysis, I examined buy-holdabnormal returns for up to the 240 trading days after the announcement, future research could improve a similar return by examining the longer post-event period. Finally, from this study, it is evidenced that the firms from emerging countries (rest of Asia Pacific) experience significantly positive abnormal return over the long-term. Hence, a holistic approach of CSR-CFP analysis from an emerging market is a potential for future research which can explore more to help ethical fund manager for their investment decision.

Appendix B

Table 5. 1 Description of Sample

Panel A: Data de	escription for short-ter	m stock retur	n (Additi
Country Name	No of observations	%	
UK	102	14.07%	
US	167	23.03%	
Germany	34	4.69%	
France	59	8.14%	
Japan	152	20.97%	
Australia	43	5.93%	
Rest of Europe	124	17.10%	
Rest of Asia	44	6.07%	
Total	725	100.00%	

Panel B: Data description for short-term stock return (Deletion)

Country Name	No of observations	%
UK	51	8.84%
US	193	33.45%
Japan	151	26.17%
Rest of Europe	43	7.45%
Rest of Asia	139	24.09%
Total	577	100.00%

Panel C: Data description for long-term stock return (Addition)

Country Name	No of observations	%
UK	76	12.75%
US and Canada	137	22.99%
Japan	125	20.97%
Europe	190	31.88%
Rest of Asia	68	11.41%
Total	596	100.00%

Panel D: Data description for long-term stock return (Deletion)

Country Name	No of observations	%
UK	36	8.78%
US	132	32.20%
Japan	111	27.07%
Rest of Europe	101	24.63%
Rest of Asia	30	7.32%
Total	410	100.00%

			Global Sam	ple
Day	aar	Ν	t-test	sign test
-10	0.0002	725	0.4308	-0.4601
-9	-0.0001	725	-0.1982	-0.9058
-8	0.0002	725	0.2840	0.3569
-7	-0.0007	725	-1.1449	0.2827
-6	-0.0001	725	-0.1063	-0.8315
-5	-0.0001	725	-0.2178	-1.7972 *
-4	-0.0002	725	-0.3561	-0.9801
-3	0.0005	725	0.7988	1.9168 *
-2	0.0001	725	0.0894	0.3569
-1	-0.0010	725	-1.5061	-1.5743
0	-0.0009	725	-1.6256	-2.4657 **
1	-0.0011	725	-1.8338 *	-1.3515
2	-0.0019	725	-2.5345 *"	* -2.1686 **
3	0.0001	725	0.2054	-0.0887
4	0.0000	725	-0.0544	-1.3515
5	0.0001	725	0.1573	0.5798
6	0.0003	725	0.4624	2.0654 **
7	-0.0005	725	-0.8165	-0.4601
8	-0.0027	725	-1.5299	-0.5344
9	0.0001	725	0.1247	0.2827
10	0.0001	725	0.1204	0.7283
11	-0.0010	725	-1.6517 *	-1.9457 *
12	0.0015	725	2.2754 **	* -0.3859
13	-0.0004	725	-0.6517	0.1341
14	-0.0012	725	-1.7433 *	-2.0200 **
15	0.0000	725	0.0307	1.3226

Table 5. 2 Short term average abnormal stock return of companies added in the FTSE4Good Global Index – Market model

Notes: * Indicates significant at the 10% level, ** indicates significance at the 5%

level, *** indicates significance at 1% level.

			Global Sample	9
Window	caar	Ν	t-test	sign test
(-1015)	-0.0079	725	-2.4814 **	-1.5001
(-51)	-0.0008	725	-0.6395	-0.7573
(-31)	-0.0005	725	-0.4490	0.2827
(-11)	-0.0030	725	-2.7735 ***	-1.5001
(00)	-0.0009	725	-1.6256	-2.4657 **
(15)	-0.0028	725	-1.9169 *	-0.6830
(110)	-0.0046	725	-2.2013 **	0.1341
(115)	-0.0057	725	-2.3393 **	-1.7972 *

Table 5. 3 Cumulative average abnormal return (CAAR) of stock added in the FTSE4Good Global Index– Market model

Notes: * Indicates significant at the 10% level, ** indicates significance at the 5%

level, *** indicates significance at 1% level.

		UK				US				GERMANY	
Day	aar N	t-test	sign test	aar	Ν	t-test	sign test	aar	Ν	t-test	sign test
-10	0.0022 102	1.3975	-0.6443	-0.0004	167	-0.3653	0.4110	-0.0013	34	-0.7507	-1.2975
-9	0.0001 102	0.0605	0.3608	-0.0007	167	-0.6432	-0.2175	-0.0017	34	-0.7005	-0.9493
-8	0.0020 102	1.0828	1.3658	-0.0012	167	-0.7359	0.2539	-0.0014	34	-0.6019	-0.6011
-7	-0.0006 102	-0.3555	1.1648	0.0004	167	0.3080	0.0968	0.0017	34	0.8023	-0.2529
-6	-0.0009 102	-0.5049	-0.2423	-0.0009	167	-0.9212	-0.0604	0.0017	34	0.4589	0.0953
-5	-0.0021 102	-1.1963	-1.6493 *	0.0006	167	0.7791	-1.0032	-0.0025	34	-0.6504	-1.2975
-4	-0.0016 102	-0.6824	-0.2423	0.0011	167	1.2121	-0.2175	0.0002	34	0.1396	0.0953
-3	0.0006 102	0.4382	0.5618	0.0035	167	2.7241 ***	3.3967 ***	0.0013	34	0.5167	0.7917
-2	0.0023 102	1.2794	0.9638	0.0002	167	0.1651	0.0968	0.0049	34	1.4674	0.7917
-1	-0.0034 102	-1.6799 *	-0.8453	-0.0012	167	-0.9298	-0.8461	-0.0052	34	-1.3111	-1.9938 *
0	-0.0039 102	-2.1493 **	-0.0413	-0.0022	167	-2.5180 **	-2.5746 ***	-0.0014	34	-0.3965	-1.2975
1	-0.0008 102	-0.3689	-0.8453	0.0009	167	0.8796	-0.2175	-0.0073	34	-2.5584 **	-1.2975
2	-0.0059 102	-1.8586 *	-0.2423	0.0002	167	0.1925	0.4110	-0.0050	34	-1.3028	-1.6456 *
3	0.0009 102	0.3696	1.3658	0.0006	167	0.5773	0.7253	0.0019	34	0.7123	1.4880
4	0.0002 102	0.1010	-0.6443	-0.0008	167	-0.6190	-1.6318	-0.0081	34	-1.6946 *	-2.3420 *
5	0.0029 102	1.7153 *	0.3608	-0.0001	167	-0.0926	0.7253	-0.0020	34	-0.5543	-1.2975
6	0.0035 102	2.3897 **	3.3759 ***	-0.0008	167	-0.6151	1.3539	-0.0004	34	-0.1154	0.0953
7	-0.0027 102	-1.5255	0.1598	0.0005	167	0.5295	0.7253	0.0022	34	0.7006	0.7917
8	-0.0028 102	-0.9144	-1.8504 *	-0.0018	167	-2.2438 **	-0.6889	-0.0009	34	-0.2346	-1.2975
9	-0.0033 102	-1.7796 *	-1.2473	-0.0006	167	-0.6528	-0.6889	-0.0015	34	-0.4936	-1.2975
10	-0.0022 102	-0.9113	-0.6443	0.0006	167	0.4458	0.8825	0.0028	34	1.2922	2.1844 *
11	0.0017 102	0.6425	-0.0413	-0.0016	167	-1.2613	-1.7889 *	0.0008	34	0.3132	-0.9493
12	0.0036 102	1.2104	-1.0463	0.0018	167	1.8306 *	0.2539	0.0029	34	1.1640	0.0953
13	0.0031 102	1.6693 *	1.9689 **	0.0001	167	0.1515	0.8825	0.0006	34	0.1676	0.0953
14	-0.0020 102	-0.9281	-1.4483	0.0009	167	0.7453	-0.5318	-0.0068	34	-2.1025 **	-0.9493
15	0.0019 102	0.7083	0.7628	0.0002	167	0.1723	1.5110	0.0033	34	0.9296	0.0953

Table 5. 4 Country-wise short-term average abnormal stock return of companies added in the FTSE4Good Global Index– Market model

Table 5.4<u>, cont.</u>

		FRANCE				JAPAN				AUSTRALIA	
Day	aar N	t-test	sign test	aar	N	t-test	sign test	aar	Ν	t-test	sign test
-10	0.0002 59	0.1453	0.1687	-0.0005	152	-0.3321	-0.4537	0.0016	43	0.7465	0.3378
-9	0.0012 59	0.6571	-0.0940	-0.0022	152	-1.4879	-0.7815	0.0055	43	1.6692 *	0.9551
-8	0.0014 59	9 1.0466	0.6940	-0.0001	152	-0.0624	-0.1259	0.0023	43	1.0328	0.6465
-7	0.0014 59	0.6724	0.1687	-0.0005	152	-0.4159	-0.2898	-0.0020	43	-0.6835	-0.5880
-6	0.0015 59	0.9538	2.0074 **	0.0006	152	0.4664	-0.6176	-0.0005	43	-0.1776	0.3378
-5	-0.0006 59	9 -0.3816	-0.3567	0.0003	152	0.2568	0.0380	0.0026	43	1.2492	0.0292
-4	0.0029 59	9 2.1521 **	1.4821	-0.0012	152	-0.8358	-0.2898	-0.0004	43	-0.1837	0.3378
-3	0.0006 59	0.4311	0.6940	-0.0021	152	-1.3544	-0.6176	0.0001	43	0.0391	0.9551
-2	0.0008 59	0.4483	1.2194	-0.0015	152	-1.2115	-1.2732	-0.0015	43	-0.6645	0.0292
-1	0.0001 59	0.1102	0.1687	0.0012	152	0.7987	0.2018	-0.0001	43	-0.0656	0.6465
0	0.0006 59	0.3558	-0.3567	-0.0006	152	-0.4389	-0.6176	-0.0007	43	-0.3013	-0.5880
1	-0.0013 59	9 -1.2172	-1.1447	-0.0010	152	-0.7984	-1.2732	-0.0082	43	-1.3104	0.0292
2	-0.0016 59	9 -1.1187	-1.6701 *	-0.0020	152	-1.3819	-1.4371	-0.0129	43	-1.7880 *	-1.8224
3	-0.0025 59	9 -1.6331	-1.4074	0.0023	152	1.1088	-0.1259	-0.0121	43	-1.7243 *	-1.2052
4	-0.0007 59	9 -0.3787	-1.4074	-0.0005	152	-0.3321	-0.7815	0.0044	43	1.1919	0.0292
5	0.0027 59	9 1.4668	0.6940	0.0010	152	0.7015	0.2018	0.0000	43	0.0001	0.6465
6	0.0014 59	9 1.0252	1.2194	0.0016	152	1.1204	1.6769 *	-0.0011	43	-0.5990	-0.8966
7	0.0020 59	0.9608	0.4313	-0.0008	152	-0.5880	0.3657	-0.0005	43	-0.2560	-0.2794
8	-0.0020 59	9 -1.6584 *	-0.8820	-0.0013	152	-0.9534	-0.7815	-0.0001	43	-0.0194	0.6465
9	0.0011 59	0.7953	0.9567	0.0017	152	1.1530	2.3324 **	-0.0008	43	-0.3475	-1.2052
10	0.0006 59	0.4768	-0.6194	0.0013	152	0.7681	1.3491	0.0001	43	0.0562	-0.2794
11	-0.0021 59	9 -2.5456 **	-1.1447	-0.0022	152	-1.4933	-0.2898	-0.0012	43	-0.5897	-0.5880
12	-0.0002 59	9 -0.1400	-0.3567	-0.0001	152	-0.0356	0.5296	0.0032	43	1.3925	0.9551
13	0.0000 59	0.0057	0.9567	-0.0017	152	-1.0321	-0.6176	-0.0029	43	-1.4107	-0.2794
14	0.0001 59	0.0824	0.1687	-0.0040	152	-2.3153 **	-1.4371	0.0029	43	1.1722	-0.2794
15	-0.0004 59	9 -0.3122	0.1687	-0.0014	152	-0.7713	-0.1259	0.0003	43	0.1277	-1.2052

Table 5.4, cont.

			REST OF	EU			REST OF ASIA PACIFIC					
Day	aar	Ν	t-test		sign test		aar	Ν	t-test	sign test		
-10	0.0012	124	0.9032		0.7951		-0.0017	44	-1.0002	-0.9947		
-9	-0.0008	124	-0.7021		-1.7408 *	¢	0.0025	44	1.1137	-0.0683		
-8	-0.0006	124	-0.6357		-1.3785		0.0010	44	0.5293	-0.0683		
-7	-0.0009	124	-0.7582		0.2517		-0.0105	44	-2.6257 ***	-1.3035		
-6	-0.0008	124	-0.7882		-2.6465 *	***	0.0003	44	0.1753	-0.6859		
-5	0.0003	124	0.2870		-0.6540		-0.0008	44	-0.4993	-0.3771		
-4	-0.0016	124	-1.0169		-3.0087 *	***	-0.0002	44	-0.0903	-0.3771		
-3	-0.0013	124	-1.0421		-0.8351		-0.0002	44	-0.0819	-0.0683		
-2	-0.0016	124	-1.3751		-0.2917		0.0021	44	0.7373	-0.0683		
-1	0.0014	124	0.8997		-0.4729		-0.0078	44	-2.2929 **	-1.3035		
0	0.0007	124	0.5289		-1.1974		0.0014	44	0.3772	0.2406		
1	-0.0007	124	-0.5599		1.8819 *	¢	-0.0002	44	-0.0850	-0.3771		
2	-0.0023	124	-1.0323		-1.3785		0.0043	44	1.8678 *	0.5494		
3	-0.0028	124	-2.5837	***	-1.9219 *	¢	-0.0030	44	-1.0594	-0.3771		
4	0.0010	124	0.6496		1.7008 *	¢	0.0024	44	0.6876	0.8582		
5	-0.0018	124	-0.9099		0.0705		-0.0042	44	-1.8371 *	-0.6859		
6	0.0005	124	0.4049		-0.8351		-0.0026	44	-1.0969	-0.6859		
7	-0.0022	124	-1.3346		-2.2842 *	**	0.0025	44	1.1967	0.2406		
8	0.0008	124	0.4903		-0.2917		-0.0067	44	-1.7451 *	-2.5388 **		
9	0.0024	124	1.7512	*	0.6140		-0.0006	44	-0.1952	-0.0683		
10	-0.0008	124	-0.6358		-0.8351		0.0000	44	-0.0026	0.2406		
11	-0.0011	124	-0.8945		-1.1974		-0.0021	44	-1.0994	0.2406		
12	0.0009	124	0.6953		-1.0163		0.0042	44	1.7808 *	1.1670		
13	-0.0007	124	-0.5322		-1.3785		-0.0039	44	-1.7068 *	-1.6124		
14	-0.0007	124	-0.4127		-0.8351		-0.0014	44	-0.7061	0.2406		
15	0.0004	124	0.2232		1.1574		-0.0014	44	-0.4717	0.5494		

			UK			US				GERMANY			
Window	caar	Ν	t-test	sign test	caar	Ν	t-test	sign test	caar	Ν	t-test	sign test	
(-1015)	-0.0074	102	-0.6641	-1.0463	-0.0006	167	-0.0893	-0.8461	-0.0213	34	-1.2985	-0.2529	
(-51)	-0.0043	102	-0.9549	-0.6443	0.0042	167	1.7608 *	0.4110	-0.0013	34	-0.2285	-0.6011	
(-31)	-0.0006	102	-0.1708	-0.6443	0.0025	167	1.1666	1.5110	0.0010	34	0.1835	0.7917	
(-11)	-0.0081	102	-2.1289 **	-1.4483	-0.0026	167	-1.5298	-1.1604	-0.0139	34	-1.6599 *	-0.6011	
(00)	-0.0039	102	-2.1493 **	-0.0413	-0.0022	167	-2.5180 **	-2.5746 ***	-0.0014	34	-0.3965	-1.2975	
(15)	-0.0027	102	-0.5391	0.9638	0.0008	167	0.3268	-0.2175	-0.0205	34	-2.4461 **	-1.6456 *	
(110)	-0.0102	102	-1.2198	-0.2423	-0.0013	167	-0.4157	1.6682 *	-0.0184	34	-1.4106	-0.9493	
(115)	-0.0019	102	-0.2274	-1.4483	0.0003	167	0.0561	0.7253	-0.0177	34	-1.6916 *	-1.2975	

Table 5. 5 Country-wise cumulative average abnormal return (CAAR) of stock added in the FTSE4Good Global Index-Market model

Table 5.4, cont.

	FRANCE						JAPAN				AUSTRALIA	
Window	caar N	N t-t	est	sign test	caar	Ν	t-test	sign test	caar	Ν	t-test	sign test
(-1015)	0.0073 5	69 1	1.1398	1.2194	-0.0136	152	-2.0407 **	-1.1093	0.0014	43	0.1163	0.6465
(-51)	0.0038 5	9 1	1.3787	1.2194	-0.0032	152	-1.0820	-1.4371	0.0006	43	0.1254	0.0292
(-31)	0.0015 5	i9 (0.6612	0.1687	-0.0024	152	-0.9449	-0.6176	-0.0016	43	-0.3960	0.3378
(-11)	-0.0006 5	i9 -0	0.2175	-0.3567	-0.0004	152	-0.1850	0.3657	-0.0082	43	-1.3104	0.0292
(00)	0.0006 5	i9 (0.3558	-0.3567	-0.0006	152	-0.4389	-0.6176	-0.0007	43	-0.3013	-0.5880
(15)	-0.0034 5	i9 -1	1.1609	0.1687	-0.0001	152	-0.0448	0.3657	-0.0054	43	-0.7792	-0.8966
(110)	-0.0003 5	i9 -0	0.0717	-0.0940	0.0023	152	0.5274	0.0380	-0.0077	43	-0.9344	-0.2794
(115)	-0.0028 5	i9 -0	0.5476	-0.3567	-0.0071	152	-1.3170	-1.7648 *	-0.0054	43	-0.6042	-0.5880

Table 5.5, cont.

			REST OF EU	REST OF ASIA PACIFIC				
Window	caar	Ν	t-test	sign test	caar N t-test sign test			
(-1015)	-0.0110	124	-1.4637	-1.1974	-0.0268 44 -1.8902 * -0.9947			
(-51)	-0.0028	124	-1.0454	-0.6540	-0.0068 44 -1.2910 0.2406			
(-31)	-0.0016	124	-0.7062	-0.1106	-0.0058 44 -1.1198 -0.3772			
(-11)	-0.0046	124	-0.8344	-0.1106	-0.0066 44 -1.5431 -1.6124			
(00)	0.0007	124	0.5289	-1.1974	0.0014 44 0.3772 0.2406			
(15)	-0.0065	124	-1.9008 *	-1.3785	-0.0007 44 -0.1269 -0.0683			
(110)	-0.0058	124	-1.2679	-0.2917	-0.0082 44 -0.7860 -0.6859			
(115)	-0.0070	124	-1.1738	0.2517	-0.0128 44 -1.1496 -1.3035			

		Global Samp	e
Day	aar N	t-test	sign test
-10	0.0025 577	7 2.0887 **	0.4698
-9	0.0000 577	0.0110	-1.5250
-8	-0.0007 577	7 -0.7695	-1.4419
-7	0.0014 577	7 1.1126	-0.5276
-6	0.0011 577	7 1.1665	0.6361
-5	-0.0004 577	7 -0.4040	-0.6938
-4	-0.0001 577	7 -0.1154	-2.7718 ***
-3	0.0002 577	0.1570	-1.1925
-2	0.0003 577	0.3129	0.2205
-1	0.0001 577	0.0552	-1.1925
0	-0.0010 577	7 -1.0676	-1.2757
1	-0.0002 577	7 -0.2503	-1.5250
2	0.0006 577	0.5627	0.3036
3	0.0001 577	0.1123	-1.4419
4	-0.0010 577	7 -0.9180	-2.0237 **
5	0.0001 577	0.1186	-1.0263
6	-0.0023 577	7 -1.9002 *	-1.1925
7	0.0018 577	7 1.2665	1.5504
8	-0.0002 577	7 -0.2136	-0.2782
9	0.0013 577	7 1.2723	0.7192
10	0.0009 577	0.9029	-0.3613
11	-0.0013 577	7 -1.3825	-0.5276
12	0.0005 577	0.5582	-0.0289
13	-0.0010 577	7 -0.9050	-0.9432
14	-0.0007 577	-0.5633	0.9686
15	-0.0029 577	7 -0.5966	0.8854

Table 5. 6 Short term average abnormal stock return of companies deleted from the FTSE4Good Global Index – Market model

Table 5. 7 Short term cumulative average abnormal stock return of companies deleted from the FTSE4Good Global Index – Market model

	Global Sample								
windows	caar N	t-test	sign test						
(-1015)	-0.0011 577	-0.1210	-1.0263						
(-51)	0.0000 577	0.0176	-0.8601						
(-31)	0.0006 577	0.2940	-1.8575 *						
(-11)	-0.0011 577	-0.7033	-0.9432						
(00)	-0.0010 577	-1.0676	-1.2757						
(15)	-0.0003 577	-0.1246	-2.0237 **						
(110)	0.0010 577	0.2804	-1.2757						
(115)	-0.0044 577	-0.5735	-0.9432						

Notes: * Indicates significant at the 10% level, ** indicates significance at the 5% level, *** indicates significance at 1% level.

