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UNIVERSITY OF PORTSMOUTH

Essays on Corporate Social Responsibility

By

Ruba Subhi Hamed

A thesis submitted in partial fulfilment of the requirements for the award of the degree of DOCTOR of PHILOSOPHY of the University of Portsmouth

January 2019

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"Whilst registered as a candidate for the above degree, I have not been registered for any other research award. The results and conclusions embodied in this thesis are the work of the named candidate and have not been submitted for any other academic award."

Declaration

I hereby declare that this thesis entitled *"The Impact of Mandated Corporate Social Responsibility on Disclosure Quality, Earnings Quality and Future Performance: UK Evidence"* is solely based on my research and has not been previously submitted for a degree in this or any other degree at the University of Portsmouth or any other institutions.

Ruba Hamed

Word Count (67,461)

25/01/2019

Dedication

I dedicate this thesis to the memory of my father who passed away but left this dream in my mind, to my beloved mum, who is always there believing in me, blessing me with her prayers, and waiting to witness my success, for the presence of my brothers, and my beloved sister. And most of all for my loving, supportive, encouraging, and patient husband 'Dr Basiem Al-Shattarat' whose forms the backbone and origin of happiness, and whose faithful support during the stages of this PhD is so appreciated, and to my little angle Layana.

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After an intensive period of around three years, today I am writing this note of thanks as a finishing touch to my thesis. Writing this thesis has had a big impact on me; it has been a period of intense learning, not only in the scientific arena but also on a personal level.

I want to reflect on the people who have supported and helped me throughout this journey. First and foremost, I offer my sincerest gratitude to my supervisors Prof Khaled Hussainey and Dr Imad Chbib, and especially, Professor Khaled Hussainey, who has supported me throughout my thesis with his patience and knowledge while allowing me the room to work in my way. One could not wish for a better or friendlier supervisor.

I also appreciate the advice of the committee members, Professor Aziz Jaafar (Bangor University) and Dr Lei Tao (Portsmouth University) for their critical comments, which enabled me to improve my thesis to the final proper shape.

I would like to convey my sincere thanks go to my sponsor Faculty of Business and Law (University of Portsmouth) for their financial support and help, which without it would not have been possible for me to pursue and to complete this PhD degree successfully.

Last but not least, all my thanks to my great family, friends, and everyone who supported me during this long and hard journey.

Abstract

The thesis aims to explore the UK regulation of Act 2006 (Strategic Report and Directors' Report) Regulations 2013 which mandates corporate social responsibility (CSR) reporting. To achieve this aim, the thesis reviewed relevant theories which link between CSR-related regulation and CSR reporting quality, earnings management, and future performance. These include legitimacy theory, agency theory, economic theory, signalling theory, stakeholder theory, and impression theory. The legitimacy theory explains the relationship between CSR-related regulation and CSR reporting quality. The impression theory and the opportunistic perspective of agency theory clarify the impact of mandating CSR on earnings management practices in the firms. Lastly, the theories of the neoclassical economic theory, agency theory, and stakeholder and signalling explicit the influence of mandating CSR reporting on the subsequent performance of the firms.

In addition, the thesis examines how mandatory reporting of CSR influences the quality of CSR reporting using Ordinary Least Squares (OLS) regression for the period 2009 to 2017. The empirical analysis utilises the FTSE All-share firms listed in the UK to find that mandatory CSR reporting has helped to enhance CSR reporting quality in the UK significantly. Also, three firm characteristics enhance the quality of CSR reporting in the context of mandatory CSR reporting; these are corporate governance (CG), international listing, and firms listed in sensitive industries. In an additional test, high and low CSR reporting score is used as a substitute dependent variable, I find that mandatory CSR reporting alters the behaviour of providers of low CSR quality, specifically those who are more mature and listed in multinational markets. Compared to providers of high-quality CSR reports, I find that large firms are impacted by the new regulation to improve their reporting quality.

The thesis also explores the impact of mandating corporate social responsibility reporting on earnings management (EM) practices through real earnings management (REM) and accrual earnings management (AEM). The empirical analysis uses the UK's FTSE All-Share data set for the period 2009 to 2017, employing OLS model. I document two main findings: first, I find a positive relationship between voluntary CSR reporting and REM, indicating that

managers will report CSR to cover their earnings manipulation practices. Second, I find that mandating CSR reporting has helped to restrict the opportunistic behaviour of REM in the UK. In an additional test I document that mandating CSR reporting restricts providers of both high and low CSR reporting quality in practising REM activities; specifically, it has a greater effect on firms reporting low CSR quality. However, the analysis finds no evidence that mandating CSR reporting has an impact on the AEM practice.

Finally, the thesis investigates the influence of mandating corporate social responsibility reporting on subsequent financial performance through accounting-based measures and market-based measures. It provides evidence about the negative impact of reporting CSR voluntarily on the firm's future performance due to the increased spending on and costs related to such activities. On the contrary, mandating CSR reporting enhances firms' future performance by signalling to the market about the firm's positive stance towards sustainability issues in the UK. In an additional test, I find that the impact of mandating CSR reporting appears clearly in the two-years-ahead and three-years-ahead.