nodel					1				1			
UK							US				JAPAN	
windows	aar	Ν	t-test	sign test	aar	Ν	t-test	sign test	aar	Ν	t-test	sign test
-10	0.0049	51	1.5609	1.1107	0.0016	193	0.5329	0.0887	0.0016	151	1.2509	0.0229
-9	-0.0022	51	-0.7455	0.2517	0.0006	193	0.6359	-0.2095	-0.0013	151	-1.2109	-1.4834
-8	0.0071	51	2.2582 **	1.6834 *	-0.0012	193	-0.9659	-0.0604	-0.0037	151	-3.3292 ***	-3.4917 ***
-7	0.0114	51	2.3177 **	-0.0347	-0.0017	193	-0.8163	-0.5077	0.0007	151	0.5437	0.5250
-6	0.0075	51	2.4413 **	0.8244	0.0010	193	0.5716	1.2814	-0.0009	151	-0.6788	-0.3118
-5	-0.0057	51	-0.7731	-1.1800	0.0013	193	0.8605	-0.3586	-0.0009	151	-0.7599	-0.4792
-4	-0.0007	51	-0.1518	-0.6073	-0.0028	193	-1.2479	-4.0858 ***	-0.0006	151	-0.4349	-0.4792
-3	0.0040	51	1.2943	0.2517	-0.0016	193	-0.9028	-1.9986 **	0.0009	151	0.6475	0.5250
-2	-0.0005	51	-0.1447	-0.8937	0.0006	193	0.2766	0.0887	-0.0018	151	-1.3131	0.1903
-1	-0.0010	51	-0.2557	-0.0347	0.0002	193	0.0842	-1.5513	-0.0002	151	-0.1270	-0.1445
0	-0.0039	51	-1.5892	-2.0391 **	-0.0002	193	-0.1298	-0.8059	0.0000	151	-0.0194	0.6924
1	-0.0037	51	-1.1810	-0.8937	0.0012	193	0.9289	-0.8059	-0.0023	151	-1.6905 *	-1.4834

-0.0001 193 -0.0598

0.0007 193 0.4417

-0.0001 193 -0.0766

-0.0013 193 -0.9853

0.0018 193 1.3976

-0.0010 193 -0.8265

0.0011 193 0.8987

-0.0036 193 -2.7654 ***

0.0001 193

0.0000 193

0.0055 193

0.0015 193

0.0041 193

0.0012 193

-0.6568

0.5359

0.3868

-0.9550

-1.4022

0.6850

1.2814

0.9832

-0.8059

0.8341

-0.2095

-2.4459 **

-1.7004 *

-2.8931 ***

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-0.0031 51 -0.8660

-0.0028 51 -0.6775

-0.0018 51 -0.4295

-0.0076 51 -1.1402

-0.0031 51 -0.5260

0.0051 51 1.0914

-0.0082 51 -1.8837 *

0.0039 51 0.8348

-0.0132 51 -2.7249 ***

-0.0063 51 -1.6517 *

0.0038 51 0.5863

-0.0029 51 -0.7137

-0.0061 51 -1.9328 *

0.0094 51 2.1497 **

0.2517

-0.8937

0.8244

-0.3210

0.5380

0.5380

-1.4664

-0.8937

-0.3210

1.1107

-2.3254 **

-1.7527 *

-3.1844 ***

-2.0391 **

0.0229

-0.1445

0.1903

1.1944

1.3618

0.0229

1.5292

-0.1445

0.0229

0.8597

-0.3118

0.8597

1.6965 *

-2.3202 **

-0.0008 151 -0.6764

0.0023 151 1.4263

0.0018 151 1.1056

-0.0012 151 -0.6123

-0.0014 151 -0.5822

0.0015 151 1.2234

-0.0008 151 -0.6327

-0.0036 151 -1.4087

0.0012 151 0.5795

-0.0020 151 -0.6704

-0.0065 151 -1.5405

-0.0170 151 -0.8676

0.0036 151 2.4876 **

-0.0043 151 -2.9319 ***

Table 5. 8 Country-wise short-term average abnormal stock return of companies deleted from the FTSE4Good Global Index – Market model

Notes: * Indicates significant at the 10% level, ** indicates significance at the 5% level, *** indicates significance at 1% level.

0.7950

0.0327

0.0227

1.0073

1.7627 *

2.3440 **

Table 5.8, cont.

		REST	r of Asia pa	CIFIC		REST	OF EUROPE	
windows	aar	Ν	t-test	sign test	aar	Ν	t-test	sign test
-10	0.0016	43	0.5334	-0.8077	0.0035	139	1.6566 *	-0.1733
-9	0.0025	43	1.0159	0.3593	0.0024	139	0.9245	-0.3522
-8	0.0017	43	0.5550	0.6511	0.0000	139	0.0120	-0.5312
-7	0.0015	43	0.6563	-0.2242	0.0020	139	0.5120	-0.7101
-6	0.0008	43	0.2825	0.3593	0.0010	139	0.3446	-0.8890
-5	0.0011	43	0.5295	0.9428	-0.0006	139	-0.2659	-0.5312
-4	0.0036	43	1.3457	0.3593	0.0036	139	1.5355	-0.5312
-3	-0.0065	43	-0.7647	-1.0994	0.0019	139	0.8460	-0.5312
-2	-0.0033	43	-0.9678	-0.8077	0.0043	139	1.6238	1.2582
-1	-0.0001	43	-0.0224	0.3593	0.0010	139	0.3373	-0.5312
0	-0.0024	43	-1.2054	-0.8077	-0.0018	139	-0.7051	-1.2469
1	-0.0019	43	-0.8127	-2.5582 **	0.0024	139	1.1904	0.7214
2	0.0105	43	3.0606 ***	1.8181 *	0.0014	139	0.3861	-0.1733
3	0.0026	43	0.9017	0.0676	-0.0029	139	-1.1399	-2.3205 **
4	0.0006	43	0.2120	-0.8077	0.0008	139	0.2071	-1.0680
5	-0.0017	43	-0.5038	-0.5159	0.0013	139	0.4351	-0.7101
6	-0.0001	43	-0.0195	-0.2242	-0.0056	139	-1.6539 *	-0.1733
7	-0.0011	43	-0.3565	0.6511	-0.0005	139	-0.1589	1.6161
8	-0.0057	43	-2.4728 **	-1.9747 **	-0.0010	139	-0.4714	-0.8890
9	0.0051	43	1.6853 *	0.6511	0.0004	139	0.2360	-0.5312
10	0.0028	43	1.0990	0.0676	0.0039	139	1.6879 *	1.2582
11	0.0008	43	0.3253	0.0676	-0.0035	139	-1.6100	-1.9626 **
12	0.0047	43	1.8389 *	1.2346	0.0003	139	0.1470	0.7214
13	0.0006	43	0.1520	-0.5159	0.0032	139	1.2265	-0.3522
14	0.0059	43	1.6754 *	1.5263	0.0019	139	1.1795	1.2582
15	-0.0043	43	-1.2570	-0.2242	0.0015	139	0.7658	0.3635

Notes: * Indicates significant at the 10% level, ** indicates significance at the 5% level, *** indicates significance at 1% level.

Table 5. 9 Country-wise short-term cumulative average abnormal stock return of companies deleted from the FTSE4Good Global Index – Market model

UK					US				JAPAN			
windows	caar	Ν	t-test	sign test	caar	Ν	t-test	sign test	caar	Ν	t-test	sign test
(-1015)	-0.0159	51	-0.5667	-0.6073	0.0087	193	0.8095	-2.5949 ***	-0.0355	151	-1.2473	0.5250
(-51)	-0.0039	51	-0.2887	-1.1800	-0.0023	193	-0.5143	-1.1040	-0.0025	151	-0.7855	0.3576
(-31)	0.0025	51	0.3581	-1.1800	-0.0009	193	-0.2767	-1.7004 *	-0.0011	151	-0.4343	-0.3118
(-11)	-0.0086	51	-1.6461 *	-2.0391 **	0.0011	193	0.3756	-0.5077	-0.0026	151	-0.8244	-0.3118
(00)	-0.0039	51	-1.5892	-2.0391 **	-0.0002	193	-0.1298	-0.8059	0.0000	151	-0.0194	0.6924
(15)	-0.0188	51	-1.7699 *	-2.0391 **	0.0017	193	0.5427	-0.8059	-0.0033	151	-0.9411	-0.9813
(110)	-0.0345	51	-2.0497 **	-2.6117 ***	0.0115	193	1.5573	-0.6568	-0.0015	151	-0.2574	-0.1445
(115)	-0.0367	51	-2.0978 **	-1.7527 *	0.0109	193	1.2855	-1.4022	-0.0293	151	-1.0927	0.0229

Table 5.9, cont.

	F	REST	F OF ASIA		REST OF EUROPE				
windows	caar	Ν	t-test	sign test	caar	Ν	t-test	sign test	
(-1015)	0.0193	43	0.6948	-0.2242	0.0208	139	1.5039	0.0057	
(-51)	-0.0051	43	-0.4474	-0.8077	0.0103	139	1.5106	1.0793	
(-31)	-0.0098	43	-0.9691	-1.3912	0.0073	139	1.4497	0.1846	
(-11)	-0.0045	43	-0.9757	-0.8077	0.0015	139	0.4492	-0.1733	
(00)	-0.0024	43	-1.2054	-0.8077	-0.0018	139	-0.7051	-1.2469	
(15)	0.0100	43	1.6248	0.6511	0.0029	139	0.3006	-1.6048	
(110)	0.0111	43	0.9196	-0.2242	0.0002	139	0.0203	-0.7101	
(115)	0.0188	43	1.2109	0.3593	0.0035	139	0.3961	-0.3522	

GLOBAL SAMPLE										
Window	bhar	Ν	t- statistic		skewness adj.	;-				
(030)	0.0023	596	0.6441		0.6513					
(060)	0.0050	596	0.9040		0.9241					
(090)	0.0139	596	2.1969	**	2.2764	**				
(0120)	0.0261	596	3.0101	***	3.4762	***				
(0150)	0.0322	596	3.2526	***	3.7837	***				
(0180)	0.0394	596	3.6162	***	4.2897	***				
(0210)	0.0398	596	3.6508	***	4.1875	***				
(0240)	0.0441	596	3.6651	***	4.2377	***				

Table 5. 10 Long-term stock return for the companies added in the FTSE4Good Global index.

			JAPAN		US AND CANADA					
Window	bhar	N	t- statistic	skewness adj.	-	date	bhar	N	t- statistic	skewness- adj.
(030)	0.0076	125	0.9032	0.9170		(030)	0.0013	137	0.1887	0.1913
(060)	-0.0110	125	-0.9785	-0.9571		(060)	0.0070	137	0.5879	0.6070
(090)	-0.0070	125	-0.5518	-0.5470		(090)	0.0180	137	1.2914	1.3969
(0120)	0.0127	125	0.8205	0.8189		(0120)	0.0175	137	0.9809	1.1001
(0150)	0.0162	125	0.8740	0.8898		(0150)	0.0208	137	1.0391	1.1556
(0180)	0.0311	125	1.5182	1.5767		(0180)	0.0126	137	0.6296	0.6800
(0210)	0.0420	125	1.8282 *	1.9909	**	(0210)	0.0113	137	0.5530	0.6020
(0240)	0.0490	125	1.9755 **	^c 2.2600	**	(0240)	0.0492	137	1.0450	1.3939
		E	UROPE			UK				
Window	bhar	Ν	t- statistic	skewness adj.	-	date	bhar	N	t- statistic	skewness- adj.
(030)	-0.0017	190	-0.2876	-0.2906		(030)	0.0122	76	0.9675	1.0723
(060)	0.0108	190	1.1833	1.3319		(060)	0.0069	76	0.3958	0.3782
(090)	0.0210	190	2.1169 **	⁶ 2.3575	**	(090)	0.0123	76	0.6379	0.6055
(0120)	0.0317	190	2.1049 **	⁶ 2.7327	***	(0120)	0.0219	76	1.1610	1.1316
(0150)	0.0331	190	2.0687 **	⁶ 2.4906	**	(0150)	0.0176	76	0.8933	0.9016
(0180)	0.0413	190	2.4624 **	[°] 2.8214	***	(0180)	0.0251	76	1.1381	1.1809
(0210)	0.0419	190	2.4005 **	[°] 2.6517	***	(0210)	0.0233	76	1.0119	1.0273
(0240)	0.0505	190	2.5176 **	⁶ 2.8070	***	(0240)	0.1043	76	1.1069	1.5884

Table 5. 11 Country wise long-term stock return for the companies added in the FTSE4Good Global index.

		ASIA PA	CIFIC		
Window	bhar	N	t-	skewness-	
window	Dilai	IN	statistic	adj.	
(030)	-0.0074	68	-0.7378	-0.7448	
(060)	0.0070	68	0.4244	0.4309	
(090)	0.0171	68	0.9235	0.9449	
(0120)	0.0377	68	1.4604	1.5705	
(0150)	0.0730	68	2.3778 *	* 2.7527	***
(0180)	0.0862	68	2.3591 *	* 2.8082	***
(0210)	0.0812	68	2.4514 *	* 2.7163	***
(0240)	0.0751	68	2.2239 *	* 2.4091	**

	GLOBAL SAMPLE										
Window	BHAR	Ν	t- statistic	skewnes s-adj.							
(030)	-0.0109	410	-1.6780 *	-1.5667							
(060)	-0.0012	410	-0.1104	-0.0826							
(090)	0.0049	410	0.4029	0.4347							
(0120)	0.0183	410	1.2517	1.3683							
(0150)	0.0289	410	1.7497 *	1.9461 *							
(0180)	0.0272	410	1.5550	1.7038 *							
(0210)	0.0279	410	1.4600	1.5932							
(0240)	0.0062	410	-1.2352	-1.1407							

Table 5. 12 Long-term stock return for the companies deleted from the FTSE4Good Global index.

Notes: * Indicates significant at the 10% level, ** indicates significance at the 5% level,

*** indicates significance at 1% level.

	U	K				US AND CANADA				
		t-		skewnes					t-	skewness-
Window bhar	Ν	statistic		s-adj.		Window	bhar	Ν	statistic	adj.
(030) -0.0695	36	-2.6066	***	-3.0491	***	(030)	0.0005	132	0.0397	0.1055
(060) -0.0897	36	-2.4158	**	-2.6646	***	(060)	-0.0102	132	-0.6955	-0.6923
(090) -0.0862	36	-2.6174	***	-2.6531	***	(090)	-0.0088	132	-0.4318	-0.4005
(0120) -0.0754	36	-1.9508	*	-2.0535	**	(0120)	0.0157	132	0.6800	0.7294
(0150) -0.0490	36	-1.0631		-1.0775		(0150)	0.0295	132	1.1883	1.2779
(0180) -0.0177	36	-0.3818		-0.3858		(0180)	0.0338	132	1.1246	1.2463
(0210) -0.0112	36	-0.2091		-0.2089		(0210)	0.0408	132	1.1754	1.3372
(0240) 0.0103	36	0.1672		0.1608		(0240)	0.0359	132	0.9697	1.0959
	EUROPE					JAPAN				
Window bhar	N	t-		skewnes					t-	skewness-
Window bhar	N	t- statistic		skewnes s-adj.		Window	bhar	N	t- statistic	skewness- adj.
Window bhar (030) -0.0267	N 101	-	**		**		bhar -0.0067	N 111	-	
		statistic	**	s-adj.		(030)			statistic	adj.
(030) -0.0267	101	statistic -2.2515	**	s-adj. -2.3790		(030) (060)	-0.0067	111	statistic -0.6714	adj. -0.6827
(030) -0.0267 (060) 0.0103	101 101	statistic -2.2515 0.4556	**	s-adj. -2.3790 0.4862		(030) (060)	-0.0067 -0.0018 0.0150	111 111	statistic -0.6714 -0.1405	adj. -0.6827 -0.1532
(030) -0.0267 (060) 0.0103 (090) 0.0097	101 101 101	statistic -2.2515 0.4556 0.3616	**	s-adj. -2.3790 0.4862 0.3988		(030) (060) (090)	-0.0067 -0.0018 0.0150 0.0092	111 111 111	statistic -0.6714 -0.1405 0.9797	adj. -0.6827 -0.1532 1.0224
(030)-0.0267(060)0.0103(090)0.0097(0120)0.0329	101 101 101 101	statistic -2.2515 0.4556 0.3616 0.9212	**	s-adj. -2.3790 0.4862 0.3988 1.0004		(030) (060) (090) (0120)	-0.0067 -0.0018 0.0150 0.0092 0.0138	111 111 111 111 111	statistic -0.6714 -0.1405 0.9797 0.5699	adj. -0.6827 -0.1532 1.0224 0.5809
(030)-0.0267(060)0.0103(090)0.0097(0120)0.0329(0150)0.0437	101 101 101 101 101	statistic -2.2515 0.4556 0.3616 0.9212 0.9896	**	s-adj. -2.3790 0.4862 0.3988 1.0004 1.1104		(030) (060) (090) (0120) (0150)	-0.0067 -0.0018 0.0150 0.0092 0.0138 0.0111	111 111 111 111 111 111	statistic -0.6714 -0.1405 0.9797 0.5699 0.7604	adj. -0.6827 -0.1532 1.0224 0.5809 0.7819

Table 5. 13 Country wise long-term stock return for the companies deleted from the FTSE4Good Global index.

		ASIA P	ACIFIC						
t- skewnes N statistic s-adj.									
(030)	0.0379	30	1.0547	1.2982					
(060)	0.0969	30	1.0550	1.4556					
(090)	0.1017	30	1.1152	1.5316					
(0120)	0.1140	30	0.9936	1.3897					
(0150)	0.1170	30	0.9961	1.3760					
(0180)	0.0890	30	0.8149	1.0871					
(0210)	0.1137	30	1.0161	1.3058					
(0240)	0.1153	30	0.9567	1.2208					

Notes: * Indicates significant at the 10% level, ** indicates significance at the 5% level,

*** indicates significance at 1% level.

			Global Sa	mple	e	
Day	aar	Ν	t-test		sign test	
-10	0.0009	725	1.4602		0.5189	
-9	0.0015	725	2.1874	**	2.8909	***
-8	0.0008	725	1.2094		1.5566	
-7	-0.0005	725	-0.7126		-0.4447	
-6	0.0007	725	1.1237		0.0741	
-5	-0.0009	725	-1.4403		-3.7062	***
-4	0.0005	725	0.7157		0.6671	
-3	0.0002	725	0.2450		-0.3706	
-2	-0.0016	725	-2.4221	**	-2.5202	**
-1	0.0001	725	0.1510		-2.2237	**
0	-0.0025	725	-3.6954	***	-4.8922	***
1	-0.0027	725	-3.9103	***	-4.0769	***
2	-0.0032	725	-3.2428	***	-1.7049	*
3	-0.0004	725	-0.4836		-0.1482	
4	-0.0011	725	-1.3837		-3.8545	***
5	-0.0018	725	-2.1827	**	-2.5944	***
6	0.0007	725	0.8820		1.8531	*
7	0.0003	725	0.4515		-0.3706	
8	-0.0024	725	-3.0187	***	-4.0769	***
9	0.0001	725	0.1187		0.0000	
10	0.0017	725	2.3307	**	2.8167	***
11	-0.0010	725	-1.4470		-3.1132	***
12	0.0020	725	2.3760	**	0.3706	
13	0.0019	725	2.6485	***	2.2979	**
14	-0.0041	725	-4.5885	***	-1.4084	
15	-0.0016	725	-1.6250		-1.1860	

Table 5. 14 Short term average abnormal stock return of companies added in the FTSE4Good Global Index – Fama and French 3 Factor model

Table 5. 15 Short term cumulative average abnormal stock return of companies added in the FTSE4Good Global Index – Fama and French 3 Factor model

			Global Sa	mpl	e	
Window	caar	Ν	t-test		sign test	
(-1015)	-0.0125	725	-2.7988	***	-2.6685	***
(-51)	-0.0017	725	-1.1502		-1.0377	
(-31)	-0.0013	725	-1.0955		-2.5944	***
(-11)	-0.0054	725	-2.2127	**	-3.7804	***
(00)	-0.0025	725	-3.6954	***	-4.8922	***
(15)	-0.0091	725	-4.9962	***	-5.4111	***
(110)	-0.0089	725	-3.5220	***	-3.4097	***
(115)	-0.0116	725	-3.4283	***	-3.5580	***

		UK					US			Ĩ			GERMAN	Y		
Day	aar N	t-test	sign test		aar	Ν	t-test		sign test		aar	Ν	t-test		sign test	
-10	-0.0016 102	2 -0.8780	-0.5713		0.0004	167	0.2972		0.6393		0.0004	34	0.2049		-0.3024	
-9	-0.0005 102	2 -0.2418	-0.7723		0.0022	167	1.7350	*	3.3106	***	-0.0024	34	-0.8937		-0.9989	
-8	0.0000 102	2 -0.0163	0.6348		0.0017	167	1.0235		1.7392	*	-0.0018	34	-0.6664		0.0458	
-7	-0.0017 102	2 -0.9212	0.2328		0.0008	167	0.5425		-0.4607		0.0003	34	0.1673		-1.3471	
-6	0.0004 102	0.1688	-0.3703		-0.0005	167	-0.4800		0.7964		0.0002	34	0.0457		0.0458	
-5	-0.0087 102	2 -3.7639 *	** -2.3804	**	0.0000	167	-0.0281		-2.6605	***	-0.0049	34	-1.3114		-1.6954	*
-4	0.0010 102	0.3971	-1.3753		-0.0005	167	-0.3986		-0.3035		-0.0011	34	-0.4528		-0.3024	
-3	-0.0039 102	2 -2.3990 *	* -1.5764		0.0020	167	1.4284		0.4822		0.0022	34	0.9272		1.4388	
-2	-0.0050 102	2 -2.3648 *	* -1.1743		-0.0005	167	-0.3239		0.0108		0.0028	34	0.8351		0.0458	
-1	-0.0011 102	2 -0.4506	-0.9733		0.0033	167	1.9615	**	-0.4607		-0.0050	34	-1.0931		-2.0436	**
0	-0.0044 102	2 -2.1353 *	* -0.5713		-0.0038	167	-3.0822	***	-3.4462	***	-0.0016	34	-0.4300		-0.6507	
1	-0.0066 102	2 -2.8853 *	** -2.1794	**	-0.0010	167	-0.8964		-2.0320	**	-0.0104	34	-2.6914	***	-1.3471	
2	-0.0078 102	2 -2.0560 *	* -0.1693		0.0022	167	1.5188		1.4250		-0.0079	34	-1.5040		-0.6507	
3	0.0003 102	0.1246	0.2328		0.0017	167	1.1148		0.9536		0.0014	34	0.5131		0.3941	
4	-0.0002 102	2 -0.1082	-2.3804	**	-0.0052	167	-3.4367	***	-2.8177	***	-0.0076	34	-1.8575	*	-1.6954	*
5	0.0008 102	0.3686	-0.1693		0.0004	167	0.2582		-0.9321		-0.0059	34	-1.4928		-2.3919	**
6	0.0026 102	2 1.6068	1.8409	*	0.0017	167	1.1064		3.1534	***	0.0008	34	0.2190		-0.3024	
7	-0.0003 102	2 -0.1838	-1.3753		-0.0008	167	-0.5742		-0.6178		0.0032	34	1.1596		0.7423	
8	-0.0006 102	2 -0.1649	-1.1743		-0.0038	167	-3.6212	***	-2.1891	**	-0.0009	34	-0.2034		-1.3471	
9	-0.0053 102	2 -2.6218 *'	** -2.7824	***	-0.0059	167	-4.4639	***	-4.0748	***	0.0000	34	-0.0096		-0.3024	
10	-0.0023 102	2 -0.8630	-0.7723		0.0035	167	2.5959	***	4.5677	***	0.0047	34	2.0437	**	0.7423	
11	0.0023 102	0.7984	0.6348		-0.0017	167	-1.2984		-1.8749	*	0.0003	34	0.0787		-1.6954	*
12	0.0080 102	2 2.3269 *	* 0.0317		0.0022	167	1.0993		0.9536		0.0028	34	1.0696		0.7423	
13	0.0076 102	2 3.2356 *'	** 1.8409	*	0.0030	167	2.0413	**	1.2678		0.0005	34	0.1267		0.0458	
14	-0.0040 102	2 -1.5459	-2.9834	***	-0.0051	167	-2.6861	***	0.0108		-0.0086	34	-2.4306	**	-0.9989	
15	0.0006 102	0.1947	1.4388		-0.0035	167	-1.8876	*	-2.8177	***	0.0009	34	0.2192		-0.3024	

Table 5. 16 Country-wise short-term average abnormal stock return of companies added in the FTSE4Good Global Index – Fama and French 3 Factor model

Table 5.16, cont.