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List of Abbreviations

AEM	Accruals Earnings Management
CED	Corporate Environmental Disclosure
CG	Corporate Governance
CLRSG	Company Law Review Steering Group
COGS	Cost Of Goods Sold
CSR	Corporate Social Responsibility
DTI	Department of Trade and Industry
EEA	European Economic Area
ESG	Environmental, Social, and Governmental
EU	European Union
GAAP	Generally Accepted Accounting Principles
GRI	Global Reporting Initiative
IPO	Initial Public Offering
LSE	London Stock Exchange
NGOs	Non-Governmental Organizations
OFR	Operating and Financial Review
OLS	Ordinary Least Squares
R&D	Research And Development Discretionary Expenses
REM	Real Earnings Management
SEC	Securities and Exchange Commission
SEO	Seasoned Equity Offering
SG&A	Selling, General and Administrative
SIC	Standard Industrial Classification
UK	United Kingdom
VIF	Variance Inflation Factor

CHAPTER ONE

Introduction

1.1 Research Background

The growing public focus on social and environmental sustainability issues has triggered a trend in forcing firms to report their corporate social responsibility (CSR) practices (Gray et al., 1995). This trend is of particular interest to external users such as stakeholders. Due to this importance, in July 2013, the UK parliament approved the latest provision for The Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013, to be applied for the financial year ‘ending on or after’ the end of September 2013. This government-launched action plan sets out guidance about the importance of integrating human rights and the environment into firms’ operations and business plans, and how to apply this. Specifically, this thesis examines the effect of mandating CSR reporting legalised in the UK in 2013 across four key issues.

First, following the prior studies, this thesis examines the link between CSR-related regulation and CSR reporting quality, earnings management, and future performance. A set of research hypotheses are developed using stakeholder, signalling, economic, agency, legitimacy, and impression theories (e.g., Ioannou and Serafeim, 2017; Chen et al., 2018). Based on the legitimacy theory, mandating CSR reporting increases stakeholder’s scrutiny of the firm’s practices. Thus, this feeling of threat would push firms to improve the quality of CSR reporting to legitimise themselves and avoid any governmental penalties (e.g., Ioannou and Serafeim, 2017).

Drawing on both impression theory and the opportunistic perspective of agency theory, in the context of mandating CSR reporting, managers who opportunistically manipulate earnings become less interested in using CSR reporting as a tactic to impress stakeholders and conceal their manipulation behaviour (e.g., Kim et al., 2012). Depending on the neoclassical economic, agency, stakeholder and signalling theories, two main points are clarified. The first aspect, which is supported by the neoclassical economic theory and agency theory, consists on engaging firms in CSR practices would harm firms’ profitability due to the increased spending on such activities (Grewal et al., 2018). The second aspect,

which is supported by stakeholder and signalling theories, argues that in the context of mandatory CSR reporting, practising CSR enhance the firm's future performance by signalling to the market about its positivity toward sustainability issues and the benefits related to that (Liu and Zhang, 2017).

Second, building on the legitimacy theory, I examine the impact of CSR-related regulation on the quality of CSR reporting. Specifically, I investigate the impact of firms' characteristics on the relationship of mandatory CSR and CSR reporting quality. Also, to compare the high-quality CSR reports, and the low-quality CSR reports in the context of mandatory CSR reporting. Recent studies of mandatory CSR reporting suggest that adopting regulations of CSR reporting has improved firms' CSR reporting specifically in South Africa, Denmark, Malaysia, and China (Ioannou and Serafeim, 2017). It is also found that mandatory CSR reporting regulations have changed firms' behaviour to increase their spending on CSR activities even though it is not a requirement of the regulation; this, in turn, generates positive support from external bodies (Chen et al., 2018).

Third, I explore how mandating CSR reporting influences earnings management behaviour compared to voluntary reporting before the new regulation was promulgated, based on the impression and agency theories. Then, a more detailed investigation is implemented to compare between the high-quality and low-quality CSR reports. The literature argues that practising CSR restricts the opportunistic behaviour of firms' managers towards earnings management (Alsaadi et al., 2017). On the other hand, the agency and impression theories argue that CSR reporting could be used as a strategic shield to cover up managers' earnings management practices; this takes place by practising and reporting CSR which helps to maintain the negative consequences of exercising earnings management activities (Watts and Zimmerman, 1978). Conversely, exercising earnings management activities motivates managers to practice more CSR even if they are not committed to sustainable issues (Petrovits, 2006; Prior et al., 2008).

Fourth, this thesis suggests that this change in regulation may impact the firm's performance; thus, building on economic, agency, signalling, and stakeholder theories, this thesis analyses the subsequent effect of mandatory CSR reporting on the firm's performance compared to voluntary CSR reporting. This argument is supported by the stakeholder theory which asserts that since stakeholders' satisfaction is the main factor for

firm success, then managers would not harm the firm in a way that is likely to displease stakeholders (e.g., Kim et al., 2012; Cho and Chun, 2016). Thus, to protect themselves from rebuke or possible loss of their jobs, managers have no choice but to enhance the firm's performance and satisfy the stakeholders through investing in CSR practices and reporting as an entrenchment tactic (Cespa and Cestone, 2007; Martı´nez-Ferrero et al., 2014). Moving beyond these theories, CSR reporting is built on the fact that the existence of additional factors might impact the relationship between CSR reporting quality and future performance, which worth further investigation in terms of mandatory CSR reporting to understand its influence (e.g., firm size, age, industry sensitivity). Prior literature indicates inconsistent findings regarding the relationship between mandatory CSR reporting and firm's performance. Some of the research streams support the positive impact of CSR reporting on future performance based on the accounting measures. Moreover, based on the market measures, the firm signals the market about its good CSR performance to legitimise itself (Liu and Zhang, 2017; Nekhili et al., 2017). Furthermore, in the context of mandating CSR reporting, an increase in the firms' CSR reporting post the new regulation is documented in parallel with the improvements in the future performance of those firms (Ioannou and Serafeim, 2017).