	FRANCE							JAPAN						AUSTR	ALIA	L .		
Day	aar	Ν	t-test		sign test		aar	Ν	t-test		sign test		aar	Ν	t-test		sign test	
-10	0.0007	59	0.4590		-0.4506		0.0018	152	1.0923		1.3482		0.0031	43	1.1251		0.5847	
-9	0.0026	59	1.2825		1.9130	*	0.0010	152	0.5832		0.3649		0.0061	43	1.9203	*	1.2020	
-8	0.0036	59	2.2201	**	2.1756	**	-0.0003	152	-0.1922		0.8565		0.0020	43	0.8266		-0.9583	
-7	0.0025	59	1.1988		1.1251		-0.0005	152	-0.3591		-0.1268		-0.0021	43	-0.6671		-1.5755	
-6	0.0005	59	0.2488		-0.1880		0.0023	152	1.5625		0.0371		0.0002	43	0.0588		0.5847	
-5	-0.0010	59	-0.6241		-0.9759		0.0015	152	0.9422		-0.7824		0.0017	43	0.8510		-0.3411	
-4	0.0040	59	2.5503	**	2.1756	**	0.0011	152	0.6811		1.8399	*	-0.0029	43	-0.9742		-1.2669	
-3	-0.0003	59	-0.2165		-0.7132		0.0018	152	1.0294		0.5288		-0.0026	43	-1.0029		-1.5755	
-2	-0.0012	59	-0.5689		-1.5011		-0.0029	152	-1.9858	**	-2.9129	***	-0.0054	43	-2.3691	**	-1.2669	
-1	-0.0016	59	-1.1759		-0.7132		0.0022	152	1.3496		0.2010		-0.0012	43	-0.4473		-0.0325	
0	-0.0021	59	-0.9542		-2.2890	**	-0.0027	152	-1.7526	*	-1.6018		-0.0023	43	-0.8572		-1.2669	
1	-0.0030	59	-2.2002	**	-1.5011		0.0010	152	0.6775		-0.6185		-0.0118	43	-1.6869	*	-2.1928	**
2	-0.0044	59	-2.5994	***	-3.0769	***	-0.0049	152	-1.6846	*	-0.7824		-0.0235	43	-2.8613	***	-3.1186	***
3	-0.0045	59	-2.3041	**	-1.5011		0.0000	152	-0.0163		0.5288		-0.0255	43	-2.9395	***	-3.4272	***
4	-0.0032	59	-1.7760	*	-2.2890	**	0.0005	152	0.2768		-1.1101		0.0054	43	1.2364		-0.9583	
5	-0.0021	59	-0.9644		-2.0264	**	0.0005	152	0.2772		0.8565		-0.0014	43	-0.4745		0.2761	
6	0.0020	59	0.9996		1.1251		0.0007	152	0.3198		-0.1268		-0.0008	43	-0.3943		-0.0325	
7	0.0018	59	0.8237		0.5999		-0.0005	152	-0.3433		-0.4546		0.0020	43	0.9487		1.2020	
8	-0.0065	59	-4.6574	***	-3.3395	***	-0.0006	152	-0.3804		-0.1268		-0.0013	43	-0.4821		-1.2669	
9	0.0036	59	2.3095	**	2.7009	***			2.3386	**	1.1843				0.0759		-0.0325	
10	0.0014	59	0.8602		0.0746		0.0029	152	1.4740		1.6760	*	0.0001	43	0.0436		-0.3411	
11	-0.0025	59	-2.1993	**	-2.8142	***	-0.0020	152	-1.2972		-1.6018		-0.0001	43	-0.0624		-0.0325	
12	-0.0008	59	-0.5490		-0.4506		-0.0015	152	-0.8517		-0.1268		0.0016	43	0.5710		-0.6497	
13	0.0029	59	1.8776	*	0.8625		-0.0008	152	-0.3952		2.3316	**	-0.0007	43	-0.2739		-0.3411	
14	-0.0043	59	-1.6081		-0.9759				-3.3206	***		**	0.0019	43	0.6545		1.2020	
15	-0.0059	59	-2.2809	**	-2.0264	**	0.0031	152	1.5523		2.1677	**	-0.0012	43	-0.4644		-1.5755	

Table 5.16, cont.

		R	REST OF E	U			RE	ST	OF ASIA	PAC	IFIC	
Day	aar	Ν	t-test		sign test		aar	Ν	t-test		sign test	
-10	0.0035	124	2.3175	**	0.9125		-0.0021	44	-1.0305		-1.7625	*
-9	-0.0005	124	-0.3462		0.5547		0.0049	44	1.9806	**	1.6325	
-8	0.0012	124	1.0556		0.1968		-0.0008	44	-0.4017		-1.7625	*
-7	-0.0002	124	-0.2018		0.7336		-0.0084	44	-2.2172	**	-1.4538	
-6	0.0003	124	0.2687		-0.5189		0.0010	44	0.5690		-0.8366	
-5	0.0009	124	0.6755		-1.2346		0.0006	44	0.2469		0.0893	
-4	-0.0006	124	-0.3964		-0.3400		0.0025	44	0.8729		1.0153	
-3	-0.0007	124	-0.5472		0.0179		-0.0004	44	-0.1658		-0.2193	
-2	-0.0002	124	-0.1126		-0.5189		0.0033	44	1.0806		1.0153	
-1	0.0004	124	0.2393		-0.3400		-0.0082	44	-2.5438	**	-2.6884	***
0	-0.0005	124	-0.3174		-1.5925		0.0000	44	-0.0102		-1.4538	
1	-0.0014	124	-1.0997		-1.2346		-0.0039	44	-1.4418		-1.4538	
2	-0.0034	124	-1.6722	*	-1.7714	*	0.0019	44	0.8520		1.0153	
3	-0.0018	124	-1.3863		-1.2346		-0.0070	44	-1.9670	**	-0.5279	
4	0.0000	124	-0.0180		0.3758		0.0069	44	1.9375	*	0.7066	
5	-0.0057	124	-2.4988	**	-2.1293	**	-0.0093	44	-3.5488	***	-2.6884	***
6	-0.0004	124	-0.2778		-1.2346		-0.0006	44	-0.2476		0.3980	
7	-0.0011	124	-0.6427		-0.3400		0.0082	44	3.5059	***	2.2498	**
8	-0.0004	124	-0.2083		-0.6978		-0.0056	44	-1.3206		-2.0711	**
9	0.0061	124	3.9181	***	3.4176	***	0.0009	44	0.2726		1.0153	
10	0.0014	124	1.0113		0.3758		0.0025	44	1.0497		-0.2193	
11	-0.0018	124	-1.2461		-1.4135		-0.0003	44	-0.1338		0.0893	
12	0.0022	124	1.4427		0.3758		0.0052	44	2.0314	**	0.7066	
13	0.0025	124	1.7719	*	-0.1610		-0.0028	44	-1.2533		-0.8366	
14	-0.0003	124	-0.1360		1.8072	*	-0.0026	44	-1.1612		-0.5279	
15	-0.0046	124	-1.5561		0.1968		-0.0017	44	-0.5983		-1.1452	

Table 5. 17 Short term cumulative average abnormal stock return of companies added in the FTSE4Good Global Index – Fama and French 3 Factor model

	UK								US						GERMAN	Y		
Window	caar	Ν	t-test		sign test		caar	Ν	t-test		sign test		caar	Ν	t-test		sign test	
(-1015)	-0.0303	102	-2.8713	***	-2.7824	***	-0.0073	167	-0.9673		-1.4035		-0.0376	34	-1.6127		-1.6954	*
(-51)	-0.0176	102	-3.7010	***	-3.5865	***	0.0044	167	1.6419		0.7964		-0.0059	34	-0.6094		0.0458	
(-31)	-0.0099	102	-2.5479	**	-2.9834	***	0.0049	167	2.0850	**	0.7964		0.0001	34	0.0072		0.3941	
(-11)	-0.0120	102	-3.0253	***	-3.1845	***	-0.0016	167	-0.7584		-1.7177	*	-0.0170	34	-1.6384		-1.6954	*
(00)	-0.0044	102	-2.1353	**	-0.5713		-0.0038	167	-3.0822	***	-3.4462	***	-0.0016	34	-0.4300		-0.6507	
(15)	-0.0135	102	-2.6617	***	-2.5814	***	-0.0020	167	-0.6057		-1.8749	*	-0.0304	34	-2.5913	***	-3.0884	***
(110)	-0.0193	102	-2.2452	**	-1.9784	**	-0.0073	167	-1.8461	*	-2.0320	**	-0.0226	34	-1.6215		-1.3471	
(115)	-0.0049	102	-0.5180		-1.1743		-0.0125	167	-2.0881	**	-1.5606		-0.0267	34	-2.0403	**	-2.3919	**

Table 5.1<u>7, cont.</u>

	FRANCE								JAPAN			AUSTRALIA					
Window	caar	Ν	t-test		sign test		caar	Ν	t-test		sign test	caar	Ν	t-test		sign test	
(-1015)	-0.0178	59	-1.5487		-0.1880		-0.0009	152	-0.0708		0.3649	-0.0119	43	-0.6287		-1.2669	
(-51)	-0.0001	59	-0.0214		1.1251		0.0036	152	0.9874		-0.1268	-0.0104	43	-1.7878	*	-0.9583	
(-31)	-0.0031	59	-1.0994		-1.2385		0.0010	152	0.3367		-1.1101	-0.0091	43	-2.1166	**	-2.5014	**
(-11)	-0.0067	59	-2.0157	**	-3.0769	***	0.0004	152	0.1667		0.3649	-0.0118	43	-1.6869	*	-2.1928	**
(00)	-0.0021	59	-0.9542		-2.2890	**	-0.0027	152	-1.7526	*	-1.6018	-0.0023	43	-0.8572		-1.2669	
(15)	-0.0172	59	-4.5356	***	-3.3395	***	-0.0029	152	-0.5812		-0.1268	-0.0101	43	-1.0511		-0.9583	
(110)	-0.0149	59	-3.0414	***	-2.2890	**	0.0030	152	0.4938		1.1843	-0.0098	43	-0.8406		-0.9583	
(115)	-0.0254	59	-3.0671	***	-2.0264	**	-0.0060	152	-0.6512		0.0371	-0.0084	43	-0.5649		-1.5755	

		R	REST OF E	U		RE	ST	OF ASIA	PACI	FIC	
Window	caar	Ν	t-test	sign test		caar	Ν	t-test		sign test	
(-1015)	-0.0048	124	-0.4136	-1.0557		-0.0157	44	-1.0348		-0.2193	
(-51)	-0.0001	124	-0.0350	0.1968		-0.0022	44	-0.3708		-0.2193	
(-31)	-0.0005	124	-0.1879	-0.8768		-0.0053	44	-0.9994		-0.8366	
(-11)	-0.0038	124	-0.4865	-2.1293	**	-0.0122	44	-2.6189	***	-2.3797	**
(00)	-0.0005	124	-0.3174	-1.5925		0.0000	44	-0.0102		-1.4538	
(15)	-0.0123	124	-3.2957	*** -3.5607	***	-0.0113	44	-1.6701	*	-0.5279	
(110)	-0.0067	124	-1.1571	-2.1293	**	-0.0059	44	-0.5424		-0.8366	
(115)	-0.0086	124	-0.9713	-1.2346		-0.0082	44	-0.7327		-0.8366	

		Globa	al Sample	2		
Day	aar	Ν	t-test		sign test	
-10	0.0033	577	308:268		1.6667	*
-9	0.0022	577	2.4081	**	1.5000	
-8	-0.0010	577	-1.0339		-1.6667	*
-7	-0.0006	577	-0.3829		-1.0833	
-6	0.0001	577	0.0930		-1.1667	
-5	0.0014	577	1.2414		0.7500	
-4	-0.0015	577	-1.3489		-2.9167	***
-3	0.0004	577	0.3330		-2.7500	***
-2	-0.0003	577	-0.2329		-2.3333	**
-1	0.0018	577	1.4384		1.5000	
0	-0.0012	577	-1.1804		-2.8333	***
1	-0.0011	577	-1.1696		-2.3333	**
2	-0.0010	577	-0.7871		-1.1667	
3	-0.0011	577	-0.9887		-3.1667	***
4	0.0003	577	0.2372		-2.7500	***
5	-0.0014	577	-1.1775		-2.7500	***
6	-0.0017	577	-1.1424		-1.3333	
7	0.0010	577	0.6863		0.0833	
8	-0.0021	577	-1.7653	*	-3.0000	***
9	0.0012	577	1.1163		1.7500	*
10	0.0038	577	3.7216	***	2.6667	***
11	-0.0018	577	-1.6864	*	-1.1667	
12	0.0005	577	0.4978		1.4167	
13	0.0001	577	0.1045		0.4167	
14	-0.0026	577	-1.8580	*	-1.4167	
15	0.0002	577	0.0468		5.0833	***

Table 5. 18 Short term average abnormal stock return of companies deleted from the FTSE4Good Global Index – Fama and French 3 Factor model

Notes: * Indicates significant at the 10% level, ** indicates significance at the 5% level, *** indicates significance at 1% level.

Table 5. 19 Short term cumulative average abnormal stock return of companies deleted from the FTSE4Good Global Index – Fama and French 3 Factor model

		Globa	al Sample		
windows	caar	Ν	t-test	sign test	
(-1015)	-0.0010	577	-0.0953	-1.0833	
(-51)	0.0018	577	0.6330	-0.8333	
(-31)	0.0019	577	0.9167	-0.7500	
(-11)	-0.0005	577	-0.2793	-0.8333	
(00)	-0.0012	577	-1.1804	-2.8333	***
(15)	-0.0044	577	-1.3967	-3.7500	***
(110)	-0.0021	577	-0.4976	-1.9167	*
(115)	-0.0056	577	-0.6670	-2.2500	**

Notes: * Indicates significant at the 10% level, ** indicates significance at the 5% level, *** indicates significance at 1% level.

			UK						US						JAPAN			
Day	aar	Ν	t-test		sign test		aar	Ν	t-test		sign test		aar	Ν	t-test		sign test	
-10	0.0079	51	1.9667	**	-0.0422		0.0029	193	0.7871		-1.8644	*	0.0047	151	2.7730	***	4.8539	***
-9	-0.0040	51	-1.0936		-0.6149		0.0019	193	1.4928		0.6701		0.0043	151	3.2070	***	2.1774	**
-8	0.0038	51	1.2114		-0.3286		-0.0036	193	-2.3858	**	-2.9081	***	-0.0019	151	-1.2779		-0.6665	
-7	0.0150	51	2.9800	***	0.8169		-0.0056	193	-1.6250		-1.8644	*	-0.0013	151	-0.9292		-0.3319	
-6	0.0029	51	0.6411		1.3896		-0.0007	193	-0.3092		-2.4608	**	-0.0009	151	-0.5819		-1.0011	
-5	-0.0130	51	-1.6708	*	-1.4740		0.0059	193	3.4464	***	1.5647		0.0011	151	0.7915		0.8391	
-4	-0.0091	51	-1.9967	**	-1.1877		-0.0066	193	-2.6506	***	-5.1445	***	0.0009	151	0.5604		0.3372	
-3	0.0091	51	1.6988	*	-0.0422		-0.0014	193	-0.6494		-3.9517	***	0.0033	151	2.0687	**	1.1736	
-2	0.0010	51	0.2521		0.2442		0.0027	193	1.0863		-2.0135	**	-0.0039	151	-2.4750	**	-0.6665	
-1	-0.0010	51	-0.2331		-1.4740		0.0043	193	1.7029	*	1.2665		0.0032	151	1.9588	*	3.0138	***
0	-0.0050	51	-1.6428		-1.7604	*	0.0015	193	0.8407		-1.1190		-0.0023	151	-1.2969		-1.1684	
1	-0.0034	51	-0.8887		-0.3286		-0.0014	193	-0.8363		-2.3117	**	-0.0013	151	-0.9845		-1.0011	
2	-0.0147	51	-2.7538	***	-1.7604	*	0.0010	193	0.5242		0.0738		-0.0027	151	-1.4260		0.3372	
3	-0.0121	51	-2.6424	***	-2.3331	**	0.0035	193	1.7159	*	-0.5226		-0.0013	151	-0.6356		-0.6665	
4	-0.0066	51	-1.2638		-1.4740		0.0013	193	0.5662		-1.7153	*	-0.0020	151	-1.2002		-2.0048	**
5	-0.0072	51	-1.0761		0.2442		0.0006	193	0.3421		-0.8208		-0.0018	151	-0.8141		-1.3356	
6	0.0182	51	2.1185	**	1.6760	*	-0.0008	193	-0.5411		-0.8208		-0.0022	151	-0.8130		-1.1684	
7	0.0005	51	0.0986		-1.1877		0.0068	193	2.0606	**	-0.5226		-0.0021	151	-0.8816		0.3372	
8	-0.0115	51	-2.0109	**	-1.1877		0.0001	193	0.0616		-2.6099	***	-0.0022	151	-1.2162		-1.6702	*
9	0.0033	51	0.6903		1.9623	**	0.0017	193	0.8692		0.5210		0.0031	151	2.5475	**	1.5082	
10	-0.0071	51	-1.5584		-2.0467	**	0.0004	193	0.2208		0.3719		0.0124	151	7.6562	***	5.3558	***
11	-0.0117	51	-2.4070	**	-0.9013		0.0023	193	1.5484		0.5210		-0.0047	151	-1.7886	*	-2.0048	**
12	-0.0049	51	-0.7087		-0.3286		0.0026	193	1.5818		1.2665		-0.0020	151	-0.9969		-1.1684	
13	0.0036	51	0.8526		0.8169		-0.0042	193	-2.5492	**	-2.9081	***	0.0000	151	-0.0049		2.5119	**
14	-0.0043	51	-1.2003		-1.7604	*	0.0012	193	0.7051		-0.3735		-0.0107	151	-2.4180	**	-1.8375	*
15	0.0008	51	0.1831		0.2442		0.0044	193	2.4182	**	0.9683		-0.0116	151	-0.5871		5.3558	***

Table 5. 20 Country-wise short-term average abnormal stock return of companies deleted from the FTSE4Good Global Index – Fama and French 3 Factor model

Table 5.20, cont.

	REST OF ASIA PACIFIC								REST OF EUROPE					
Day	aar	Ν	t-test		sign test		aar	Ν	t-test		sign test			
-10	0.0024	43	0.7667		-0.0261		0.0001	139	0.0323		-0.1629			
-9	0.0013	43	0.4924		-0.3179		0.0052	139	1.8963	*	0.9107			
-8	0.0031	43	1.0570		0.8494		0.0011	139	0.3323		-0.3419			
-7	0.0014	43	0.6608		-0.6098		0.0012	139	0.2960		-0.1629			
-6	0.0017	43	0.6120		-0.0261		0.0019	139	0.6946		0.7317			
-5	0.0004	43	0.1764		0.5575		0.0022	139	0.8995		-0.6997			
-4	0.0074	43	2.7588	***	1.1412		0.0026	139	1.0967		-0.8786			
-3	-0.0076	43	-0.9394		-1.7770	*	-0.0008	139	-0.3198		-1.7733	*		
-2	-0.0034	43	-0.9836		-2.0689	**	0.0015	139	0.4928		-0.6997			
-1	0.0013	43	0.3696		0.2657		-0.0005	139	-0.1567		-0.8786			
0	-0.0003	43	-0.1127		-0.9016		-0.0026	139	-0.9345		-1.5944			
1	-0.0009	43	-0.2337		-0.6098		0.0007	139	0.2923		-1.2365			
2	0.0104	43	3.4452	***	1.7248	*	-0.0014	139	-0.3949		-3.0258	***		
3	0.0019	43	0.5898		-0.9016		-0.0044	139	-1.5095		-3.7415	***		
4	0.0022	43	0.5632		-0.0261		0.0033	139	0.9376		-0.8786			
5	-0.0076	43	-2.4799	**	-2.6525	***	-0.0007	139	-0.2371		-2.1312	**		
6	-0.0011	43	-0.2437		-0.3179		-0.0065	139	-1.8512	*	-0.6997			
7	-0.0009	43	-0.2969		0.8494		-0.0023	139	-0.7493		0.3739			
8	-0.0054	43	-2.2551	**	-2.6525	***	-0.0016	139	-0.6347		0.9107			
9	0.0040	43	1.0469		-0.0261		-0.0001	139	-0.0594		-0.3419			
10	0.0019	43	0.6998		-0.9016		0.0019	139	0.7802		0.0160			
11	0.0020	43	0.6618		1.1412		-0.0038	139	-1.5597		-2.1312	**		
12	0.0076	43	2.5579	**	2.3085	**	0.0008	139	0.3704		0.5528			
13	0.0029	43	0.6466		-1.1934		0.0033	139	1.1755		0.9107			
14	0.0040	43	0.9866		0.2657		-0.0017	139	-0.9945		-0.8786			
15	-0.0013	43	-0.3635		0.5575		0.0063	139	3.0915	***	2.3421	**		

Table 5. 21 Country-wise cumulative short-term average abnormal stock return of companies deleted from the FTSE4Good Global Index – Fama and French 3 Factor model

UK					US					JAPAN							
windows	caar	Ν	t-test		sign test		caar	Ν	t-test		sign test	caar	Ν	t-test		sign test	
(-1015)	-0.0495	51	-1.6642	*	-2.3331	**	0.0205	193	1.3347		-1.4172	-0.0218	3 151	-0.7542		1.1736	
(-51)	-0.0131	51	-0.9413		-1.1877		0.0048	193	0.9429		-1.1190	0.0046	151	1.3767		1.8428	*
(-31)	0.0091	51	1.1891		-0.0422		0.0056	193	1.4485		-1.2681	0.0026	151	1.0308		1.6755	*
(-11)	-0.0094	51	-1.8870	*	-2.6195	***	0.0044	193	1.1455		-0.3735	-0.0003	151	-0.1145		0.8391	
(00)	-0.0050	51	-1.6428		-1.7604	*	0.0015	193	0.8407		-1.1190	-0.0023	3 151	-1.2969		-1.1684	
(15)	-0.0440	51	-3.3608	***	-4.0513	***	0.0050	193	1.1154		-1.1190	-0.0091	. 151	-2.2465	**	-2.1721	**
(110)	-0.0406	51	-2.3410	**	-2.9058	***	0.0131	193	1.5308		-0.8208	0.0000	151	0.0005		1.0064	
(115)	-0.0570	51	-2.8607	***	-2.0467	**	0.0193	193	1.7779	*	-1.2681	-0.0290) 151	-1.0633		0.3372	

Table 5.21, cont.

	OF ASIA	PACIFIC	REST OF EUROPE							
windows	caar	Ν	t-test	sign test		caar	Ν	t-test	sign test	
(-1015)	0.0274	43	0.7921	0.2657		0.0054	139	0.3157	-1.5944	
(-51)	-0.0019	43	-0.2032	-0.9016		0.0050	139	0.7027	-0.8786	
(-31)	-0.0098	43	-1.0688	-2.0689	**	0.0002	139	0.0429	-0.6997	
(-11)	0.0001	43	0.0196	-0.9016		-0.0025	139	-0.6197	-0.3419	
(00)	-0.0003	43	-0.1127	-0.9016		-0.0026	139	-0.9345	-1.5944	
(15)	0.0060	43	0.6940	0.2657		-0.0026	139	-0.2576	-2.1312	**
(110)	0.0045	43	0.2643	-0.9016		-0.0112	139	-1.2838	-2.6680	***
(115)	0.0197	43	0.8739	-0.3179		-0.0063	139	-0.5678	-3.0258	***

Table 5. 22 Panel A : Comparison of mean of AARs of companies added to and deleted from the FTSE4Good Global index

	Mean(diff)	Std. Error Mean	t-stat	Z-test
AAR (Addition, Deletion) - Market Model	-0.0003	0.0003	-1.0860	-1.015
AAR (Addition, Deletion) <u>- Three-Factor Model</u>	-0.0004	0.0003	-1.5060	-1.385

Notes: * Indicates significant at the 10% level, ** indicates significance at the 5% level, *** indicates significance at 1% level.

Table 5.22 Panel B: Comparison of mean of CAARs of companies added to and deleted
from the FTSE4Good Global index

	Mean(diff)	Std. Error Mean	t-stat	Z-test
CAAR (Addition, Deletion) - Market model	-0.0025	0.0009	-2.8890 **	-2.380 **
CAAR (Addition, Deletion) - Three-Factor model	-0.0052	0.0011	-4.8500 ***	· -2.521 **

Table 5.22 Panel C: Comparison of mean of BHARs of companies added to and deleted from the FTSe4Good Global index

	Mean(diff)	Std. Error Mean	t-stat	Z-test
BHAR (Addition, Deletion)	0.0127	0.0038	3.3470 **	-2.521 **

Notes: * Indicates significant at the 10% level, ** indicates significance at the 5% level, *** indicates significance at 1% level.

Chapter 6: Heterogeneousness in CSR and CFP relationship among industrial sectors: evidence from cross-country emerging markets.

6.1. Introduction

Corporate social responsibility is becoming the dominant paradigm in the current corporate world. With the growth of the industrial revolution, environmental and social issues also have increased immensely. The continuous increase in the global temperature has turned the fertilise land to the drought and have put the lives at risk. Pollution, social incongruity, hunger, insecurity and refugees are emerging as global problems. It is essential that international communities, countries and corporations tie up together to tackle these issues. Along with the international governments, NGOs, INGOs and other not for profit organisations, the private corporate world have increased their presence, commitment and investment significantly to make a positive change in the world.

The impact of firm's investment in CSR initiatives is widely debated by academics, professionals, and the corporate world. CSR is a source of the corporate reputation (Preston and O'Bannon, 1987; Godfrey, 2005; Carroll and Shabana, 2010) as it improves firm's brand recognition (Du, Bhattacharya, and Sen, 2010). CSR also acts insurance-like protection (Shiu and wang, 2017; McGuire et al., 1988; Godfrey et al., 2009) that could lead to a reduction in the company's cost and improve operational excellence (Laczniak and Murphy, 1991; Isaksson et al., 2014). Also, companies with good CSR reputation attract talented employees (Turban and

Greening, 1996), customer loyalty (Sen et al., 2016; Brammer and Millington, 2008) and additional source capital (Dhaliwal et al., 2011; El Ghoul et al., 2011). These benefits subsequently lead to improved financial performance (Du et al., 2017; Godfrey et al. 2009; Waddock and Graves, 1997).

Studies in the past have reported mixed results in CSR-CFP relationship. Majority of studies that have concluded the positive relationship between CSR and firm performance (Peloza,2009; Margolish et al., 2009). However, the inconsistencies, in conclusion, could be due to the number of issues in the investigation such as methodological and conceptual differences adopted in alternative CSR measurements used in these studies (Wartrick and Cochran, 1985; Lee et al., 2009; Alikaj et al. 2016). Most of these studies have used relatively small samples and typically investigate the profitability or stock return in the short-term. Similarly, studies comparing the performance of CSR and non-CSR firms have typically ignored the various microcharacteristics of those firms.

The debate is continuing because CSR is becoming the mainstream of the company's business strategy and facilitated several business benefits. Consistent with the Porter (1998) focus strategy, companies are implementing CSR programmes according to the need and expectation of their stakeholders rather than broader stakeholder's groups. Due to the firm's focus on the specific stakeholders and formulation of niche CSR strategies, the CSR-CFP relationship varies from companies to companies and the type of industry they are operating. Although the potential heterogeneity of CSR-CFP relationship has been in the discussion for a while (Barnett, 2007, Hart, 1995), insufficient attention has been given to the investigation of the same.

Past studies have mainly investigated the aggregate impact of CSR on firm's financial performance (Du et al., 2017, Qui et al., 2016, Ding et al., 2016), rather than investigating the CSR-CFP relationship amongst the industry sector to sector. Also, studies have attempted to examine the CSR-CFP relationship using single and specific industry (Baron et al., 2009; Esteban-Sanchez et al., 2017; Wu and Shen, 2013; Jo et al., 2015; Loureiro et al., 2012; Wang et al., 2016; Lee and Kang, 2013). However, Omar and Zallom (2016) and Feng et al., (2017) attempted to investigate the impact of CSR on CFP in the cross-industry setting. The former study used three different industries with a minimal sample size from Jordan and reported a mixed conclusion. The latter research examined the CSR-CFP relationship using ten different industry sectors but limited to the US dataset.

On the other hand, prior studies that examined the CSR-CFP relationship have primarily focused on developed markets, such as those of the US, UK, Canada, and other European countries, with the investigation using emerging market been rather seldom. However, due to the increased popularity of socially responsible business practices around the world, companies in developing economies are equally pursuing CSR initiatives. There is a significant increase in investment opportunities in the emerging markets due to the rise in socially responsible and ethical investing (Jamali and Karam, 2018). In the recent years, socially responsible and ethical fund managers have directed more funds in emerging markets and increased their ownership in firms with high CSR commitments. This pattern is also followed by mutual funds that are also diverting their investment towards socially responsible firms (Tosun, 2016). Hence, the CSR debate is in its peak in the emerging markets. For example, Tosun (2017) suggests that socially responsible mutual funds have increased their ownership by 15% per unit of increase in a firm's CSR score (p.710). Moreover, studies have given insufficient attention to the emerging market when reviewing the impact of CSR on CFP. Notably, research on the differences across industries and across countries still lacks in the CSR-CFP literature.

In addition, some companies from emerging countries have expanded internationally and are listed in the foreign stock markets such as those of the US, UK, Germany, Hong Kong, etc. Such trends of cross-listing have a significant impact on the firms' CSR investment; hence, cross-listed firms need to adapt/implement CSR to legitimise themselves in the stock market of the host country (Bell et al., 2012; Boubakri et al., 2016). Cross-listing in a foreign country's stock market, especially a developed one, can significantly improve CSR performance and therefore its financial performance. However, to the best of our knowledge, prior studies have not examined the impact of cross-listing in the CSR-CFP relationship. Hence, in this study, I aim to examine the moderating impact of firms' cross-listing on the CSR-CFP relationship.

Hence, to address the gap discussed above, I examine the heterogeneousness in the CSR-CFP relationship using the data from the emerging market. I also examine the moderating impact of cross-listing on CSR-CFP relationship. Also, to improve the limitation of generalisation from a previous study (Feng et al., 2017), I use companies from 23 countries whose CSR performance is evaluated by the FTSE4Good Emerging Index. To the best of my knowledge, for the first time, I use the FTSE4Good index ESG rating score as a proxy for corporate social responsibility performance. The FTSE4Good Emerging Index consists of companies from the emerging market around the world, and the ESG rating is based on the companies' commitment and compliance with the environment, social and governance themes²⁵. Using the total of 1,244 firm-year observation (representing 779 individual companies) between 2016 and 2017 from emerging market countries and yearly CSR performance score (measured as firms ESG rating score), I investigate the CSR-CFP relationship across ten ICB (industry classification benchmark) developed by the FTSE. I found a positive and significant impact of CSR performance (ESG rating score) on Tobin's Q and Return on Assets (ROA). Consistent with Feng et al., (2017), this study concluded that the CSR-CFP relationship varies across the industry sectors. I also found that cross-listing has a significantly positive impact on the CSR-CFP relationship suggesting the impact of CSR on CFP is more pronounced for the firms that are cross-listed in the foreign stock market.

The current study makes several contributions to CSR-CFP literature. First, I used a unique measure of CSR performance developed by the FTSE4Good index. For the first time in the literature, I use the ESG rating score as a proxy of CSR performance provided by the FTSE4Good index to examine the impact of CSR on firms' financial performance. Secondly, previous studies have primarily focused on the aggregate and specific industry data to examine the CSR-CFP relationship and given less attention to the cross-industry investigation. This study attempted to provide evidence of heterogeneousness in CSR-CFP relationship by analysing the cross-industry dataset. Thirdly, this study is the first to examine the moderating impact of cross-listing on the CSR-CFP relationship and provides evidence of an economically and statistically significant positive relationship between CR-CFP for those firms that are cross-listed, as opposed to the ones that are not.

²⁵ Please follow the FTSE4Good index methodologies for ESG rating. The methodology is available at http://www.ftse.com/products/downloads/FTSE4Good_Index_Series.pdf?42

This addresses the call by Feng et al., (2017) and Omar and Zallom's (2016) for further investigation using different country data as well as different and unique CSR performance proxies.²⁶ Finally, I examine the impact of CSR on CFP using the emerging country dataset, and I am one of the front-runners in using multi-country setting to explore the CSR-CFP relationship that contributes the generalizability of the CSR effect on firm's financial performance.

This rest of this empirical chapter is structured as follows. In section 6.2, I discuss the relevant literature on CSR-CFP relationship, theoretical perspective and hypotheses. Data and methodology are presented in section 6.3. I have shown the result and finding of this study in part 6.4. Section 6.5 displays the discussion and conclusion of this research.

6.2. Literature review and theoretical framework

In recent years, CSR has gained significant attention from all over the world. It is widely talked theme by the corporate world, academics, practitioners and public in recent years and has been used several CSR themes (corporate citizenship, sustainability, governance, carbon emission, climate change etc.). Especially in emerging market, CSR has been in the peak of the debate (Jamali, 2008; Jamali and Karam, 2018). The CSR implementation differs from country to country due to the state's legislation, the cultural differences and the industry they are operating (Jamali and Mirshak, 2007; Moon, 2004). Especially in emerging market companies pursue CSR due to domestic regulatory pressure, cultural issues, the threat of regulation, and increased SRI investment (Baskin,

²⁶ Most of the previous studies have used similar CSR performance benchmark and rating such as KLD, DJSI index rating.

2006, p24). Notably, the corporate scandals and events have contributed to the increased stakeholders' awareness of the impact of the company's operation to the society and community. Companies have increased their presence in the CSR activities along with their business operation.

CSR is becoming an essential element of the modern business model to differentiate among competitors and to gain competitive advantage (Porter and Kramer, 2006). The stakeholders' power has increased significantly in recent years, and it varies according to their concern over the company. The stakeholders' concerns differ from company to company and the industry sector to sector. Stakeholders may have the stronger interest towards those companies from industrial, mining, utilities and chemical industry sector as they highly exposed to the environmental risk and have a more significant impact on the environmental pollutions because of their operation. This is because they are heavily involved in the activities that may damage the greenery and wildlife due to leak and other polluting substances. However, some stakeholders may have relaxed approaches to the companies in the financial industry sectors but are more significant exposure to social risk.

The level of CSR investment/strategy depends on the stakeholders' interest, power, urgency and salience (Mitchell et al., 1997). The stakeholders' concerns towards companies vary industry to industry and the nature of the business. Companies respond to stakeholders by formulating and developing a CSR strategy that also fits in their business model. The existence of variation in the CSR investment across the industrial sector could also imply significant variation/implication in the CSR-CFP relationship. Ullmann (1985) argues that the nature of the firm's industrial sector moderates the CSR-CFP relationship. For example, Derwall et al., (2005) provide evidence that the positive impact of CSR on CFP is found to be less pronounced to those companies which are classified under the industry that lead to a higher level of negative impact on the environment. On the other hand, Lee et al., (2009) found that the CSR-CFP relationship for companies within chemicals, mining and forest products were found to be more pronounced. Hence, I expect the heterogeneousness in the CSR-CFP relationship across the industry sector.

6.2.1. Previous work on CSR-CFP relationship heterogeneity

So far, studies have examined the CSR-CFP relationship widely and reported mixed conclusions (Margolish and Walsh, 2009; Lu et al., 2014). In particular, studies have used the industry sector as a control variable and also have considered the industry effect on the CSR-CFP relationship (Du et al., 2017; Hawn et al., 2017; Mishra, 2017). Also, studies have examined the CSR-CFP relationship within the specific industry such as industrial (Baron et al., 2009); banking (Esteban-Sanchez et al., 2017; Wu and Shen, 2013; Simpson and Hohers, 2002); financial services (Jo et al., 2015); automobile (Loureio et al., 2012), construction (Wang et al., 2016); hospitality and restaurant (Lee and Kang, 2013) etc. Although CSR literature has evidenced the discussion of the potential heterogeneity on CSR-CFP relationship (Hart, 1995; Barnett, 2007), a limited number of studies have empirically investigated the heterogeneousness in CSR-CFP relationship across industries (Hoepner and Yu, 2010; Omar and Zallom, 2016; Feng et al., 2017).

Ullman (1985) argues that CSR-CFP relationship is moderated by the industry sectors. Hoepner and Yu (2010) examined the heterogeneousness of CSR-CFP relationship among industry and found a positive and significant relationship for consumer discretionary and healthcare sector implying that these two sectors enjoy the

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benefit of implementing the CSR initiatives due to the high proximity to the end consumer (p.25). Similarly, Omar and Zallom (2016) make an effort to analyse the heterogeneousness relationship between CSR and CFP using three different industrial sectors and a relatively smaller sample size from Jordan. They reported that CSR decreases the profitability for food and beverage industries, while no effect on the profitability in case of chemical, and pharmaceutical and medical industry.

Feng et al., (2017) extend the industry-wide investigation by comparing the CSR-CFP relationship across ten industrial sectors: consumer discretionary, consumer staples, financials, healthcare, industrials, information technology, materials, energy, telecommunication services, and utilities. Using a sample of the US companies between 1991 and 2011, they found that the association between CSR and firms financial performance (measured by Tobin's Q and ROA) is heterogeneous across the industry sector (p.106). The study evidenced a positive impact of CSR on CFP for most of the industrial sectors except energy companies and utility companies. They concluded that CSR has a significant positive effect on a firm's financial performance for most but not all (p.116). Feng et al., (2017) suggested the extension of the study to include the data from other countries due to the generalisation issue as the author primarily focus on the US data. Since the heterogeneousness of CSR exist across the industry, it is still important as well as relevant to examine the heterogeneity of CSR-CFP relationship across industry sector and outside the developed economy. In this study, I investigate the industry sectorwise CSR-CFP relationship using the emerging market dataset and will explore what type of industry that has a more significant impact of CSR on financial performance.

Also, although prior studies that investigate CSR-CFP relationship primarily focused on the developed economies where stakeholder' engagement is more matured,

results may not be relevant/applicable to the emerging market as CSR differs country to country due to the difference in norms, values and institutional settings. Also, in the context of the emerging market, limited studies examined the impact of CSR on firm financial performance using a cross-country sample. Due to the lack of reporting requirement regulations and information intermediaries in emerging markets, it is difficult to obtain the CSR performance (Kelley et al., 2018). Hence, prior studies used their assessment of CSR performance (primarily content analysis) in their empirical examination. The major limitation of such analysis is the degree of bias and lack of researcher experience during the marking and coding of the CSR performance of firms. Also, such analysis may be misleading due to the conflict arise between what is written in the disclosure and what these companies do (Adams, 2004). Hence, to overcome the above limitations in the literature, a holistic investigation of CSR-CFP relationship in the emerging market using third party CSR performance compiled by the third party.

6.2.2. Hypothesis development

The stakeholder theory asserts that firms should act in the interest of the stakeholders that are affected rather than merely the benefit of its shareholders. According to Post et al., (2002), "stakeholders are individuals and constituencies that contribute, either voluntarily or involuntarily, to its wealth-creation capacity and activities, and who are therefore its potential beneficiaries and risk bearers" (p.2). Businesses have a social responsibility towards the several elements, parties, groups of the society that are directly or indirectly affected by the business operation (Freeman, 1984). Such stakeholders hold a significant amount of resources and the power that is essential for any business to grow and sustain. In a competitive environment, corporations should address and meet the

interest and expectation of several stakeholders. The businesses' relationship with their stakeholder is the ultimate source of business success rather than the transaction (Branco and Rodrigues, 2006). Hence, it is essential to build, maintain and sustain the healthy relationship with them via investment in the corporate social responsibility programmes.

The advocates of CSR argue that a firm's investment in socially responsible initiatives is the instrument of improved financial performance (Wood and Jones, 1995; Donaldson and Preston, 1995). Addressing and meeting the needs, expectation and demand of the society is essential for business is favourable to their financial performance. The most significant advantage of meeting stakeholders expectation is to win their confidence, loyalty and eventually improved reputation in the society. Porter and Krammar (2006) argue that a firm's reputation is vital to achieving competitive advantage because the firm's participation in CSR is to differentiate themselves from competitors. Hence, firms are linking their CSR initiatives to their business strategy to gain competitive advantages.