On the contrary, another steam of research documents a negative impact of reporting CSR on the firms' performance through underpricing firms in a sensitive industry after reporting CSR, or penalising them if they do not reveal information about their environmental impact (Matsumura et al., 2014). Moreover, a negative impact of enforcing CSR reporting on the firms' performance is documented, (Chen et al., 2018), which relate to the higher associated costs that firms will carry to apply this regulation (Grewal et al., 2018).

1.2 Research Aims and Objectives

Recent CSR literature suggests that firms utilise CSR reporting as a strategic shield to legitimise them-selves against stakeholders, to cover up their opportunistic practices (e.g., Ioannou and Serafeim, 2017; Chen et al., 2018), and to signal the market about their good CSR performance to enhance their future performance (Liu and Zhang, 2017; Nekhili et al., 2017).

Research focusing on CSR reporting is becoming more common as a mechanism to evaluate firms' role towards sustainability and to differentiate accurate and reliable information from less transparent reported information (Solomon, 2006). Therefore, the main aim of this thesis is to review CSR related literature and theories and to investigate the impact of mandated CSR reporting on earnings quality and future performance. To achieve this aim, the following objectives of this thesis are determined:

- To provide a systematic review of the CSR-related literature and theories.
- To investigate whether CSR-related regulation impacts the quality of CSR reporting in the UK firms and the role of firm characteristics in this relationship.
- To examine whether CSR-related regulation impacts earnings quality through real and accrual earnings management proxies.
- To examine whether CSR-related regulation impacts the subsequent performance through accounting-based and market-based measures.

1.3 Research Problem and Questions

Recently, few regions have mandated CSR reporting starting from 2008[1], and the UK is one of these regions that in 2013 requires firms to report about CSR practices. Accordingly, there is a lack of research about this important regulation in the context of the UK environment. This narrows our understanding of the consequences of mandating CSR reporting on the firms, regulators, and stakeholders. Thus, the thesis problem arises to understand the consequences of adopting this regulation in UK firms.

Based on the determined aim and objectives, and research problem, the following three research questions are stated:

Research question 1**:** Does CSR-related regulation affect the quality of CSR reporting in the UK FTSE All-share non-financial firms?

Research question 2**:** Does CSR-related regulation affect earnings management behaviour in the UK FTSE All-share non-financial firms?

[1] Few regions mandated CSR reporting such as Malaysia at 2007, Denmark and China at 2008, South Africa at 2010, and Hong Kong and India at 2012. In addition, Finland, and Sweden at 2012 (but restricted for specific firms).

***Research question 3*:** Does CSR-related regulation affect the subsequent performance of the UK FTSE All-share non-financial firms?

1.4 Research Importance

The findings of the thesis could have important implications for policy-makers and regulators who implement this new regulation or who are willing to do so. This is because it provides them with feedback to understand the effect of their decision in terms of their efforts to (i) improve communication between firms and stakeholders in the annual report (CSR section) (FASB 2013, FRC 2013), where firms with high CSR attract a more positive investors' assessment of their firms' future value. (ii) Increase firms' reporting quality of financial reporting by including more accurate information, specifically, if mandating CSR reporting impacts managers' opportunistic practices of earnings management. The findings will be useful to differentiate accurate information from less quality reported information. (iii) Enhance firms' environmental and social roles[2]. And (iv) make them more loyal to sustainability issues. Also, it is important to the stakeholders regarding firms' performance and the impact of such new regulations on their interests.

The findings also enhance the knowledge of shareholders and stakeholders about the quality of firms' CSR reporting and performance and the impact of such new regulations on their interests. This enhancement influences investors' beliefs and valuations, which in turn guide the firm's investment decisions, the firm's investment decisions affect the stock price and return, and the stock price feedback into the firm's investment choices (e.g., Gao, 2010). In other words, when investors decide where to invest their money, then they will direct employees to decide where to work, and as consequence policymakers and regulators will decide what to regulate, thus they finally will direct the consumers to decide what items to purchase (Eccles and Krzus 2010).

[2] Providing regulators and policymakers with feedback regarding the regulation they enforced is essential to enhance firms' role toward society and environment by improving their CSR practices (such as increasing the environmental projects). This improvement will reflect on their CSR reporting, which in turn will enhance firms' CSR assessment (net score) in general.

1.5 Research Motivation

This thesis sheds light on CSR reporting in the UK context. Exploring this context provides an interesting institutional setting for empirical analysis, for two main reasons. First, in the context of the UK environment, almost no evidence is found regarding the new regulation, where the UK is one of the few regions to have enforced the regulation requiring CSR reporting specifically in South Africa, Denmark, Malaysia, and China (Ioannou and Serafeim, 2017). This, therefore, narrows our understanding of the impact of mandating CSR reporting on the firms. However, the UK has a strong legal system and enforcement environment which differs than other countries that enforced this regulation which worth to investigate (e.g. Nobes and Parker, 2006).

Second, the advantages of producing CSR reports may vary across different environments and regions based on the country-specific context (e.g., Cahan et al., 2016); thus, the findings of this study offer details about a new important institutional environment. Specifically, CSR reporting considers as value-relevant by UK institutional investors, who collect private social information to assist them with investment decision-making (Solomon, 2006).