Also, according to the value maximisation theory (Jensen, 2010), a company that consider and address the demand and expectations of the stakeholder will improve the company's value. In the absence of the stakeholders' satisfaction, companies do not achieve their objectives. In line with Jensen's (2010) argument, I argue that a firm in emerging economies with higher CSR performance will enjoy a higher level of financial performance. Firms' broader involvement in the CSR initiatives improves their relationship with their stakeholder, who strictly follows their operations. Customers not only buy the goods and services from the companies but also follow the other matters that

the company is involved. One of the significant consequences of the firm's wrongdoing is that they tend to lose their market share immediately.²⁷

On the other hand, emerging markets are fast-growing economies and are introducing comprehensive economic policies to enhance their international competitiveness and to promote high economic growth. Firms from emerging countries are more of the function of national business systems and low economic development (Chapple and Moon, 2005). Compared with the developed economies, there is a significant difference in the business environment, economic growth, business management, and corporate governance practices in the emerging countries that result to lower level of attention and investment in the CSR initiatives compared to developed economies (Hah and Freeman, 2014). Even the multinational companies face challenges in implementing CSR due to the difference in norms, values and intuitional setting over countries. For example, firms in emerging economies are highly owned by families and have the CEO duality effect, which consequently leads to a low level of transparency (Jo and Harjoto, 2011). Also, the use of natural resources is as key for contributing to rapid economic growth in these countries. The excessive use of natural resources to gain international competitiveness is contributing to degradation, depletion and destruction of the environment. The improper management of natural resources can lead to social injustice, inequality and poor labour practice.

²⁷ For example, in 2012, when the news broke that one of the widely popular coffee chain Starbucks didn't pay the fair share of taxation to the UK government, there were angry voices among customers against Starbucks. The Starbucks scandal consequently led to the decline in the yearly like to like sales for following years. Starbucks later voluntarily paid the millions of taxes to the UK government to gain the confidence back from stakeholders.

Moreover, companies operating in emerging countries may pursue unethical practices to sustain their competitiveness and gain short-term financial gain. Also, compared to foreign (multinational) counterparts, local firms in an emerging market may have limited access to resources and may be costlier to pursue CSR initiatives. Only the market leader will implement the CSR in emerging market and hence may enjoy improved/better financial performance.

Emerging economies are in a race towards rapid economic development. As emerging economies become more developed/mature, corporate social responsibility play a key role in enhancing corporate reputation and subsequently lead to improving the firms' financial performance. Also, the investment opportunity in the emerging markets is more open compared to the past. Since the introduction of the United Nations Principle for Responsible Investment (UNIPRI, 2006), the socially responsible investment is growing significantly (Cheung et al., 2010; Investment week, 2019²⁸) and ethical fund managers are shifting their fund towards emerging markets. Hence, based on the above rationale, first, I expect a positive association between firm CSR and financial performance in the emerging market.

Thus, it is hypothesised that:

 H_1 : There is a positive association between the financial performance of the companies and the CSR performance in an emerging market.

Further, Porter (1998) elaborates on the generic strategies to create and sustain the competitive advantage. According to him, a business can attain or maintain their

²⁸ https://www.investmentweek.co.uk/investment-week/feature/1366372/-demand-ethical-emergingmarkets-funds

competitive advantage either by cost leadership strategy or by differentiating themselves from competitors. The firms' involvement in CSR may provide the opportunity to gain competitive advantage through cost and risk reduction, and through differentiation (developing reputation and legitimacy) (Carroll and Shabana, 2010). However, similar to Porter's (1998) focus strategy, companies should concentrate niche group of stakeholders because the stakeholders' composition and expectation differ from industry to industry (Feng et al., 2017).

Also, industry sectors do not have the same level of exposure to environmental and social issues. For example, oil and gas, industrials, mining, chemicals are more exposed to environmental risk whereas consumer service, consumer goods, financials, technologies, telecommunications industries are more exposed to the social risk (Simnett et al., 2009). Such variation of firms' exposure to environmental and social risks lead to variation in implementing the CSR practices. Hence, companies should design their CSR initiatives/strategies by understanding the dynamics of stakeholders and their influence on the business. Further, the variation in the CSR initiatives among industry to industry could lead to the difference in the CSR-CFP relationship across the sector and hypothesised that,

*H*₂: *There is variability in the CSR-CRP relationship across the industry.*

Companies from the emerging markets also have a global reach. These firms are not only involved in importing and exporting of their goods and services but also expanding their operation internationally. This cross-listing trend has increased in recent years, especially with a large number of firms from the emerging countries becoming listed in markets such as those of the US, UK, Germany, Hong Kong etc. However, such firms need to respond to the expectations of diverse stakeholder when they cross-list themselves in the foreign stock market. As CSR in developed countries is more matured, firms from the emerging market may need to invest significantly in CSR to attract shareholders from the developed countries as the latter are more conscious on the impact of firm's operation in the environment and society. Besides, the corporate governance of a firm tends to improve after cross-listing due to the high listing requirement in a developed country which has a positive impact on the firms CSR performance (Harjoto and Jo, 2011). Also, emerging countries' firms face significant litigation risks as they are more closely monitored by the various listing authorities and the various market participants. Hence, their engagement with CSR activities can reduce such risks (Coffee, 2001). Prior literature discusses the relationship between cross-listing and firms' corporate social responsibility and argues that cross-listed firms' engagement in CSR is driven by those firms' improved corporate governance, reputational bonding to the international stock exchange and higher exposure to litigation risk (Boubakri et al., 2016; Del Bosco and Misani, 2016). Boubakri et al., (2016) find a positive relationship between cross-listing and firms' CSR performance using 10,815 observations from 54 countries during the period 2002 to 2011. This result is also corroborated by Del Bosco and Misani (2015) who report that firms' ESG performance improves significantly after firms becoming cross-listed. Moreover, crosslisted firms need to adapt/implement CSR to legitimise themselves in the capital market of the host country (Bell et al., 2012) and tend to have higher valuations. Doidge et al., (2004) report that the firm that cross-listed firms tend to have higher Tobin's Q when they are compared with same country firms that are not cross-listed.

From the above discussion, it is evident that the cross-listing provides additional liquidity and the greater reach to increase capital for the issuing companies. Further,

cross-listed companies tend to invest significantly in CSR initiatives. If such an argument is a case, then I expect firms that cross-listed in a different country might strength the impact of CSR on firms' financial performance (value and profitability). Hence, it can be hypothesised that,

 H_3 : The impact of CSR on firms' financial performance is more pronounced for those firms that are cross-listed in foreign stock market.

6.3. Methodology

To examine the relationship between CSR and firm performance, I use the firms' ESG rating score by FTSE4Good Emerging (FTSE4Good-EM) index as a proxy of CSR performance. The firm-level yearly ESG rating score is obtained from FTSE4Good-EM index series. The firm performances measures including yearly accounting and financial data such as Tobin's Q, Total Assets, Capital Expenditure, Sales/Revenue, Total Debt, Asset Turnover, Operating Margin, Market Value of the Firm, PTBV and ROIC etc. are obtained from Thomson Reuters Datastream.

One of the reasons for choosing FTSE4G-EM index is that it records in detail the CSR performance of companies from a large number of emerging markets from around the world. Also, the FTSE4Good index series is a widely popular index which implements a robust and consistent methodology (explained previously in chapter 3) for evaluating those companies and developing the index. The index is also aligned with the UN sustainable development goals (SDGs) and the UN Principle for Responsible Investment (PRI). To provide a comprehensive assessment aiming towards a common global standard (principle of harmonization), the FTSE4Good is working with Expert in Responsible Investment Solutions (EIRIS) integrating over 40 leading global frameworks such as

Global Reporting Standard (GRI), the OECT Guidelines, Carbon Disclosure Project (CDP), the Transparency International's Business Principles for Countering Bribery, the GHG Protocol (FTSE, 2016).

[Insert Table 6.1 about here]

Every year, companies around the world apply to be associated / added in the FTSE4G-EM index. The FTSE evaluates the companies by the publicly available ESG data regarding 300 indicators across 14 themes across the three main pillars (FTSE, 2018)²⁹. According to Table 6.1, (presented in appendix C), the final sample contains 1,244 firms-year observations (main model) from 779 firms across 23 emerging economies/markets for the period 2016 and 2017.

This study uses firm-level ESG rating scores as a proxy of CSR, and it is the main independent/explanatory variable to investigate the impact of corporate social responsibility performance on the firms' financial performance. In line with prior studies (Feng et al.,2017; Omar and Zallom, 2016), I use Return on Assets (ROA) to measure firms' profitability (net income divided by the total assets) and Tobin's Q to measure the value of a firm. The Tobin's Q is measured as;

Tobin's Q =
$$\frac{\text{Market value equity +Total liabilities}}{\text{Book value of Total Assets}}$$
(6.1)

I use firms' specific characteristics to control the CSR-CFP relationship because firms' value and financial performance can be affected by them (Kang et al., 2016;

²⁹ The 14 themes are climate change, water use, biodiversity, pollution and resources, environmental supply chain, health and safety, labour standard, human rights and community, customer responsibility, social supply chain, anticorruption, tax transparency, risk management, and corporate governance. These themes are categorised under three main pillars; Environmental, Social, Governance.

Aggrawal et al., 2010; Lee and Grewal, 2004). Consistent with the CSR-CFP literature (Li et al., 2018; Kang et al., 2016; Attig et al., 2013; El Ghoul, 2011; Brammer and Pavelin, 2008; Manescu and Starica, 2007; Waddock and Graves, 1997; Ullmann, 1985), I use size (natural logarithm of Total Assets), leverage (total debt by total assets), growth (percentage change in net revenue), capital expenditure to sales ratio, employee size (log of total number of employees) and profitability (measured by operating margin) as control variables as these firm-specific characteristics are linked with firms' performance.³⁰

One of the objectives of this study is to investigate the heterogeneity of the CSR and CFP across industries. I use industry classification benchmark (ICB) to group the total observations into an industry-based subgroup. The ICB classification comprises ten industry sectors such as Oil & Gas, Basic Materials, Industrials goods, Consumer goods, Healthcare, Consumer service, Telecommunications, Utilities, Financials and Technology. First, to examine the impact of CSR on CFP I first use ordinary least squares regression model, whereas Tobin's Q and ROA as a dependent variable, CSR performance (ESG rating score) as an independent, size, leverage, growth, asset turnover and profitability as controlling variables. I use a linear form of regression which is widely used in the CSR-CFP literature (Li et al., 2018, Fent et al., 2017; Surroca et al., 2010; Waddock and Graves, 1997). The main estimation model for each firm for corporate financial performance (CFP) is as follows:

 $CFP_{i} = \alpha_{0} + \beta_{1}CSR_{i} + \beta_{2}Size_{i} + \beta_{3}Leverage_{i} + \beta_{4}Growth_{i} + \beta_{5}Capex_{i} + \beta_{6}Operatingmargin_{i} + \beta_{7}Employee_{i} + \sum_{k=1}^{10} e_{k}industry (k)_{i} + \sum_{l=1}^{2} y_{l}Year(l)_{i} + \sum_{m=1}^{23} c_{m}Country(m)_{i} + e_{i}$ (6.2)

³⁰ Also explained and reported in chapter 3 of the thesis.

where *j* stands for the industry, *i* stands for the firm, *CFP_i* is the financial variable of a firm *i* measured by Tobin's Q and ROA; α_0 is the intercept; β_1 is the coefficient of CSR performance *CSR_i*; CSR is the CSR performance (ESG rating score as a proxy of CSR) of firm *i*; β_2 is the coefficient of size; size represents the natural logarithm of total assets of firm *i*; β_3 is the coefficient of leverage measured as the total debt of firm *i* divided by the total assets of firm *i*; β_4 is the coefficient of growth measured as the percentage change in the sales compared to the last year of firm *i*; β_5 is the coefficient of Capex (capital expenditure to sales ratio) of firm *i*; β_6 is the coefficient of employee size of firm *i*. I further used the industry, year and country fixed effect. The error term in the estimation is e_i . Overall, we expect a positive impact of CSR (ESG rating) on the firms' financial performances in the case of the emerging markets.

In line with prior studies (Li et al., 2018; Chen et al., 2018; Du et al., 2017; Feng et al., 2017) I also use the fixed effect to control for industry, time and country. As CSR varies industry to industry (discussed in chapter 3, section 3.2.4.) I control for the industry effect using a dummy variable (assigning 1 for Oil & Gas, Basic Materials, Industrials Goods, Consumer Goods, Healthcare, Consumer Services, Telecommunications, Utilities, Financials and Technology). In Equation 6.2, I also use a dummy to control for the year to capture the time effect as changes in the market sentiment. In this study, I use a sample firm observation from 2016 to 2017 (with 2016 as an omitted dummy). Also, I further control for the country as the CSR implementation differs from country to country due to the state's legislation and cultural differences (Jamali and Mirshak, 2007) and therefore, the financial performance. The sample of this study spans across 23 emerging countries (Table 6.1 Panel B in Appendix C of this thesis provides a summary of country-

wide sample numbers), and I categorise the dummy variables to represent these emerging countries.

Further, to test the heterogeneousness of the relationship between CSR and CFP across the industry, I estimate the following model for each firm for corporate financial performance:

$$CFP_{i} = \alpha_{0} + \beta_{1}CSR_{i} + \beta_{2}Size_{i} + \beta_{3}Leverage_{i} + \beta_{4}Growth_{i} + \beta_{5}Capex_{i} + \beta_{6}Operatingmargin_{i} + \beta_{7}Employee_{i} + \sum_{l=1}^{2}y_{l}Year(l)_{i} + \sum_{m=1}^{23}c_{m}Country(m)_{i} + e_{i}$$

$$(6.3)$$

To test the moderating effect of the cross-listing on the CSR-CFP relationship, I use a dummy variable (cross-listed firm equals to 1 and 0 otherwise) in equation 6.2 as an additional interaction term.

$$CFP_{i} = \alpha_{0} + \beta_{1}CSR_{i} + \beta_{2}Size_{i} + \beta_{3}Leverage_{i} + \beta_{4}Growth_{i} + \beta_{5}Capex_{i} + \beta_{6}Operatingmargin_{i} + \beta_{7}Employee_{i} + \beta_{8}Crosslisting_{i} + \sum_{k=1}^{10} e_{k}industry (k)_{i} + \sum_{l=1}^{2} y_{l}Year(l)_{i} + \sum_{m=1}^{23} c_{m}Country(m)_{i} + e_{i}$$
(6.4)
where, β_{8} is the coefficient of cross-listing.

6.4. Results

6.4.1. Descriptive statistics, correlations and Variance Inflation Factor Test

In this chapter, I examine the impact of CSR on firms' financial performance across industries using a sample of firms from emerging economies. I use the FTSE4Good emerging market index rating score as a proxy of firms' CSR performance and Tobin's Q and Return on Assets (ROA) as proxies of financial performance. All results are presented in Appendix C of this chapter. Table 6.2 presents the descriptive statistics and the Variance Inflation Factor (VIF thereafter) for the variables used. In order to control the effect of outliers, all variables are winsorized at the 1% and 99% levels. Panel A of Table 6.2 reports the mean, median, standard deviation, maximum, and minimum for each variable in each benchmark criteria alongside data normality indicators. The variables are that of CSR performance (ESG rating score), Tobin's Q, Return on Assets (ROA), Return on Invested Capital (ROIC), Price to Book Value (PTBV), Size (log of assets), Leverage, Growth, Capital Expenditure to Sales ratio, Operating Margin and Employees (log of number of employees). For example, according to Table 6.2 (Panel A), the mean (median) of Tobin's Q and ROA are 0.5920 (0.5904) and 0.0478 (0.0363) respectively. The standard deviation for Tobin's Q and ROA are relatively smaller compared to the standard deviation of the CSR performance. Similarly, the mean (median) of CSR performance, ROIC and PTBV are 0.0008 (0.0004), 0.04782.1399 (2.1000), 8.7403 (7.1800) and 2.2154 (1.3344) respectively. In all cases, standard deviations for each variable is close to zero, except for the cases of CSR, ROIC, PTBV and size. All variables except Tobin's Q and Employee Size are positively skewed which is expected as they are associated with operating performance measures. The negative skewness of Tobin's Q (-0.1277) and Employee size (-0.3635) meant that the majority of Tobin's Q and Employee size lies left to the mean. Also, excess Kurtosis is positive for all the variables used in this study. The high values for Kurtosis across all variables suggest that, on average, the data of our sample is not normally distributed. Our descriptive statistics reveal a positive skewness suggesting data are not symmetrical. The Jarque Bera test (J-B thereafter) results reveal a statistically significant finding (p-values<0.05) in all cases with positive skewness and a positive kurtosis for the data set. Although the J-B test is not the most powerful test for normality, as compared to other modelling approaches, i.e. Anderson-Darling test, Cramer-von Mises, Shapiro-Wilks test, etc., we do not need further robustness

examination as the results are overwhelmingly supportive of the violation of the normality assumption.

[Insert Table 6.2 about here]

Table 6.2 (Panel B) presents the results of the collinearity diagnostic tests. Apart from the variables ROA and ROIC which are nearly perfect correlated (Pearson correlation of 0.907) no other variable is highly correlated with one another and especially with the CSR indicators. This is also corroborated by the VIF values reported on Panel C, which range between 1.02 and 1.08 for both the cases of the Tobin's Q and ROA. Since, the VIF of all variables used in this study does not exceed 10 (Hair et al., 2006); we can conclude that our study does not suffer from the problem of multicollinearity.

I further run the Breusch-Pagan/Cook-Weisberg test for heteroskedasticity. To do so, I run the main regression model (using dependent variables as Tobin's Q and ROA) using equation 6.2 and run the heteroskedasticity test³¹. The results reveal that the variance is not constant in the model (using both dependent variables)³². As of Table 6.2 (Panel D), the heteroskedasticity test result chi²(1) is 12.85 (*p*-value of 0.003) for dependent variable Tobin's Q and 145.41 (*p*-value of 0.000) for ROA. This result rejects the assumption of constant variance. To deal with this problem, I adopt the relevant, robust standard error procedures using the Stata command *robust*. The heteroskedasticity test results support the use of robust error procedures. The robust standard error procedure does not affect the actual regression coefficient and corrects bias in standard

³¹ Stata command: *estat hettest*

³² The result of the Breusch-Pagan/Cook-Weisberg test for heteroskedasticity is presented in Table 6.2 (Panel B) in the Appendix C.

errors and relevant statistics (significance level of the estimation) (Bianco et al., 2005; Maddala, and Lahiri, 2009). The Stata command of $robust^{33}$ is used in the models, 6.2, 6.3 and 6.4 respectively.

6.4.2. Key findings on the impact of CSR on financial performance.

This study examines the impact of CSR performance (measured by ESG rating score) on firms' financial performance. The financial performance, such as market value (measured by Tobin's Q) and profitability (measured by ROA) are the dependent variable. Consistent with previous studies (Li et al., 2018; Kang et al., 2016; Attig et al., 2013; El Ghoul, 2011; Brammer and Pavelin, 2008; Waddock and Graves, 1997), I control the CSR-CFP relationship using firm-specific characteristics such as size (natural logarithm of assets), leverage, growth, Capex to Sales (capital expenditure divided by sales), operating margin, employee size (natural logarithm of number of employees). I further control for industry, time (year) and country effects.

Since firms having strong financial performance in the past tend to invest heavily in CSR initiatives, they may subsequently experience higher CSR (ESG rating score) performance. To control for possible endogeneity bias and reverse causality, I re-estimate the CSR-CFP investigation (equation 6.2) using an instrumental variable (IV) approach to check whether the result of this study suffers any endogeneity between CSR performance and firm's financial performance measured by Tobin's Q and ROA. Consistent with previous studies (Siueia et al., 2019; Li et al., 2018; Benlemlih and Bitar, 2018; Attig et al., 2013; El Ghoul et al., 2011), I also use firm-level yearly CSR

³³ reg tobinsq CSR Size Leverage Growth Capex Operatingmargin Employee i.industrycode i.year i.ctrycode, robust

performance (ESG score) and industry average CSR performance (ESG score) as instrumental variables (IV). Both IVs are strongly relevant to contemporary CSR performance and strong instrumental exogenous with contemporary CFP. To assess and control for the bias caused by the possible presence of endogeneity, this study utilises a two-stage least square method (2SLS) (Model 2) and the generalized method of moments (GMM) (Model 3) as two additional modelling approaches.

[Insert Table 6.3 about here]

Using the 2SLS (Model 2) and GMM (Model 3), I regress the CSR performance (ESG rating score) on both instrumental variables together with other control variables that are used in the main regression mentioned above, i.e. equation 6.2. Moreover, I preserve the predicted value for the CSR performance and fit it with the baseline equation 6.2. According to Table 6.3, the first-stage regression result shows that the relationship between both instrumental variables and the firms' CSR performance is positive and statistically significant. According to Table 6.3, the coefficient of the initial value of CSR performance (Initial value of ESG rating score) is 0.9378 (t-value of 8.509). Similarly, the coefficient of the second instrumental variable industry average CSR performance (industry average CSR performance measured by ESG rating score) is 0.9267 (t-value of 7.56). Both instrumental variable coefficients are statistically significant at the 1% level. These results confirm that the instrumental variables are significantly related to firm CSR performance (ESG raging score).