Third, the UK Act 2006 (regulation 2013) requirements different than other countries that mandate CSR reporting. For instance, in China, the Shenzhen Stock Exchange and Shanghai Stock Exchange require ESG disclosure for some specifically listed firms such as cross-listed firms and financial industry firms compared to LSE which mandates CSR reporting for all listed firms in the main market.

Fourth, the required information to be disclosed vary from region to another between requiring ESG reporting, or CSR reporting (which includes environmental and social information according to Act 2006 (regulation 2013)).

1.6 Research Contribution

The thesis makes several contributions to the accounting literature. First, it is a response to Christensen's (2016, p.138) call for papers, that "… future research could also examine how mandatory CSR reporting affects firms" to complement the literature that evinces the impact of voluntary CSR reporting. These findings add to a growing body of literature that

studies the consequences of mandating CSR reporting. One such research stream focused on firm value and market responses to disclosure (Grewal et al., 2015; Chen et al., 2018), whereas another focuses on disclosure activities and environmental impacts (Hung et al., 2015; Ioannou and Serefeim, 2017). This study provides a new research insight by examining the impact of mandating CSR reporting on the quality of CSR report itself which resulted from firms' sustainable practices as presented in the firms' financial reports measured after the regulation. This research stream needs to be explored in the first place due to its importance in enhancing our understanding about the firms' behaviour towards such regulations, this to be carried out before exploring the consequences of CSR-related regulation on other streams. In specific, this thesis investigates the firm characteristics, such as firm size, debt ratio, firm age, firm external auditors, firm cross-listing, firm growth, firm industry sensitivity classification, and firm profitability, and their impact on the CSR reporting quality in the context of the new regulation, which would restrict or enhance the impact of CSR-related regulation on CSR reporting quality. Studying these characteristics are limitedly applied in the literature, thus, investigate them will expand our understanding of the variation in the consequences of adopting the new regulation.

However, to date, only limited literature focuses on mandatory CSR reporting because only a few regions mandate this reporting type specifically in the context of the UK environment, almost no evidence is found regarding adopting the new regulation in the UK. Consequently, this narrows the understanding of the impact of these regulations on the quality of CSR reporting in general, and specifically in the UK environment which has different institutional characteristics and capital market aspects than other environments that mandate CSR reporting. Also, UK institutional investors collect private social information to assist them with investment decision-making. Thus, CSR reporting considers as value-relevant to them (Solomon, 2006).

Particularly, the Act 2006 (regulation 2013) requirements different than other countries that mandate CSR reporting. For instance, in China, the Shenzhen Stock Exchange and Shanghai Stock Exchange require ESG disclosure for some specifically listed firms such as cross-listed firms and financial industry firms compared to LSE which mandates CSR reporting for all listed firms in the main market. Also, the required information to be disclosed vary from region to another between requiring ESG reporting, or CSR reporting (which includes

environmental and social information according to Act 2006 (regulation 2013)). Accordingly, this study contributes to the literature by (i) investigating the consequences of adopting regulation of CSR reporting and the intentions behind the CSR practices in a firm, (ii) how it influences the harmful practice of earnings management in the firms, (iii) and to what extent does this regulation influence the subsequent financial performance of the firms. Consequently, improves stakeholder's decisions towards these firms in the UK environment and shrinks the lack of research in different environments which limits our understanding of the consequences of this regulation on the firms.

In more details, the findings provide unique evidence on the impact of mandated CSR reporting on earnings management, drawing on the impression theory and agency theory where managers are seen as the agents of all stakeholders seeking to impress stakeholders to conceal the harmful consequences of their earnings manipulation practices. Most of CSR literature employed the ethical perspective to explain sustainable practices in the firms, but employing the impression theory to explain the intention of managers behind practising CSR is limitedly used in the literature of CSR although it is explaining the logic behind the overinvestment in such practices.

While several studies endeavour to investigate the relationship between CSR reporting and earnings management (e.g., Chih et al., 2008; Liu et al., 2017), they present inconsistent evidence that restricts our understanding of this association. Specifically, almost no evidence provided in the literature regarding the mandatory CSR reporting impact on the earnings quality either in the UK or other countries adopts the same regulation. Accordingly, this study contributes to the literature through (i) introducing new evidence of research about the influence of mandating CSR reporting on utilising CSR practices as a shield to cover the consequences of the opportunistic behaviour of managers towards earnings management, (ii) sending a red flag to regulators and stakeholders to warn them about the fake over-investment in CSR practices which reflects negatively on the accuracy of their decisions, and the quality of the financial reporting.

Moreover, it is not clear how such regulation would affect the firms' subsequent performance. On the one hand, this regulation might increase firms' reporting transparency, enhance their environmental and social roles, and making them more loyal to sustainability issues. On the other hand, it might produce a negative effect from the externalities, where

the firm would incur new costs, or face more pressure than usual to increase CSR performance to be able to compete with other firms. Specifically, this would harm the original sustainable firms with superior CSR performance. To conclude, such regulations have both benefits and costs, but if the costs offset the potential benefits, this might harm the shareholder's interest (Ioannou and Serafeim, 2017). Thus, this study contributes and expands the literature by adding new evidence about the impact of mandating CSR reporting on the firms' financial performance. This evidence is important where firms with high CSR attract a more positive investors' assessment of their firms' future value.

1.7 Summary of the Key Findings

To examine whether CSR-related regulation influences the quality of CSR reporting, earnings management practices, and subsequent performance in UK firms, I implement a series of analysis tests. The results evince that firstly; mandatory CSR reporting enhances CSR reporting quality in the UK. They also show that the characteristics of CG, international listing, and firms listed in sensitive industries improve the impact of mandating CSR reporting on CSR reporting quality.

Then, using an additional test, I examine the mandatory CSR in the contexts of high and low CSR reporting quality. The results show that mandatory CSR reporting has an impact on the providers of low CSR quality, specifically those who are more mature and listed in multinational markets. Compared to providers of high-quality CSR reports, the thesis findings document that large firms are impacted more by the new regulation to improve their reporting quality.

Secondly, the findings provide evidence that managers will report CSR to cover their earnings manipulation practices; this is consistent with Prior et al. (2008) and Choi et al. (2013). Conversely, in the mandatory context of CSR reporting, earnings management activities decrease where managers lose their competitive advantage of using CSR voluntary reporting as a shield to cover earnings management practices, which is consistent with Hong and Andersen (2011), and Kim et al. (2012). Finally, using an additional test to compare high- and low-quality CSR reporting, I find that mandating CSR reporting restricts providers of both high and low CSR reporting quality from practising earnings management activities. Specifically, it has a stronger influence on firms reporting low CSR quality.

Thirdly, the results indicate that engaging in CSR practices would temporarily harm a firm's profitability due to the increased spending related to such activities, which is consistent with Liu and Zhang (2017) and Chen et al. (2018). On the other hand, the impact of mandating CSR reporting appears clearly in the two-year-ahead and three-years-ahead performance through both market- and accounting-based indicators. The positive impact could be explained by the notion that mandating CSR reporting results with a better performance in the future by signalling to the market about the firm's positivity concerning sustainability issues. However, the impact of CSR reporting is reflected clearly in the two-year-ahead and three-years-ahead performance of the firm, rather than on the one-year-ahead performance, where practising CSR is considered an action related to the long-term improvement of a firm's interest (Liu and Zhang, 2017). Therefore, the results contribute to the literature by providing direct and clear evidence of the influence of mandating CSR reporting on a firm's performance. Also, it extends the literature on the potential benefits of enforcing these regulations, and to what extent these regulations affect the firm's subsequent performance.

1.8 The Structure of the Thesis

This thesis is structured to include six chapters as follows. This chapter (chapter one) is the introduction. It sets out a brief contextual background and explores each study's related aims and objectives, and research related literature. It also discusses the research motivations. In brief, it outlines the adopted research design, followed by a summary of the findings and the research contribution. The rest of the thesis is as follows:

Chapter Two – Theoretical Framework: This chapter discusses the most common theories used in each empirical study such as economic theory, stakeholder theory, agency theory (e.g., signalling and opportunistic perspectives), and impression theory.

Chapter Three – The impact of regulation on CSR reporting quality: This chapter is devoted to examine the effect of CSR reporting regulation on the quality of CSR reporting in the UK.
Chapter Four – The impact of regulation on earnings management: This chapter presents the second empirical and examines the relationship between CSR reporting quality and earnings management practice in the UK.

Chapter Five – The impact of regulation on subsequent performance: This chapter contains the third empirical that examines the relationship between CSR reporting quality and future performance in the UK.

In chapters 3, 4, and 5; the study starts with a brief introduction followed by a discussion of the literature review and hypotheses development. The next section of each chapter highlights the research methods including the sample discretion, variables' definitions, and models employed. The subsequent section discusses the results of the data analysis. The final section concludes and summarises the main points in these chapters.

Chapter Six – Conclusion, future research, and limitations: This chapter complements the thesis by presenting a summary of all four studies that form the main body of this thesis, including a summary of findings, related discussion, the limitations and the suggested ideas for future research.

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CHAPTER TWO

Theoretical Framework

2.1 Introduction

Recently, increasing awareness of CSR importance has emerged through engaging more firms in such practices, in addition to the growing attention of public users of annual reports to these practices, which in turn increases the pressure and scrutiny they can impose on firms' sustainable behaviours (Ioannou and Serafeim, 2017). However, it has been found that CSR reporting practices are a communicating channel that firms use to present their ethical activities to stakeholders (Halme et al., 2014). This, in turn, enhances the firm's image and reputation (Branco and Rodrigues, 2006; Popoli 2011) and satisfies the increasing desire of investors' to receive more extensive information about firms' sustainable practices (Cohen et al., 2011).

As stakeholders become more sceptical about the firm's CSR activities and scrutinise them in more depth, managers also become more concerned of the message they may deliver by disclosing and reporting their CSR practices due to the positive and negative aspects related to this type of information. On the one hand, firms use this activity as a shield to legitimise themselves against society's risky reactions and enhance their reputation, which eventually builds a good reputation and brand name in the market (Branco et al., 2006; Porter and Kramer, 2011; 2006). Moreover, these activities would enhance investors' assessment of the future performance and value of these firms. Moreover, managers might intentionally be motivated to engage in CSR activities to cover their earnings management activities and protect themselves against stakeholders (Healy and Wahlen, 1999).

On the other hand, reporting of CSR activities could be a misleading tool for annual report readers if it is used opportunistically by managers (Verrecchia, 1983). Additionally, CSR practices incur extra costs for the firm to compete and distinguish itself from the rest of its competitors, or to announce some sensitive information to the public which might affect their compositeness and future performance (Ioannou and Serafeim, 2017). Accordingly, this would not motivate managers to practice and report about their CSR effectively.