[Insert Table 6.4 about here]

The first hypothesis (H1) of this study expects that the CSR performance of the firm is positively related to the financial performance of the firm as measured by Tobin's Q and ROA. Table 6.4 reports the regression results of investigating the impact of CSR

performance (ESG score) on firms' financial performance of firms measured by Tobin's Q and ROA under the OLS, 2SLS and GMM models. According to Table 6.4 for OLS (Panel A - model 1), the CSR performance (ESG rating score) coefficient is positive with a value of 0.0113 (t-value of 1.75) and statistically significant at the 10% level. Similarly, the results from using the 2SLS and the GMM models (Panel A - models 2 and 3) corroborate those of the OLS model as the coefficients for CSR performance (ESG score) under both models (2 and 3) are positive and statistically significant. For example, the coefficient using the 2SLS is 0.0128 (t-value of 1.85) and for the GMM is 0.0128 (t-value of 1.84). Apart from the variables Growth and Employees, the controlling variables of size and leverage have a positive impact on the Tobin's Q under all three alternative modelling approaches. A positive and statistically significant coefficient of size means that larger firms tend to invest more in the CSR activities and subsequently lead to higher valuation (Dhaliwal et al., 2011; Doh et al., 2010; Braymer and Pavalein, 2008). Similarly, a positive and statistically coefficient of leverage implies firms with heavily debt-funded tend to have additional resources to invest in the CSR which subsequently maximise firm's value (Du et al., 2017; Lourence et al., 2012). On the contrary, the Capital Expenditure to Sales ratio and the Operating Margin are significantly negatively related to Tobin's Q. For example, the capital expenditure to sales is a proxy of slack resources and higher capital expenditure to sales ratio mean low available of resources for the CSR. The negative and significant coefficient of capital expenditure to sales, meaning firms with lower slack resources will limit the investment in CSR and have a negative impact on the firm value. Overall according to the result from Table 6.4 (Panel A), CSR activities appear to improve the value of a firm in the emerging markets. These results are consistent for all models (OLS, 2SLS and GMM).

This study also investigates the impact of CSR performance on firms' profitability measured by return on assets (ROA). Table 6.4 (Panel B) reports the regression results with the ROA been the dependent variable. The CSR performance coefficient is positive and statistically significant under all three models. For example, the coefficient of CSR performance (ESG rating score) is positive and statistically significant at the 5% level under standard OLS (coefficient of 0.0036, t-value of 2.14). The 2SLS (model 2) and GMM (model 3) also corroborate the result of the OLS case by reporting positive and statistically significant coefficients for CSR performance. According to Table 6.4, Panel B the CSR coefficients are 0.0035 (t-value of 1.97) and 0.0034 (t-value of 1.93) under 2SLS (model 2) and GMM (model 3) respectively. The CSR performance coefficient under both models is statistically significant at the 10% level. Also, all models confirm that firms' growth and operating margin are both positive determinants. On the other hand, firms' size, leverage, capital expenditure to sales ratio are significantly negative determinants. The only exception is that of the variable *employee size*, which is positive but statistically insignificant. The aggregate/all industry result (as of Table 6.4) implies that firms' commitment to socially responsible initiatives has a positive implication on their financial performance in the case of emerging economies. Hence, we can argue that our first hypothesis of a statistically significant relationship between CSR and firms' value can be accepted. The results of this study are consistent with Feng et al., (2017) and Li et al., (2018) who examined the CSR-CFP relationship using US and UK companies respectively and report a positive impact of CSR on firm performance.

Our second hypothesis tests that there is variability in the CSR-CRP relationship across industries. To do so, we re-run our model (equation 6.3) but split our sample into various industries.³⁴ According to Table 6.5 - Panel A, when financial performance is measured in terms of Tobin's Q, there is a positive and statistically significant result for CSR performance in the case of consumer services and the financial services sectors. For example, the CSR performance coefficient under OLS is 0.0286 (t-value of 2.22) for consumer services and 0.0321 (t-value of 2.07) for the financial industry. The result using the 2SLS and GMM approaches are consistent with this finding.

[Insert Table 6.5 about here]

On the other hand, according to Table 6.5 - Panel B, the CSR performance (ESG rating) coefficient in case of ROA is positive and statistically significant for the industries: oil & gas, consumer goods, customer service and telecommunications. This is again consistent across all three different models (OLS, 2SLS and GMM). For example, Table 6.5 (Panel B) reports a positive and statistically significant (at the 10% level) coefficient for Oil & Gas of 0.0089 (t-value of 1.85), 0.007 (t-value of 1.73) and 0.0074 (t-value of 1.69) for models 1 (OLS), 2 (2SLS) and 3 (GMM). Table 6.5 - Panel B also reports positive and statistically significant (at the 10% level) coefficients of 0.0171 (t-value of 2.02), 0.0087 (t-value of 1.79) and 0.0029 (t-value of 1.68) for all OLS, 2SLS and GMM models for the sector of Telecommunications. For consumer services, the CSR performance coefficients are positive with values of 0.0113 (t-value of 2.32), 0.0140 (t-value 3.19) and 0.0150 (t-value 3.68) under OLS, 2SLS and GMM respectively. The results for consumer service sectors are more pronounced compared to other sectors. Table 6.5 - Panel B also reports positive and statistically significant (10% level) CSR

³⁴ Table 6.5 reports the regression result across industries. However, for brevity purposes I report only those results that are significant.

performance coefficient for the consumer goods industry. Similarly, the results for ROA are consistent for all three different estimation models.

The industry-wise investigation result implies that CSR has a positive impact on firms' financial performance for firms within consumer services, consumer goods, financial services, telecommunication and oil and gas. This study evidenced that the impact of CSR on a firm's financial performance varies across industries. Such a difference in CSR-CFP relationship among the industry is due to several factors such as the potential of environmental and social damage, end-user proximity, product and service differentiation and dependence on stakeholder group (Hopener and Yu, 2010; Lev et al., 2010; Simpson and Khoers, 2002). The consumer goods, consumer service, financial services and telecommunication industry operate in proximity to end-consumers who show more social concern in their consumption (Hoepner and Yu, 2010) and the consumer trust and loyalty are highly related to firms CFP (Hopener and Yu, 2010; Lev et al., 2010). Consumers reward them with their wallet and investors prefer to invest in firms that implement a socially responsible business model (Su et al., 2016; Nielsen, 2015). The result of this study also corroborates Lev et al., (2010), who report that firms operate close to end-consumer tend to experience higher sales when they made a charitable contribution.

Also, I find that the positive CSR-CFP relationship in the oil and gas industry but less pronounced compared to Consumer Service, Consumer Goods, Financials, and Telecommunication. The result of this study is also consistent with Derwall et al., (2005) who find the CSR-CFP relationship is less pronounced in environmentally problematic industry. Firms in the oil and gas industry face greater environmental and social concern, such as pollution, carbon emission, safety risk, reputational risk and liability (fine) risk. These companies invest significantly in technology and training to reduce/mitigate the environmental and social risk, which acts as insurance-like protection (Godfrey et al., 2009; Shiu and wang, 2017) and subsequently leads to an improved reputation and cost-saving (Laczniak and Murphy, 1991; Isaksson et al., 2014). Although such investment in CSR improve efficiency as these issues are critical for firms' long-term success, due to the higher cost of environmental performance, the positive impact of CSR on CFP is less pronounced in the oil and gas industry (Derwall et al., 2005; Hoepner and Yu, 2009).

6.4.3. Testing the moderating impact of cross-listing on CSR-CFP relationship.

This study also investigates the role of firms' cross-listing in the foreign stock market on the CSR-CFP relationship using equation 6.4. I use a dummy variable (1 for cross-listing firms and 0 for non-cross listing firms) to test the moderation hypothesis, which captures variation in the CSR-CFP relationship between cross-listed firms and non-cross-listed firms. Table 6.6 - Panel A presents a positive and statistically significant CSR performance coefficient under all three models. Similarly, the coefficient of cross-listing is positive and statistically significant in all cases. The coefficient of CSR performance is 0.0105 (t-value of 1.65) for the OLS model indicating that, ceteris paribus, the increase in firms' value (Tobin's Q) led by CSR performance is higher for firms that are cross-listed in a foreign country as the coefficient of 0.0267, t-value of 1.82 for the OLS model). In fact, according to the results, one standard deviation increase in firms' CSR performance leads to a 2.6% increase (0.0267×0.9766) in Tobin's Q for the cross-listed firms. This finding is also corroborated by the use of the 2SLS and GMM models.

[Insert Table 6.6 about here]

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A similar result is presented in Table 6.6 - Panel B, where we have positive and statistically significant coefficients for the variables CSR performance and cross-listing under all three models and for ROA as a proxy for financial performance. According to Table 6.6 - Panel B, the cross-listing coefficients are positive and statistically significant for all three models. i.e. 0.0068 (t-value of 1.85), 0.0068 (t-value of 1.88) and 0.0069 (t-value of 1.90) for OLS, 2SLS and GMM respectively. These findings imply that firms' cross-listing plays a significant role in the CSR-CFP relationship by boosting such a relationship and increasing operating performance for companies that engage in CSR activities. Based on these results, we have to accept our third hypothesis, H₃.

6.4.4. Robustness test

According to the previous CSR-CFP examination, CSR performance has a positive impact on firms' financial performance as measured by Tobin's Q and ROA. For robustness testing, I use alternative definitions of financial profitability such as the ratio of Price to Book Value (PTBV) (instead of the Tobin's Q ratio) and that of Return on Invested Capital (ROIC) (instead of the ROA). Table 6.7 presents the impact of CSR performance on the firm's PTBV and ROIC. The results are again positive and statistically significant (CSR performance proxied by ESG rating score) for all three models. For example, according to Table 6.7 - Panel A reports the impact of CSR on PTBV is positive and statistically significant with values of 0.439 (t-value of 4.22), 0.460 (t-value 4.03) and 0.475 (t-value 4.21) for model 1 (OLS), 2 (2SLS) and 3 (GMM) respectively.

[Insert Table 6.7 about here]

Similarly, this study further tests the impact of CSR performance on firms' ROIC. According to Table 6.7 - Panel B, the impact of firms' CSR activities on their ROIC ratio is positively and statistically significant. This result is consistent for all three models (OLS, 2SLS and GMM). An interesting aspect is that this relationship is considerably stronger for these alternative profitability proxies. For example, the CSR performance coefficients under OLS, 2SLS and GMM are 0.723 (t-value of 3.10), 0.737 (t-value of 2.97) and 0.729 (t-value of 2.94), all statistically significant at the 1% level.

[Insert Table 6.8 about here]

Table 6.8 reports the regression result across the industries sectors. When financial performance is measured in terms of PTBV, I report a positive and significant ESG rating coefficient for all cases of oil & gas, consumer goods, customer service and financial sectors. According to Table 4.8 - Panel A, the CSR performance coefficients for oil & gas, consumer goods, customer service, and financial sectors using the OLS model are 0.267 (t-value of 1.71), 1.301 (t-value of 2.85), 0.881 (t-value of 2.02) and 0.304 (t-value of 3.12) respectively. The results for model 2 (2SLS) and model 3 (GMM) are also consistent with the OLS model for these industries except for Oil & Gas in the case of the GMM definition. In terms of the other controlling variables, the coefficients for size and capital expenditure to sales ratios are consistently negative and statistically significant in all four industries. This indicates a reverse relationship between CSR and financial performance with Size and Capex to sales ratio firms, i.e. the larger the size and capital expenditures in a firm the lower the impact of CSR activities on profitability. This is quite logical given the possibility that CSR activities in already large firms might have a smaller incremental benefit to the aspect of profitability. With regards to the rest of the control

variables, all coefficients are insignificant for most industries and for all alternative modelling approaches.

Furthermore, Table 6.8 - Panel B presents the regression result of the impact of CSR performance on ROIC. The coefficient of CSR performance regression is positive and statistically significant for oil & gas, consumer services, consumer goods and telecommunication sectors under all three models. Table 6.8 - Panel B shows that for oil & gas, consumer goods, consumer services and telecommunications, the CSR performance coefficient under OLS (model 1) is 1.318 (t-value of 1.97), 1.532 (t-value of 1.89), 2.006 (t-value of 2.67) and 2.901 (t-value of 2.43) respectively. Table 6.8 - Panel B also reports positive and statistically significant CSR coefficient for models 2 (2SLS) and 3 (GMM), which is consistent with the OLS model. Overall, these results mean that the CSR has a positive impact on firms' return on invested capital as firms involved in the CSR initiatives can increase significantly their return on investments. However, the effect is less pronounced for the case of larger firms.

[Insert Table 6.9 about here]

This study further examines the impact of cross-listing on the CSR-CFP relationship for both PTBV and ROIC. According to Table 6.9, the CSR coefficients for both PTBV and ROIC are both positive and statistically significant in all OLS, 2SLS and GMM methods. For example, the cross-listing coefficient is positive and statistically significant (0.538, t-value of 2.71) for the dependent variable PTBV in the OLS model. The results for the 2SLS and GMM models are also consistent with the OLS and are statistically significant at the 1% level. A similar finding is reported in Table 6.9 - Panel B for the ROIC proxy. The CSR performance coefficients are again positive and statistically significant at the 1% level for all models. The moderation test results (Table

6.9, Panel B) also confirm that the firm's cross-listing positively moderates the relationship between CSR performance and ROIC. According to Table 6.7 - Panel B, the cross-listing coefficient is 0.952 (t-value of 1.70) under OLS, 0.950 (t-value of 1.72) under 2SLS, and 0.988 (t-value of 1.79) under GMM. These are significant at the 10% level.

Overall, the robustness test corroborates the original results of Tables 6.4 and 6.5 of the study. The CSR performance has a significantly positive impact on the firms' value (Tobin's Q) and profitability (ROA), supporting our first hypothesis, H₁. Furthermore, Table 6.5 confirms that the CSR-CFP relationship varies across the industry; hence, supporting the second hypothesis, H₂. The result of the robustness test (Tables 6.7 and 6.8) also supports the first hypothesis and second hypothesis, respectively. As of Table 6.7, the CSR has a positive and statistically significant impact on PTVB (value) and ROIC (profitability). Similarly, Table 6.8 again confirms the variability in CSR-CFP relationship among industry sectors. Finally, the results of Table 6.9 are consistent with the result of Table 6.6 highlighting the significantly positive impact of cross-listing on the CSR-CFP relationship. Hence, the positive impact of CSR on CFP is more pronounced for firms that are cross-listed on foreign stock markets.

6.5. Discussion and Conclusion

The popularity of CSR is increasing significantly in recent years. The firms' participation in CSR differs from industry to industry and country to country. Firms design their CSR initiatives according to the nature of their business, the industry they are operating and the strategy they adopt. Therefore, I argue that the relationship between CSR and CFP is heterogeneous amongst alternative industries. Considering this

argument, I aimed to examine this heterogeneous link between CSR and CFP across industries. Further, I sought to investigate the CSR-CFP relationship in the emerging economies and expected to be a positive one.

This is examined for the first time in the literature. I use 1,244 firms-year observations representing 779 companies from 23 emerging markets. This sample consists of the companies that applied to be associated with the FTSE4Good emerging market index between 2016 and 2017. Also, to the best of my knowledge, this is the first time that the FTSE4Good Emerging index Rating Score is used as a proxy for CSR performance. This study employs instrumental variables (IV) to eliminate endogeneity issues alongside the use of alternative modelling approaches to test the CSR-CFP relationship, such as those of 2SLS and GMM.

To investigate the financial effect, I use Tobin's Q and ROA, where I regress financial performance with the firms overall CSR Performance (ESG rating score) and controlling for various micro-characteristics such as the firm's size, leverage, capital expenditure to sales ratio, growth, operating margin and employee size. I found that the CSR performance is positively associated with all Tobin's Q, PTBV, ROA and ROIC indicators. These results are consistent with our first hypothesis, namely *the existence of a positive association between the financial performance of the companies and the CSR performance in the emerging market*. Overall, it implies that the more the firms invest in socially responsible business practices, the better their financial performance is going to be. This result is consistent with Choi and Wang (2009), Chueng et al., (2009), Jo and Harjoto (2011), Feng et al., (2017) and Li et al., (2018). Prior studies primarily focus on the developed economies, for example, the most recent studies by Feng et al., (2017) and Li et al., (2018) focus on US companies and the FTSE 350 respectively and examine the

relationship between CSR and financial performance (Tobin's Q and ROA). They reported the positive impact of the overall CSR score on firms' financial performance. The aggregate result of this study is also consistent with the instrumental stakeholder theory which argues that firm participation in the CSR initiatives is instrumental for the better economic benefit (Wood and Jones, 1995; Donaldson and Preston, 1995).

Consistent with the second hypothesis (H₂), I find that the relationship between initiatives and corporate financial performance varies firms' CSR across industries/sectors. For example, in the case of Tobin's Q and ROA, out of ten industries, I found the coefficient for CSR performance to be positive and statistically significant for the cases of financial and consumer services for the Tobin's Q and oil & gas, customer service, consumer goods and telecommunication sectors for the case of the ROA. For the rest of the industries, the CSR does not have any material impact. The industry-wise robustness test results (Table 6.8 - Panel A) confirms that the significant impact of CSR on PTBV for oil & gas, consumer services, consumer goods and financial industry. In the case of ROIC, CSR has a significant impact on ROIC for oil & gas, consumer services, consumer goods and the telecommunication industry. Hence, we can conclude that the CSR-CFP relationship is heterogeneous and varies across industries in the case of emerging markets. The impact of CSR on CFP varies among these industries possibly because different industries have different visibility with regards to potential negative effect from their operation to the environment (Ziegler et al., 2007; Hopner et al., 2010; Lev et al., 2010). For example, the impact of CSR on CFP in the oil & gas industry is less pronounced as compared to the other industries. Companies in the oil & gas sector have high reputational risk and primarily focus on legitimising themselves with society and community by investing in environmental management, health and safety, etc. Hence, the

positive impact of CSR on CFP in the Oil & Gas industry appears to be less pronounced. On the other hand, industries such as consumer goods, consumer service, telecommunication and financials are in relatively close proximity to the end-users and less proximity to environmental damage. End-users are more concerned with the social issues on their consumptions and are heavily dependent on the issue of trust. Hence the impact of CSR on CFP among consumer goods, consumer service, telecommunication and financials are more pronounced.

The third hypothesis examines the moderating role of cross-listing on the CSR-CFP relationship. The results confirm that cross-listed firms tend to enjoy higher positive and statistically significant financial performance. Also, the coefficient of cross-listing is positive and statistically significant using all three models.

This study is amongst very few that have examined the heterogeneous relationship between CSR and CFP across industries/sectors and builds upon the works of Omar and Zallom (2016) and Feng et al., (2017) who investigate the heterogeneous association between firms' participation in socially responsible initiatives and financial return across industrial sectors. However, the former study by Omar and Zallom (2016) is limited to only 26 observations from three industrial sectors (chemical, food and beverage, and pharmaceutical & medicine); while the latter one used a large sample of 17,083 observations but all from the US only. The result of this study is consistent with Feng et al., (2017) by showing that the CSR-CFP relationship is heterogeneous across industries and this effect is valid not only in the case of developed markets but also for the emerging ones. I expanded the study by examining the value relevance of the CSR scores with additional financial proxies. Also, the very first time in the literature, this study examines the moderating effect of cross-listing in CSR-CFP relationship. Tables 6.6 and 6.9 confirm that cross-listing positively and significantly moderate the CSR-CFP relationship. This result means that the positive impact of CSR on firms' financial performance is more pronounced when the firm is a cross-listed. This is because such firms are required to improve corporate governance and CSR activities as a form of boosting their reputation and legitimise themselves in the international stock exchanges (Boubakri et al., 2016; Del Bosco and Misani, 2016; Del Bosco and Misani, 2015). In addition, cross-listed firms tend to enjoy higher valuation compared with firms from their own country that are not cross-listed due to their improved reputation (Doidge et al., 2004).

The current study examines whether corporate social responsibility has a positive impact on firms' financial performance in the emerging market and explores the heterogeneous relationship across industries. The result of this concludes that firms in the emerging market tend to enjoy better financial return when they commit to socially responsible activities in their business operation. Higher the firm's involvement in CSR, the better their financial return. However, this result differs across industries.

This study contributes to the CSR-CFP literature in several ways. First, I extend the literature by providing evidence using new CSR dataset. I am the first to use the ESG rating as a proxy of CSR performance developed by the FTSE4Good index. The FTSE4Good index is widely recognised as one that uses very comprehensive and expert criteria in the selection of the firms that will become part of the index and provides a very wide geographical coverage. Its framework is aligned with the UN sustainable development goals (SDGs) and committed to providing a comprehensive assessment. It aims towards providing a common global standard drawn from over 40 leading global frameworks such as the Global Reporting Standard (GRI), the OECT Guidelines, Carbon Disclosure Project (CDP), the Transparency International's Business Principles for Countering Bribery, the GHG Protocol (FTSE, 2016), etc.. Also, I use 1,244 firm-year observation representing 779 individual firms from 23 emerging countries across the world. This improves the generalisability of my findings in the literature. Secondly, this study is among the very first to examine the effect of cross-listing on the CSR-CFP relationship and confirms that cross-listing has a positive and significant impact on the CSR-CFP relationship. Thirdly, this study is among the few that examined CSR-CFP heterogeneous relationship across industries. Only a few studies, Feng et al., (2017) and Omar and Zallom (2016) previously examine CSR across many industries. However, both studies are based on single country data (US and Jordan). Hence, in this study, I respond to Feng et al., (2017) call for additional examination using data from countries outside the US.

There are several implications from the result of the current study. The improved financial performance driven by an increase in CSR activities may be due to a better relationship between the firm and several stakeholders that are directly and indirectly connected to the business operation. Also, the evidence of heterogeneousness association between CSR and CFP across industry implies that firms or managers in an emerging market should focus on linking the CSR strategies that better suits to the nature of their business and the model they are operating. Hence, it is important for managers to design their CSR programs in line with their business strategy so as to maintain some consistency in meeting stakeholders' expectations. Also, continuous improvement in the firms' CSR programme facilitates improved economic performance as firms with higher CSR rating tends to enjoy significantly higher/better financial returns (corporate value) compared

with firms implementing fewer CSR initiatives. Further, as regards the examination of the value relevance of the CSR rating, our tests revealed that the stock market also responds positively with the firms' commitment to CSR. Since this study reports a positive association between CSR rating and CFP in emerging markets, both multinational and local firms in these markets should focus on those CSR activities/initiatives that are more suitable to the country they are operating in. What are these activities is a question that we leave open for future research in the field.

Appendix C

Industry Code	Industry	No of Observations	Percentage
1	Oil & Gas	81	6.51%
1000	Basic Materials	136	10.93%
2000	Industrials	205	16.48%
3000	Consumer Goods	141	11.33%
4000	Health Care	55	4.42%
5000	Consumer Services	119	9.57%
6000	Telecommunication	61	4.90%
7000	Utilities	99	7.96%
8000	Financials	293	23.55%
9000	Technology	54	4.34%
		1,244	100.00%

Table 6. 1 Sample Table

Table 6.1 (Panel B): Country-wise	se Sample
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Country code	Country Name	No of Observatio P	ercentage
BRAZ	Brazil	81	6.51%
CHL	Chile	32	2.57%
CHN	China	320	25.72%
COL	Colombia	18	1.45%
CZE	Chez Republic	4	0.32%
EGY	Egypt	6	0.48%
GRC	Greece	12	0.96%
HUN	Hungary	5	0.40%
IND	India	156	12.54%
INDO	Indonesia	38	3.05%
MAL	Malaysia	63	5.06%
MEX	Mexico	53	4.26%
PAK	Pakistan	5	0.40%
PER	Peru	3	0.24%
PHIL	Philippines	41	3.30%
POL	Poland	34	2.73%
QA	Qatar	11	0.88%
RUS	Russia	44	3.54%
SAF	South Africa	85	6.83%
THAI	Thailand	49	3.94%
TUR	Turkey	52	4.18%
TWN	Taiwan	112	9.00%
UAE	United Arab Emirate	s 20	1.61%
	Total	1,244	100.00%

Table 6. 2 Descriptive Statistics, 0	Correlations and	Variance Inflation	Factor Test
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Panel A: Descriptive

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Jarque- Bera	Prob	Sum	Sum Sq. Dev.	Ν
CSR (ESG)	2.1399	2.1000	4.3000	0.4000	0.9766	0.1396	2.2027	36.9955	0.0000	2662.0000	1185.4620	1244
Tobin's Q	0.5920	0.5904	0.9484	0.1276	0.2130	-0.1277	2.1476	41.0484	0.0000	736.4023	56.4015	1244
ROA	0.0478	0.0363	0.2472	-0.0859	0.0506	1.1204	5.3828	554.5575	0.0000	59.4492	3.1770	1244
ROIC	8.7403	7.1800	36.5600	-7.7600	6.9669	1.2656	5.7295	718.2653	0.0000	10872.9100	60332.0900	1244
PTBV	2.2154	1.3344	17.8549	0.1763	2.5446	3.5136	18.7586	15431.6700	0.0000	2755.9840	8048.6200	1244
Size	8.2779	8.1471	11.2451	6.4375	0.9770	0.7201	3.4019	115.8856	0.0000	10297.6900	1186.4870	1244
Leverage	0.2781	0.2659	0.7774	0.0037	0.1753	0.4917	2.7334	53.8173	0.0000	345.9422	38.2118	1244
Growth	0.0963	0.0685	0.9112	-0.3765	0.1903	1.3044	7.0632	1208.5190	0.0000	119.8290	45.0031	1244
Cpex /Sales	0.0919	0.0517	0.7107	0.0016	0.1184	2.8979	13.0828	7010.6450	0.0000	114.3395	17.4233	1244
Operating Margin	0.1590	0.1406	0.5460	-0.2664	0.1326	0.3880	3.9306	76.1066	0.0000	197.7677	21.8393	1244
Employee	4.1480	4.1654	5.5593	2.2856	0.6338	-0.3635	3.4537	38.0641	0.0000	5160.1570	499.2743	1244

Panel B: Correlations

Variables	CSR	Tobin's	ROA	ROIC	PTBV	Size	Leverage	Growth	Capex/Sales	Operating	Employee
CSR	1.000										
Tobin's Q	0.082	1.000									
ROA	0.026	-0.494	1.000								
ROIC	0.089	-0.260	0.907	1.000							
PTBV	0.101	-0.037	0.442	0.494	1.000						
Size	0.198	0.304	-0.199	-0.172	-0.211	1.000					
Leverage	-0.013	0.357	-0.251	-0.262	-0.008	-0.015	1.000				
Growth	-0.098	-0.006	0.109	0.130	-0.015	-0.052	0.051	1.000			
Capex/Sales	-0.034	-0.211	0.000	-0.077	-0.045	-0.040	0.177	-0.040	1.000		
Operating Margin	-0.055	-0.041	0.298	0.292	0.105	0.085	0.023	0.154	0.186	1.000	
Employee size	-0.049	-0.050	0.041	0.030	-0.036	0.023	-0.080	-0.069	0.006	0.014	

VIF: Dependent var	iable Tobii	n's Q	VIF: Dependent var	VIF: Dependent variable ROA				
Variable	VIF	1/VIF	Variable	VIF	1/VIF			
Operating Margin	1.0800	0.9256	Operating Margin	1.0800	0.9256			
Cpex /Sales	1.0800	0.9259	Cpex /Sales	1.0800	0.9259			
Size	1.0600	0.9455	Size	1.0600	0.9455			
CSR (ESG)	1.0600	0.9460	CSR (ESG)	1.0600	0.9460			
Growth	1.0500	0.9521	Growth	1.0500	0.9521			
Leverage	1.0400	0.9590	Leverage	1.0400	0.9590			
Employee	1.0200	0.9846	Employee	1.0200	0.9846			
Mean VIF	1.0557		Mean VIF	1.0557				

Panel C: Variance Inflation Factor Test

Variables	Tobin's Q	ROA
CSR	0.0113*	0.00355**
	(1.84)	(2.24)
Size	0.0969***	-0.0210***
	(11.83)	(-9.86)
Leverage	0.527***	-0.0770***
	(20.67)	(-11.63)
Growth	-0.0246	0.0193***
	(-1.08)	(3.26)
Capex to sales	-0.305***	-0.0421***
-	(-7.90)	(-4.19)
Operating		
margin	-0.214***	0.166***
	(-6.08)	(18.13)
Employee	-0.00122	0.00135
	(-0.19)	(0.80)
Constant	-0.352***	0.207***
	(-4.68)	(10.65)
Adj square	55.39%	44.49%
N	1244	1244
	estat hettest	estat hettest
	Breusch-Pagan / Cook-Weisberg test	Breusch-Pagan / Cook-Weisberg
	for heteroskedasticity	test for heteroskedasticity
	Ho: Constant	
	variance	Ho: Constant variance
	Variables: fitted values of Tobin's Q	Variables: fitted values of ROA
	$chi^2(1) = 12.85$	$chi^2(1) = 145.41$
	$Prob > chi^2 = 0.003$	$Prob > chi^2 = 0.000$

Panel D: Heteroskedasticity Test

 Table 6. 3 First Stage Regression Results

Variables	CSR
Size	0.0205
	(1.41)
Leverage	0.0801*
-	(1.78)
Growth	-0.0352
	(-0.87)
Capex/Sales	0.0154
	(0.23)
Operating Margin	0.0402
	(0.65)
Employee	-0.0278**
	(-2.42)
Initial Value of CSR	0.9378***
	(8.509)
Industry Average CSR	0.9267***
	(7.56)
Constant	-2.1325***
	(-7.09)
Industry effect	Yes
Year effect	Yes
Country effect	Yes
Adj R square	93.37%
Ν	1,244

* Indicates significant at the 10% level, ** indicates significant at the 5% level, ***

indicates significant at 1% level.

	Pa	nel A: Tobin	's Q]	Panel B: ROA				
Variables	(1)	(2)	(3)	(1)	(2)	(3)			
	OLS	2SLS	GMM	OLS	2SLS	GMM			
CSR	0.0113*	0.0128*	0.0128*	0.0036**	0.0035**	0.0034*			
	(1.75)	(1.85)	(1.84)	(2.14)	(1.97)	(1.93)			
Size	0.0969***	0.0964***	0.0965***	-0.0210***	-0.0209***	-0.0210***			
	(6.65)	(6.72)	(6.73)	(-8.52)	(-8.62)	(-8.66)			
Leverage	0.527***	0.527***	0.527***	-0.0770***	-0.0770***	-0.0766***			
	(18.44)	(18.72)	(18.71)	(-11.36)	(-11.55)	(-11.50)			
Growth	-0.0246	-0.0244	-0.0243	0.0193***	0.0193***	0.0190***			
	(-1.06)	(-1.06)	(-1.06)	(2.88)	(2.92)	(2.89)			
Capex to sales	-0.305***	-0.305***	-0.306***	-0.0421***	-0.0421***	-0.0426***			
	(-7.87)	(-7.99)	(-8.05)	(-3.70)	(-3.77)	(-3.82)			
Operating margin	-0.214***	-0.214***	-0.214***	0.166***	0.166***	0.166***			
• • • • •	(-5.02)	(-5.10)	(-5.09)	(13.30)	(13.52)	(13.51)			
Employee	-0.00122	-0.00115	-0.00120	0.00135	0.00135	0.00122			
• 5	(-0.19)	(-0.18)	(-0.19)	(0.83)	(0.84)	(0.77)			
Constant	-0.352**	-0.350**	-0.350**	0.207***	0.207***	0.209***			
	(-2.78)	(-2.82)	(-2.82)	(9.26)	(9.40)	(9.49)			
Adj R square	56.79%	56.79%	56.79%	48.36%	48.36%	48.35%			
N	1,244	1,244	1,244	1,244	1,244	1,244			

 Table 6. 4 Impact of CSR on firms' financial performance

	Cor	nsumer Se	rvice		Financal	5
Variables	(<u>1</u>) OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM	(<u>1</u>) OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM
CSR	0.0286**	0.0209*	0.0198*	0.0321**	0.0375**	0.0398**
	(2.22)	(1.76)	(1.72)	(2.07)	(2.23)	(2.39)
Size	-0.0669*	-0.0657**	-0.0635**	0.171***	0.169***	0.164***
	(-1.89)	(-2.06)	(-2.06)	(10.06)	(9.95)	(9.77)
Leverage	0.729***	0.731***	0.732***	0.0902*	0.0856	0.0826
	(9.56)	(10.80)	(11.21)	(1.65)	(1.63)	(1.60)
Growth	-0.0214	-0.0253	-0.0204	-0.0501	-0.0494	-0.0509
	(-0.27)	(-0.36)	(-0.30)	(-1.15)	(-1.20)	(-1.23)
Capex to sales	-0.336***	-0.331***	-0.326***	-0.302***	-0.296***	-0.302***
	(-3.84)	(-4.23)	(-4.12)	(-3.92)	(-4.05)	(-4.15)
Operating margin	-0.930***	-0.922***	-0.923***	-0.148*	-0.149*	-0.149*
	(-6.06)	(-6.75)	(-6.78)	(-1.80)	(-1.91)	(-1.91)
Employee	0.0001	0.0008	-0.0007	0.00503	0.00492	0.00406
1 7	(0.01)	(0.05)	(-0.04)	(0.42)	(0.43)	(0.36)
Constant	0.957***	0.951***	0.932***	-0.741***	-0.722***	-0.682***
	(3.23)	(3.58)	(3.66)	(-4.30)	(-4.30)	(-4.10)
Adj R square				61.52%	61.50%	61.11%
Ν	119	119	119	293	293	293

Table 6. 5 Impact of CSR on firms' financial performance- Industry-wisePanel A: Corporate financial performance is measured as Tobin's Q

		Oil and Ga	s	Co	nsumer Go	oods	Со	nsumer ser	vice	Tele	communio	cations
Variables	(<u>1</u>) OLS	<u>(2)</u> 2SLS	(<u>3)</u> GMM	(<u>1)</u> OLS	<u>(2)</u> 2SLS	(<u>3)</u> GMM	(<u>1)</u> OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM	(<u>1)</u> OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM
CSR	0.0089*	0.007*	0.0074*	0.0118**	0.00874*	0.00832*	0.0113**	0.0140***	0.0150***	0.0171*	0.00867*	0.00294*
	(1.85)	(1.73)	(1.69)	(2.06)	(1.88)	(1.92)	(2.32)	(3.19)	(3.68)	(2.02)	(1.79)	(1.68)
Size	-0.0422***	-0.0421***	-0.0391***	-0.0212**	-0.0208**	-0.0191**	-0.00884	-0.00928	-0.00898	-0.0377	-0.0357**	-0.0161
	(-3.85)	(-4.51)	(-4.42)	(-2.16)	(-2.30)	(-2.36)	(-0.77)	(-0.91)	(-0.90)	(-1.80)	(-2.15)	(-1.26)
Leverage	-0.106**	-0.106***	-0.114***	-0.106***	-0.106***	-0.106***	-0.0784***	-0.0790***	-0.0821***	-0.0232	-0.0219	-0.0326
	(-2.47)	(-2.92)	(-3.02)	(-4.58)	(-4.95)	(-4.93)	(-3.17)	(-3.63)	(-4.05)	(-0.75)	(-0.91)	(-1.08)
Growth	0.0523*	0.0547**	0.0628**	0.00788	0.00700	0.00753	0.0110	0.0124	0.0129	-0.0785	-0.0837**	-0.111**
	(1.77)	(2.22)	(2.39)	(0.29)	(0.28)	(0.30)	(0.35)	(0.45)	(0.47)	(-1.64)	(-2.11)	(-2.33)
Capex to sales	-0.106*	-0.105***	-0.101***	0.0512	0.0443	0.0417	-0.148***	-0.150***	-0.152***	-0.251**	-0.267***	-0.224**
	(-2.55)	(-2.94)	(-2.74)	(0.41)	(0.39)	(0.37)	(-4.72)	(-5.38)	(-5.56)	(-2.11)	(-2.95)	(-2.43)
Operating margin	0.150**	0.145**	0.147**	0.177***	0.180***	0.178***	0.139*	0.137**	0.140**	0.410***	0.416***	0.418***
	(2.16)	(2.44)	(2.54)	(2.81)	(3.08)	(3.16)	(1.94)	(2.15)	(2.20)	(7.28)	(9.66)	(7.73)
Employee	0.0043	0.0042	0.0047	0.00652	0.00609	0.00617	-0.0014	-0.0017	-0.0013	-0.00167	-0.000783	-0.000281
	(0.64)	(0.76)	(0.83)	(1.30)	(1.33)	(1.34)	(-0.28)	(-0.35)	(-0.27)	(-0.21)	(-0.13)	(-0.04)
Constant	0.388***	0.390***	0.364***	0.194**	0.196***	0.183***	0.108	0.110	0.108	0.392**	0.386***	0.191*
	(4.02)	(4.81)	(4.70)	(2.51)	(2.75)	(2.84)	(1.26)	(1.44)	(1.45)	(2.27)	(2.85)	(1.82)
Adj R square	68.05%	68.62%	67.88%	48.57%	48.57%	48.26%				80.28%	79.89%	73.37%
N	81	81	81	141	141	141	119	119	119	61	61	61

Panel B: Corporate financial performance is measured as ROA

	Par	el A: Tobi	n's Q	P	Panel B: ROA				
Variables	(<u>1)</u> OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM	(<u>1)</u> OLS	<u>(2)</u> 2SLS	(<u>3)</u> GMM			
CSR	0.0105*	0.0120*	0.0120*	0.0033**	0.0033*	0.003*			
	(1.65)	(1.74)	(1.73)	(2.00)	(1.84)	(1.80)			
Size	0.0942***	• 0.0937***	• 0.0937***	-0.0217***	-0.0216***	-0.0217***			
	(6.36)	(6.42)	(6.43)	(-8.43)	(-8.55)	(-8.59)			
Leverage	0.525***	0.525***	0.525***	-0.0775***	-0.0775***	-0.0771***			
	(18.41)	(18.70)	(18.69)	(-11.46)	(-11.65)	(-11.60)			
Growth	-0.0235	-0.0233	-0.0232	0.0196***	0.0196***	0.0193***			
	(-1.02)	(-1.03)	(-1.02)	(2.91)	(2.96)	(2.93)			
Capex to sales	-0.302***	-0.302***	-0.303***	-0.0413***	-0.0413***	-0.0418***			
	(-7.83)	(-7.96)	(-8.02)	(-3.63)	(-3.70)	(-3.75)			
Operating margin	-0.214***	-0.214***	-0.213***	0.166***	0.166***	0.166***			
	(-5.04)	(-5.13)	(-5.12)	(13.27)	(13.49)	(13.48)			
Employee	-0.00201	-0.00193	-0.00199	0.00115	0.00115	0.00102			
	(-0.31)	(-0.31)	(-0.32)	(0.71)	(0.72)	(0.64)			
Cross Listing	0.0267*	0.0265*	0.0263*	0.0068*	0.0068*	0.0069*			
	(1.82)	(1.84)	(1.82)	(1.85)	(1.88)	(1.90)			
Constant	-0.350**	-0.348**	-0.348**	0.208***	0.208***	0.209***			
	(-2.80)	(-2.83)	(-2.83)	(9.21)	(9.36)	(9.45)			
Adj R square	56.95%	56.94%	56.94%	48.53%	48.53%	48.53%			
Ν	1,244	1,244	1,244	1,244	1,244	1,244			

Table 6. 6 Moderating impacts of cross-listing on CSR-CFP relationship.

	Pa	nel A: PT	BV	Panel B: ROIC				
Variables	(1)	<u>(2)</u>	(3)	(1)	<u>(2)</u>	(3)		
	OLS	2SLS	GMM	OLS	2SLS	GMM		
CSR	0.439***	0.460***	0.475***	0.723***	0.737***	0.729***		
	(4.22)	(4.03)	(4.21)	(3.10)	(2.97)	(2.94)		
Size	-1.445***	-1.451***	-1.453***	-2.571***	-2.575***	-2.590***		
	(-7.56)	(-7.69)	(-7.70)	(-7.73)	(-7.86)	(-7.90)		
Leverage	0.433	0.434	0.304	-10.11***	-10.11***	-10.08***		
	(0.81)	(0.82)	(0.60)	(-10.35)	(-10.52)	(-10.51)		
Growth	-0.574	-0.571	-0.535	3.107***	3.109***	3.064***		
	(-1.55)	(-1.56)	(-1.47)	(3.22)	(3.27)	(3.23)		
Capex to sales	-2.290***	-2.285***	-2.216***	-9.670***	-9.667***	-9.703***		
-	(-4.04)	(-4.09)	(-4.05)	(-6.34)	(-6.45)	(-6.50)		
Operating margin	4.171***	4.172***	4.053***	21.74***	21.74***	21.64***		
	(6.35)	(6.45)	(6.44)	(13.42)	(13.64)	(13.62)		
Employee	-0.0898	-0.0889	-0.0820	0.156	0.157	0.146		
1 2	(-1.05)	(-1.06)	(-0.98)	(0.67)	(0.68)	(0.63)		
Constant	12.16***	12.19***	12.20***	27.81***	27.83***	28.05***		
-	(7.46)	(7.60)	(7.60)	(9.16)	(9.32)	(9.41)		
Adj R square	37.15%	37.15%	37.11%	43.99%	43.99%	43.99%		
N	1,244	1,244	1,244	1,244	1,244	1,244		

Table 6. 7 Impact of CSR on firms' financial performance on financial performance-Robustness Test: Corporate financial performance is measured as PTBV and ROIC

Table 6. 8 Impact of CSR on f	firms' financial performance- I	Industry-wise- Robustness Test

	Oil and Gas			Co	Consumer Goods			Consumer service			Financials		
Variables	(<u>1)</u> OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM	(<u>1)</u> OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM	(<u>1)</u> OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM	(<u>1)</u> OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM	
CSR	0.267*	0.259*	0.263	1.301**	1.419**	1.337*	0.811**	0.928**	1.238***	0.304***	0.328***	0.316***	
	(1.71)	(1.82)	(1.54)	(2.85)	(2.78)	(2.57)	(2.02)	(2.43)	(2.87)	(3.12)	(3.32)	(3.24)	
Size	-0.685***	-0.685***	-0.653***	-2.683***	-2.699***	-2.414***	-3.115***	-3.135***	-2.867***	-0.250**	-0.263**	-0.245**	
	(-3.80)	(-4.44)	(-4.41)	(-4.00)	(-4.37)	(-4.07)	(-4.17)	(-4.71)	(-4.29)	(-2.24)	(-2.45)	(-2.32)	
Leverage	-0.823	-0.825	-0.904	3.036	3.017*	2.989*	1.967	1.939	0.930	-0.104	-0.124	-0.0992	
-	(-0.77)	(-0.90)	(-1.02)	(1.54)	(1.70)	(1.67)	(0.94)	(1.05)	(0.48)	(-0.21)	(-0.27)	(-0.22)	
Growth	-0.0676	-0.0573	0.0288	1.293	1.327	1.465	-2.472*	-2.414**	-1.872	0.307	0.310	0.318	
	(-0.08)	(-0.08)	(0.04)	(0.68)	(0.76)	(0.80)	(-1.84)	(-2.03)	(-1.59)	(1.34)	(1.43)	(1.48)	
Capex to sales	-2.471***	-2.467***	-2.425***	-5.304	-5.036	-5.255	-8.539***	-8.608***	-8.889***	-1.528**	-1.505***	-1.484***	
	(-2.73)	(-3.20)	(-3.18)	(-0.72)	(-0.74)	(-0.76)	(-2.90)	(-3.31)	(-3.42)	(-2.59)	(-2.67)	(-2.64)	
Operating margin	1.287	1.266	1.282	11.94***	11.85***	11.31***	1.636	1.518	2.524	1.629**	1.625**	1.619**	
	(1.06)	(1.22)	(1.23)	(3.25)	(3.52)	(3.36)	(0.62)	(0.64)	(1.05)	(2.33)	(2.45)	(2.45)	
Employee	0.128	0.128	0.133	-0.0675	-0.0508	-0.0348	-0.277	-0.286	-0.249	0.0548	0.0543	0.0602	
	(1.10)	(1.30)	(1.34)	(-0.26)	(-0.21)	(-0.14)	(-0.62)	(-0.71)	(-0.61)	(0.92)	(0.96)	(1.08)	
Constant	6.764***	6.775***	6.493***	20.23***	20.16***	17.96***	26.08***	26.18***	24.05***	2.228**	2.313**	2.128**	
	(3.85)	(4.53)	(4.53)	(4.01)	(4.34)	(4.02)	(4.28)	(4.83)	(4.44)	(2.19)	(2.37)	(2.24)	
Adj R square	56.40%	56.39%	56.00%	55.21%	55.18%	53.67%				33.37%	33.35%	33.03%	
N	81	81	81	141	141	141	119	119	119	293	293	293	