Prior studies emphasise the link between CSR reporting and different theories such as stakeholder theory, signalling theory, economic theory, agency theory, legitimacy theory, and impression theory (Sun et al., 2010; Cheng at al., 2014; Christensen, 2016; Martı´nez-Ferrero et al., 2016; Ioannou and Serafeim, 2017; Chen et al., 2018).

Literature related to CSR reporting quality and new regulation, CSR reporting quality and earnings management, and CSR reporting quality and future performance will be discussed in chapters three, four, and five of this thesis. This chapter underpins the three empirical studies' theoretical framework. Section 2.2 presents the legitimacy theory related to the first empirical on the impact of new CSR reporting regulation on CSR reporting quality. Section 2.3 discusses the impression theory and agency theory as the basis of the second empirical on the impact of CSR reporting quality on earnings management. Section 2.4 presents the last empirical, on the impact of CSR reporting quality on subsequent performance which is based on economic theory, agency theory, stakeholder theory, and signalling theory.

2.2 Corporate Social Responsibility Reporting Conceptual Framework

2.2.1 CSR Definitions and Concerns Development

Howard Bowen (1953) is considered the 'father' of corporate social responsibility after his remarkable publication *Social Responsibilities of the Businessman*. He defines CSR thus:

> *"It refers to the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society" (p.6).*

During the 1970s to the 1990s, the CSR definitions increasingly developed from a simple perspective considering CSR as an important element to guide business future (Bowen, 1953; Davis, 1960; Carroll, 1977), to more complicated views combining the business ethics notion with the social expectation component (Zenisek, 1979; Carroll, 1983; 1994).
Carroll (1979:500) developed the following definition:

> *"The social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time."*

However, after the 1990s, the attempts to develop a CSR definition started to shift focus to the social construction of CSR in different contexts. Hence, Godfrey and Hatch (2007) agreed

with Moon (2002) who argued that there is no agreed definition of corporate social responsibility reporting, where CSR is more like "democracy and justice" definitions, which are disputed concept that always arguable. Thus, prior literature (e.g., Kok et al., 2001; Smith, 2002) has presented different definitions for CSR reporting, which raises concerns about what exactly can lead to a firm being considered socially responsible. As stated by the European Commission (2002, 347 final: 5),

> *"…CSR is a concept whereby companies integrate social and environmental concerns in their business operations and their interaction with their stakeholders on a voluntary basis."*

Also, Smith (2002:42) defined CSR reporting as

> *"..the integration of business and values whereby the interests of all stakeholders, including customers, employees, investors, and the environment are reflected in the organization's policies and actions."*

In other words, CSR reporting represents the responsibility of business towards the society and the rights of the society in business. As figure 2.1 illustrates, the evolution of CSR reporting concerns can be traced from the 1960s to date. For instance, since the 1960s the practice of CSR reporting was more talk than practice, where, for some types of business, CSR was limited to issues such as philanthropy and employee improvements (Herald, 1970). Carroll (2008) categorised this decade to be the start of the proliferation of "CSR Concepts and Practices"; it is the period which saw the emergence of a relationship between corporations and society.

During the 1970s, CSR practice started to increase, and business managers addressed CSR issues by adopting the traditional managerial methods (Carroll, 1977). Hence, in this decade CSR practice accelerated and began to cover more important concerns such as minorities' education and training, climate change, and environmental pollution issues.

Moving forward, during the 1980s, two new concepts related to CSR were developed – stakeholder theory and business ethics. Carroll (2008) documented that the public's consideration was directed to managerial and corporate mistakes and wrong-doing after witnessing a wide range of ethical scandals during this period.

The 1990s could be considered a complementary decade to the 1980s in developing the practice of CSR in the firms rather than contributing to the CSR concept itself. During this

period many different firms started to discuss the nature of their practice which enhanced their reputation for CSR practices (Carroll, 2008), and some related institutions emerged, such as Global Reporting Initiatives (GRI).

Throughout the decade of the 2000s, many concepts were endorsed under the CSR. These included adoption and reporting practices, the obligation to society, ethical behaviour and citizenship, improving the quality of life of the citizens, human rights, labour rights, protection of the environment, fight against corruption, and transparency and accountability (Katsoulakos et al., 2004). In this era, the CSR phenomenon expanded globally, and new foundations and regulations were introduced to support CSR and encourage firms to apply and follow the CSR concept in their corporations.

In the meantime, CSR reporting is considered one of the core issues in any firm. Recently, this type of practice has become mandatory in some countries (e.g., China, UK), which highlights the importance of disclosing CSR for firms. However, as Carroll (2008, p. 64) stated, "*CSR has an upbeat future in the global business arena. The pressures of global competition will continue to intensify, however, and this will dictate that the 'business case' for CSR will always be at the centre of attention.*"

2.2.2 Measures of Corporate Social Responsibility Reporting

In their attempts to establish a proper definition of CSR, researchers have explored a range of measures that may be useful in building an understanding for the CSR reporting practice and outcomes. Limited access to data is the main restriction researchers' encounter when measuring the different dimension of CSR. Therefore, in some of the literature, researchers adopt different methods and datasets to extract and measure CSR reporting (Buzby and Falk, 1978; Abbott and Monsen, 1979; Chih et al., 2008; Hung, 2011; Simnett et al., 2009; Webb et al., 2009; Dhaliwal et al., 2011; Hong and Andersen, 2011; O'Dwyer, 2011; Martı´nez-Ferrero et al., 2016; Gutsche et al., 2017).

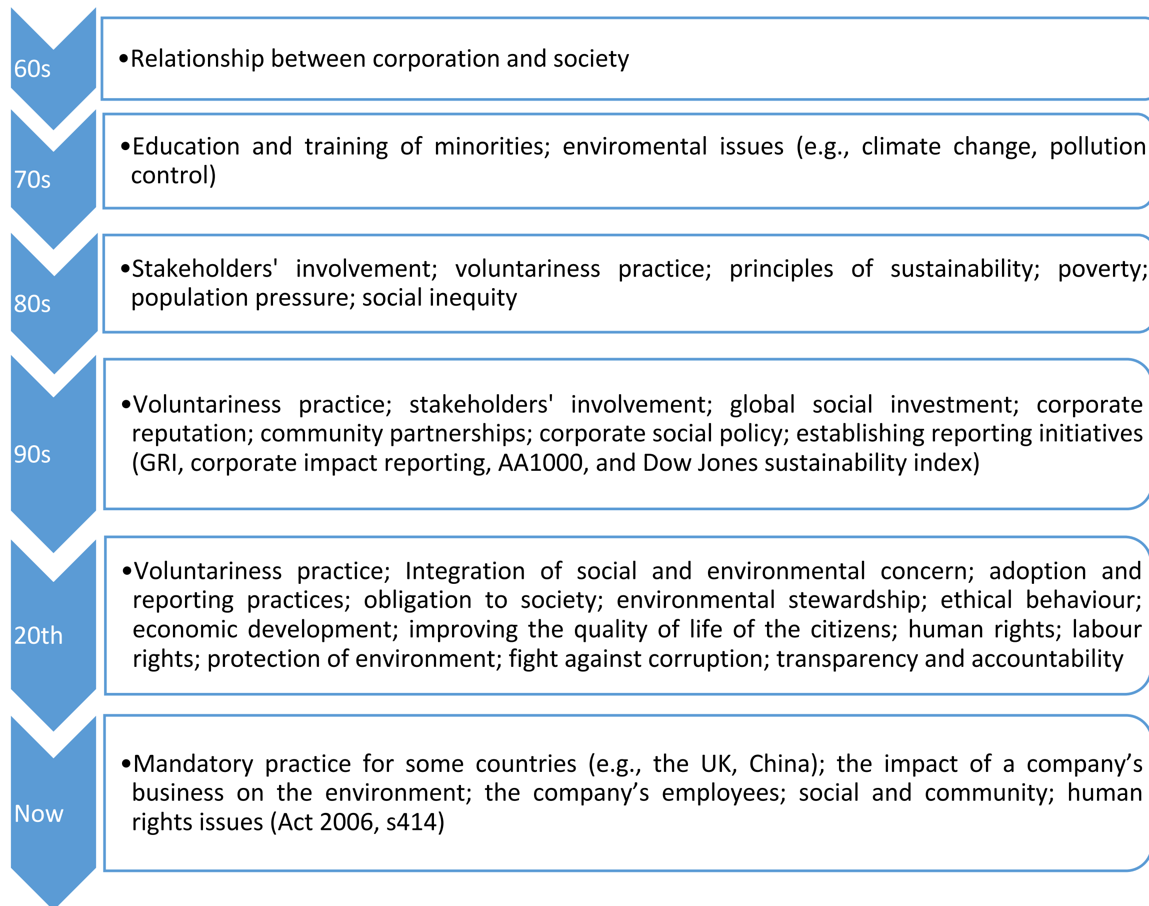

Figure 2.1:[3] Main CSR Concerns over Decades

For instance, some empirical researchers employ surveys to measure CSR components (Buzby and Falk, 1978; Hung, 2011). However, this method encounters two major difficulties, which are low survey return rates, and low participant consistency.

Other researchers adopt a content analysis of either 10-K firms' report elements (Abbott and Monsen, 1979; Webb et al., 2009), or a firm's stand-alone CSR report (Simnett et al., 2009; Dhaliwal et al., 2011) which can be collected from websites such as CorporateRegister.com and CSRwire.com. Both tools depend on the extensiveness of CSR reporting within the firm report and differ from one firm to another, which often raises the inconsistency problem across the sample in the study context. However, many researchers employ this method to measure CSR disclosure quantity using an index that consists of predefined categories (e.g., Newson and Deegan, 2002). Furthermore, previous researchers developed a quality index of CSR disclosure based on the suggested characteristics of

[3] Source: The researcher, based on reading Katsoulakos et al. (2004) and Carroll (2008).

accounting information in the conceptual framework of IFRS (e.g., Alotaibi and Hussainey, 2016).

O'Dwyer (2011) applies a different method in investigating CSR, where he reviews the sustainability reports of two Big4 professional services companies[4]. However, the results of this type of study – namely experimental or case study method – are often unable to be generalised and may be influenced by participant bias. Another common CSR reporting quality measure is the existence of the Global Reporting Initiative (GRI) framework in CSR reports. Muslu et al. (2017, p.2) state that "*GRI has pioneered a comprehensive CSR reporting framework that is used worldwide. GRI seeks to improve comparability, credibility and relevance of CSR information disclosed by different firms and thus to improve users' understanding of sustainability-related risks and opportunities*".

Archival researchers depend on several databases to investigate CSR reporting practice that is prepared by informal external parties. One of the most distinguished CSR databases employed in the accounting literature is *MSCI ESG STATS* (earlier known as KLD) (Prior et al., 2008; Hong and Andersen, 2011; Kim et al., 2012; Gao and Zhang, 2015). *MSCI* provides information about firms' CSR reporting transparency in the form of a score and presents strengths and concerns about the firm. This score is based on rating major specific categories such as corporate governance, environment, community, and others.