Panel A: Corporate financial performance is measured as PTBV

Note: t-statistics in parentheses

		Oil and Gas			nsumer Go	oods	Consumer service			Telecommunications		
Variables	(<u>1)</u> OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM	(<u>1)</u> OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM	(<u>1)</u> OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM	(<u>1)</u> OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM
CSR	1.318*	0.820*	0.884*	1.532*	1.340*	1.280*	2.006***	2.266***	2.400***	2.901**	1.860*	1.76*
	(1.97)	(1.84)	(1.72)	(1.89)	(1.71)	(1.69)	(2.67)	(3.45)	(3.94)	(2.43)	(1.77)	(1.82)
Size	-6.843***	-6.818***	-6.311***	-1.238	-1.212	-1.028	-2.688*	-2.731*	-2.652**	-5.840**	-5.597***	-2.279
	(-4.23)	(-4.94)	(-4.80)	(-0.89)	(-0.95)	(-0.89)	(-1.71)	(-1.96)	(-1.96)	(-2.25)	(-2.71)	(-1.36)
Leverage	-11.91**	-12.01**	-13.25***	-13.78***	-13.75***	-13.79***	-9.444**	-9.508***	-9.922***	3.491	3.648	2.344
	(-2.06)	(-2.44)	(-2.63)	(-4.06)	(-4.42)	(-4.41)	(-2.31)	(-2.62)	(-2.91)	(0.75)	(1.00)	(0.50)
Growth	8.203*	8.844**	10.20**	2.612	2.556	2.686	1.731	1.861	2.014	-7.935	-8.576	-13.20*
	(1.82)	(2.37)	(2.55)	(0.67)	(0.72)	(0.76)	(0.39)	(0.48)	(0.52)	(-1.08)	(-1.43)	(-1.75)
Capex to sales	-15.74***	-15.48***	-14.82***	-5.812	-6.248	-6.196	-29.00***	-29.15***	-29.32***	-32.72**	-34.67***	-29.43*
	(-2.85)	(-3.23)	(-2.97)	(-0.35)	(-0.41)	(-0.41)	(-7.06)	(-8.02)	(-8.24)	(-2.17)	(-3.05)	(-2.43)
Operating margin	14.52	13.24	13.48	21.61***	21.75***	21.19***	11.28	11.01	11.42	54.63***	55.36***	56.44**
	(1.52)	(1.64)	(1.73)	(2.68)	(2.94)	(2.98)	(1.13)	(1.24)	(1.29)	(6.90)	(9.07)	(6.99)
Employee	0.595	0.607	0.677	0.869	0.842	0.854	-0.696	-0.716	-0.683	-0.563	-0.454	-0.328
	(0.63)	(0.74)	(0.83)	(1.18)	(1.25)	(1.26)	(-0.82)	(-0.94)	(-0.89)	(-0.48)	(-0.51)	(-0.30)
Constant	63.53***	64.23***	59.79***	16.21	16.33	14.90	30.05**	30.27***	29.66***	59.31**	58.68***	26.52*
	(4.53)	(5.46)	(5.33)	(1.49)	(1.63)	(1.65)	(2.45)	(2.78)	(2.79)	(2.70)	(3.40)	(1.89)
Adj R square	64.00%	63.90%	62.36%	50.20%	50.18%	49.93%				81.26%	80.94%	72.97%
N	81	81	81	141	141	141	119	119	119	61	61	61

Panel B: Corporate financial performance is measured as ROIC

	I	Panel A: PT	BV	Panel B: ROIC				
Variables	(<u>1</u>) OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM	(<u>1)</u> OLS	<u>(2)</u> 2SLS	<u>(3)</u> GMM		
CSR	0.422***	0.443***	0.459***	0.693***	0.708***	0.699***		
	(4.07)	(3.88)	(4.05)	(2.95)	(2.82)	(2.79)		
Size	-1.500***	-1.507***	-1.509***	-2.669***	-2.674***	-2.693***		
	(-7.85)	(-7.99)	(-8.00)	(-7.80)	(-7.95)	(-8.01)		
Leverage	0.393	0.395	0.263	-10.18***	-10.18***	-10.15***		
-	(0.73)	(0.75)	(0.52)	(-10.46)	(-10.63)	(-10.62)		
Growth	-0.552	-0.549	-0.514	3.146***	3.148***	3.106***		
	(-1.48)	(-1.50)	(-1.41)	(3.26)	(3.31)	(3.27)		
Capex to sales	-2.230***	-2.226***	-2.155***	-9.564***	-9.561***	-9.594***		
_	(-3.90)	(-3.95)	(-3.91)	(-6.29)	(-6.40)	(-6.45)		
Operating margin	4.187***	4.187***	4.067***	21.77***	21.77***	21.67***		
	(6.38)	(6.49)	(6.49)	(13.43)	(13.65)	(13.63)		
Employee	-0.106	-0.105	-0.0981	0.128	0.128	0.117		
	(-1.24)	(-1.25)	(-1.18)	(0.54)	(0.55)	(0.51)		
Cross Listing	0.538***	0.535***	0.540***	0.952*	0.950*	0.988*		
-	(2.71)	(2.73)	(2.76)	(1.70)	(1.72)	(1.79)		
Constant	12.19***	12.22***	12.23***	27.86***	27.88***	28.10***		
	(7.61)	(7.76)	(7.76)	(9.15)	(9.31)	(9.40)		
Adj R square	37.61%	37.60%	37.57%	44.17%	44.17%	44.16%		
N N	1,244	1,244	1,244	1,244	1,244	1,244		

Table 6. 9 Moderating impact of cross-listing on CSR-CFP relationship- Robustness Test

Chapter 7: Conclusion

7.1. Summary of findings

Corporate Social Responsibility is becoming a vital business strategy for firms' success. Stakeholders' awareness of the effects/consequences of business operation to society has increased significantly over the years. Recent corporate scandals and environmental violations have put significant pressure on the business to compel socially responsible business practices. Due to most recent corporate scandals, the issue of whether the CSR lead to improved financial performance or decrease has got significant attention from the researchers over the years. This thesis aims to contribute to the existing literature of Corporate Social Responsibility and Corporate Financial Performance relationship by examining the CSR-CFP link in several ways.

This study investigates the impact of CSR on firms' financial performance using the CSR index (FTSE4Good) addition/deletions and its ESG rating score as a proxy of the firms' corporate social responsibility performance. First, I examined the impact of CSR on the firm's long-term operating performance. I compared the long-term operating performances of firms associated with the CSR index with the performances of firms that are not associated with the CSR index. Also, the prior and post addition (deletion) operating performance is also investigated. Secondly, I investigate the impact of CSR index addition/deletion on firms' long-term stock return. Using CSR index addition and deletion as CSR performance, this examined the firm's long-term sock return after the firms' addition (deletion) in the CSR index. Finally, this study also investigates the heterogeneity in CSR-CFP relationship among industry sectors using the emerging market data. In this instance, I used the FTSE4Good ESG rating score as a measure of the CSR performance and examined its impact on the firms' financial performances.

Having provided the extensive literature review in chapter 2 including the history of CSR, theories, and the empirical evaluation of the CSR -CFP relationship, the chapter 3 of this thesis primarily focused on the research philosophy and methodologies that have used in this research. The theoretical underpinning used is described in each empirical examination of chapter 4, 5 and 6. The main results of the three-different empirical chapter are summarised in the following section.

As mentioned in previous sections, the primary objective of this thesis is to contribute the CSR-CFP literature by examining the impact of firms' addition (deletion) in the CSR index on their financial performance. This study used the FTSE4Good index series as the proxy of the CSR performance. FTSE4Good is widely popular for its comprehensive methodologies in evaluating CSR matters. The FTSE4Good index series consists of the companies that have demonstrated a significant commitment to the key three fundamental issues such as Environment, Social and Governance issues. For first and second empirical investigation (chapter 4 and chapter 5) FTSE4Good Global index addition as positive CSR performance and deletion from the index as a negative CSR performance. For the third empirical investigation (chapter 6), I use the FTSE4Good Emerging market index ESG rating score as a proxy of CSR performance. The CSR related data and rating score are retrieved from the FTSE4Good index. The financial performance is measured using accounting and financial indicators such as; operating profit margin, operating cash flow per sales, current ratio, working capital, total debt to equity ratio, ROIC for examining the operating performance. Similarly, stock return for both short and long return stock market performance; and Tobin's Q, and return on assets (ROA) for the third empirical chapter (chapter 6). I retrieved all financial measures/data from Thomson Reuters Datastream database.

In chapter 4 of this study, I examined the impact of firms' addition (deletion) in the FTSE4Good Global index on the long-term operating performance. The chapter 4 of this thesis focuses on the first two research objectives of the thesis, which are to determine the impact of CSR on firms' long-term operating performance and to determine if companies listed in CSR index perform better after addition than those not listed in the non-CSR index. Using the FTSE4Good Global index and a proxy for CSR conformity, the sample of this chapter comprises 819 additions and 462 deletions between the beginning of March 2002 and ending of December 2015 (26 developed countries). I explored the excess operating performance by comparing operating performances of the FTSE4Good companies against the median of a relevant non-FTSE4Good as a non-CSR benchmark, e.g. industry-, size-, B/ME-, Momentum-matched (firm-matching approach).

The investigation of this study evidenced the excess or positive abnormal long-term operating performance in most of the cases when they were compared against the median of the benchmark (non-CSR) companies' portfolio. The post-addition excess performance is positive as well as significant for cash flow per sales, operating margin, ROIC, and total debt to total capital when compared to all matched benchmark criteria. Although the differential/excess of current ratio and working capital growth are negative, they are in increasing (and statistically significant) trend after the addition in the FTSE4Good index. On the other hand, this study also finds that the long-term operating performance deteriorates significantly after they are deleted from the FTSE4Good index. The result of this study indicated that the firms that are added in the CSR index (higher CSR performance) tend to enjoy the better and improved long-term operating performance. More explicitly being socially responsible towards the environment, society, community helps companies to achieve competitive advantages over their counterparts.

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The third and fifth research objectives are investigated in chapter 5 of this thesis. The main focus of chapter 5 is to determine if the addition (deletion) in the CSR index has any long-term effect on stock performance. Although the primary focus in chapter 5 is to examine the long-term impact of CSR, I began my investigation from short-term effect. I find the company suffers negative cumulative average abnormal return immediately after the addition from the CSR index. However, the long-term investigation results evidenced that the negative impact on the short-term is just a temporary and firms experience a significantly positive abnormal return over the long-term. This study finds that an investor could enjoy a positive average abnormal return of 4.41% over the 240 days after the addition in the index. The investors that buy and hold the shares of CSR index addition companies up to a year or so could enjoy higher return over the long term implying that investors value the CSR index addition. However, in case of the deletion, the results do not document any significant changes in stock return for the neither in short-term nor long-term. This study also finds the impact of CSR on short-term, and long-term stock return varies across the countries.

Finally, chapter 6 of this thesis focused on the CSR-CFP relationship in the emerging market. This chapter primarily focused on the fourth, sixth and seventh research objectives that aimed to determine the heterogeneous impact of CSR in CFP among industries/sectors and to determine if the cross-listing moderates the CSR-CFP relationships. Also, chapter 6 also aimed to determine if the CSR-CFP relationship varies across the geographical location. Using data sample observation of 1,244 firm-year observations from 23 emerging market nations, I investigate the impact of CSR performance (FTSE4Good ESG rating score) on the firms' financial performance measured by Tobin's Q and return on assets (ROA). Using OLS regression model and control with several variables (size, leverage, growth, operating margin, capital expenditure to sales ratio and employee size), I found a significantly positive

association between CSR performance and financial performance measured by Tobin's Q and ROA. Further, I use instrumental variable (IV) approach to control for any endogeneity bias caused by the reverse causality, especially firms with strong financial performance in the past might be able to invest more in the CSR initiatives. The first stage regression result of 2SLS and GMM confirms that both instrumental variables (initial value of CSR performance and industry average CSR performance) are significantly related to firm CSR performance (ESG raging score). Further, the main regression results of 2SLS and GMM also consistent with the OLS and confirms a positive impact of CSR performance on Tobin's Q and ROA. Chapter 6 results also evidenced that the positive impact of CSR on the firm's financial performance is more pronounced for those firms' that are cross-listing in a foreign country. Further, the result of chapter 6 also revealed that the relationship between CSR and CFP varies across industry sectors. Companies tend to enjoy higher and better financial return if they invest or implement socially responsible business practices. Higher their involvement in CSR better their financial performance.

Overall, this study examines the impact of firm's involvement in CSR to their financial performance (operating performance, market return, ROA and Tobin's Q) using a theoretical framework combining the stakeholder theory and signalling hypothesis. According to the framework, firms invest in CSR initiatives to address the needs and demands of their stakeholders. Firms improved reputation is the rational of their CSR leadership, and it reduces the economic uncertainty, more predictable earning and improves investor attractiveness towards firm. The results of chapter 4, 5 and 6 support the theories of modern corporate stakeholder (Freeman, 1984; Jones, 1995; Cornell & Shaprio, 1987), as well as enlighten value maximisation or enlighten stakeholders theory (Jensen 2001; Jensen, 2010) with firms' addition in the CSR index is a result of their strong and continuous commitment to the

environment, society, community and stakeholders overall. Also, the firms' cannot achieve their financial objectives by ignoring the importance of stakeholders and their interest and demands. The positive impact of CSR on firms financial performance (chapter 4, 5 and 6) confirms that Stakeholder management is becoming the key success factors in a competitive business environment. The primary objectives (shareholders' wealth maximisation) of a firm cannot be met without considering its stakeholders (Jenson, 2010; Jamali, 2008, p.217). Hence, in line with stakeholder instrumental theory, firm's involvement to the CSR is an instrument for improved financial performance (Jones, 1995; Donaldson and Preston, 1995; Wood and Clarkson, 1995).

Further, firms' participation in the CSR initiatives signals their leadership and commitment to improving their reputation and subsequently, their performance. I use addition in FTSE4Good Global index as a signal of firm's commitment and their reputation. For example, the addition to the FTSE4Good Global index signals the possibility that a firm will consistently commit adequate resources in socially responsible initiatives/leadership and could be signal of managerial optimism towards the firm's future growth and investment opportunities through sustainable and ethically responsible business practices. The result of chapter 4 and 5 provides the further evidence that the positive CSR leadership signal not only attracts the potential investors but also lead to improving operating performance as a result of improved customer loyalty, employee productivity, relationship with business partners, and a reduction in potential charges and fines. The positive and statistically significant long-term stock return in chapter 5 evidenced that the firms' CSR leadership disclosure triggers a complementary effect by creating a positive 'halo' effect that could provide a yardstick for subsequent investment decisions (Bergh and Gibbons, 2011; Lourenco et al., 2011). Hence, the result of this study supports the signalling hypothesis as firms' addition, and deletion news

carries important signals about their CSR performance as well as their capability, resources and expertise the firms hold to grow and invest in the future. Hence, the CSR index configuration is a vital source of important information for everyone.

The evidence that this study provides on the CSR index addition and deletion effect to firms performance is contributing to the existing literature by providing the evidence of long term performance effect of CSR. This study reported the positive excess operating performance when comparing CSR companies against the non-CSR matching portfolio. While this study also reported the significant improvement (deterioration) in the long term operating performance after addition (deletion) in/from the CSR index, existing empirical literature have not covered the impact of CSR index configuration on the long term operating performance. Also, this study evidenced a positive long-term stock return after the addition in the CSR index.

7.2 Implication of this study

The findings of this have important implications for the corporate managers, investors and the stakeholder's groups. On the corporate manager's perspective, it is essential for them to know the long-term impact of CSR on the firm's long-term performance, as a result, suggests that firm's consistent commitment to CSR improves stakeholders confidence and lead to the improved overall performance of the company in the long term. On the other hand, negative CSR performance could lead negative impact on their stakeholders and consequently to their financial performance as the investigation on the impact of firm's deletion from the CSR index evidenced the significant deterioration in operating performance. Hence manager should maintain their commitment towards the environment, society and the community so that they could be listed in the CSR index. On the investors' perspective, CSR index membership is an important source of companies performance. This study suggests that the CSR index addition and deletion not only signal firms CSR commitment but also convey the company's ability to generate future cash flow and their resources to pursue potential investment opportunities and growth. For investors, buying the stock around CSR index announcement, especially acquiring the stock of companies added in the index will benefit the investor in the long term as this study evidenced a positive and significant increment in the stock price in long-term. Finally, from the stakeholders' group perspective, CSR index is a vital source of evaluating the firms' commitment towards the environment, society and community as an addition in the CSR index reflect their positive approach and vice versa.

The result of this thesis evidenced that CSR is becoming the central attention of the stakeholders in recent years and companies who care about stakeholders, tend to enjoy better performance. Besides, CSR is also becoming the criteria for the investor's decision and investors value CSR companies higher in long-term. Stakeholders (including stockholders and investors) are closely monitoring the company's commitment towards environment, society and community. Also, they are demanding the greater transparency of quantifiable CSR initiatives and investment reports. Although the CSR is voluntary, the only possible way for stakeholders to get greater transparency and quantifiable CSR reports is to oblige companies to do so legally. The governments around the world, when formulating or revising the CSR related legislation, wish to take this into consideration of the stakeholders' information need of CSR. Further, governments around the world should encourage firms to invest in the environment, society and community to make a positive change in the world. Governments collaboration with private sectors (including businesses) can play an important in improving the CSR standard within companies and subsequently to improve impact on environment,

society and communities. The government contributions towards responding the global warming issues are also reflective to the primary rationale behind CSR (such as improving quality of life through improving environmental and social issues). In line with the finding of this study, government collaboration to encourage private sectors/companies to invest in CSR will promote not only government objectives but also help companies to grow in the future. Hence, governments around the world should introduce the legislation/policy that encourages companies to invest in the CSR and creates a win-win situation.

7.3 Future research avenues

Corporate social responsibility is a widely discussed topic by academics and practitioners over the years, and its financial impact has been examined extensively. In this thesis, I examined the impact of corporate social responsibility on firms financial performance using the social index (FTSE4Good Index and its ESG rating score) as a proxy. The result of this study are instinctive for academics and perhaps benefits the firms (corporate managers). Despite my best attempt to examine the economic return of the CSR initiative through multicountry setting, there are still some ways that the CSR-CFP relationship can be improved or extended. The first limitation, for example, in empirical chapter 4 and chapter 5 I only used firm's first-time addition (deletion) to (from) the FTSE4Good Global index as a proxy of CSR performance to examine the impact on both operating performance and market return. But, firms are continuously included in the CSR index over the years. Does the continuing or consistent inclusion in the CSR index lead to significant improvement in CFP for a longer period? It is interesting to examine the impact of continuous inclusion in CSR index on firms' financial performance.

In this study, I also focused on examining the heterogeneousness in the association between CSR and the firm's financial performance using the sample from the emerging market. Although I tried to cover a wider geographical area, the sample size is relatively small. Future research could expand to a wider area to extend the heterogeneity on CSR-CFP literature using developed countries, especially using larger industry-wise sample size. Also, this study identifies that the CSR-CFP relationship varies across industry sectors, and it is important to investigate why such a difference exists. Future studies in CSR-CFP relationship can be expanded by explaining why firms have such variability among industry sector and would help the corporate manager to design their CSR accordingly.

Despite my best attempt to improve the generalisability in an economic return of the CSR initiative through multi-country setting, there are still some ways that the CSR-CFP relationship can be improved or extended. Our study sample limited to 49 cross-country (26 developed and 23 emergings) with 1,281 observation for chapter four, 1,302 observation for chapter five, and 1,244 observations for chapter three. Future research could consider covering the broader geographical area and greater sample size to improve the generalisability in CSR-CFP literature especially focusing on the emerging market because of increased attraction of socially responsible and ethical fund in emerging markets. Studies focusing on the emerging market would benefit ethical manager to make their decision on fund allocation and investment.

Also, this study is only based on the FTSE4Good index series (and its ESG rating score). Although the FTSE4Good index series covers a wider geographical area, firms that are not associated with the FTSE4Good index series tend to be associated with other CSR related index. The CSR-CFP literature can be improved by analysing the sample from multiple index series and determine which index is more reliable and valued higher. Further, studies

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using CSR index rating as a proxy of CSR could examine the impact of different CSR themes and dimensions on the firm's financial return with a longer study period.

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