Moreover, the *Bloomberg* database is one of the recent methods that scholars use to measure CSR reporting quality. This database offers information about the firms' environmental, social, and governmental (ESG) practices in the form of net score ranging from 0 to 100, which reflects the extensiveness of firms' ESG reporting. Further, the ESG *Bloomberg* score includes the following headings for the environmental dimension; CO2 emissions, energy consumption, water use, and total waste. The social dimension items are number of employees, contract type and turnover, community service spending, and human rights. The other dimensions, which is corporate governance (CG), consists of information about board structure, board independence, board executives and diversity, board

[4] The Big Four (Big4) are the four biggest professional services networks in the world, offering audit, assurance services, taxation, management consulting, advisory, actuarial, corporate finance and legal services. They handle the vast majority of audits for public companies as well as many private companies.

committees, audit committee, and compensation committee, among others (*Bloomberg* database).

Other popular databases that offer researchers a wide range of information about CSR are *Thomson Reuters ESG Research Data* (previously known as ASSET4) (Martı´nez-Ferrero et al., 2016; Alsaadi et al., 2017); *the FTSE4 Global Index Series*; the *Financial Times Stock Exchange (FTSE)* including *FTSE4Good Index* (Chih et al., 2008; Sun et al., 2010); and the *Dow-Jones Sustainability* database (Chih et al., 2010; Rodriguez-Fernandez, 2016).

2.2.3 Corporate Social Responsibility Practice in the UK

For centuries, many firms have adopted CSR practice in many countries around the world. Currently, we can see a movement that is trying to promote CSR to become a common practice for the majority of the firms creating an impact that can make a difference to sustainability in the world in general, and the next generation's lives in the future.

2.2.3.1 Overview of CSR in the UK

Clark (1916, p.223) documented that "*if men are responsible for the known results of their actions, business responsibilities must include the known results of business dealings, whether these have been recognized by law or not*". This indicates the early stage when the attention is directed to CSR phenomenon The corporate social responsibility concept is neither new nor radical in the UK, where the main principle that the firm has responsibilities towards the society has a long historical background, an approach that may have started from the nineteenth century as 'business philanthropy' (Carroll, 2008).

Corporate social responsibility issues were first discussed in the context of the UK in the 1970s. This period is recognised for high unemployment rates, urban decay, and social distress (Moon, 2005). Although the 1980s can be distinguished by the emerging debate on industrial democracy and as a decade when the firms started to adopt CSR, this was abated under the prevailing political pressure. (Wedderburn, 1985).

In the 1990s, the perspective of CSR extended to an ultimate and persisting concern for socially responsible employee relations, products, and processes instead of being limited to community involvement (Moon, 2005). This transformation, as Carroll (2008) states, "*presents CSR as a part of societal governance in the UK*", entrenched in a system meant to be a directory for society.

Awareness about CSR in the UK grew in the 2000s when firms witnessed an increase in the number of CSR employees and CSR reporting, employing standards and codes as a part of firms' systems. The decade also witnessed enhanced relationships between firms' and CSR organisations (public, governmental, and educational), the emergence of CSR consultancy institutions, and finally the institutionalisation of CSR under the corporate management to become the initial part of an annual report in the UK (Moon, 2005; Carroll, 2008). This movement put the UK on a parallel track with other developed countries in the world, where UK firms are now required to report environmental, social, and governmental information to the stakeholders.

2.2.4 Development of CSR Regulations in the UK

Normally, CSR practice is linked with the "voluntary" perspective which is thought to broaden the scope of a firm's flexibility and creativity reporting practice rather than produce "defensive reports". Recently, policymakers have followed a new direction to reinforce (mandate) this practice within a proper and clear legal framework. In this way, stakeholders can recognise a firm's CSR reporting as a core part of the legal framework and sustainable development (Department of Trade and Industry, 2004a).

2.2.4.1 Voluntary CSR Reporting Regulations

In 1998, the Department of Trade and Industry (DTI) revealed that company law was to be reviewed by the independent Company Law Review Steering Group (CLRSG). The review sought to develop a framework for business activities in a simple and effective relevant cost. Accordingly, it concludes that the company law's main focus is to develop strong financial reporting systems that rely on historical quantitative information.

On the other hand, its critic ignored the fact that firms mostly depend on their intangible assets (such as employees' skills and knowledge, reputation, business relationships, strategies and risk plans, and environmental and social impact) which are considered as a qualitative type of important information to be announced for shareholders. As a result, in 2001, the CLRSG suggested that big size firms need to report information about the latter points in their annual reports using the Operating and Financial Review (OFR) report. It was agreed that this reporting should be voluntary for flexibility and innovation issues (Company Law Review Steering Group, 2001).

In 2002, the concept of corporate social responsibility was reflected and discussed by the DTI; a proposal was presented about requiring the directors to include an assessment for firms' relationship with employees, customers and suppliers, in addition to their environmental and social impacts, which was to be directed principally to shareholders rather than stakeholders.

Later, 2005 witnessed the approval of the OFR to be followed by repealing and additional amendments among the following years until the completed version came into force in 2009. These amendments and provisions affected the beneficiaries of this reporting and the requirements of the disclosure[5] (Companies Act 1985, (Operating and Financial Review and Directors' Report) Regulations 2005); The Companies Act 1985 (Operating and Financial Review) (Repeal) Regulations 2005; and The Companies Act 2006 (Accounts and Reports) Regulations 2008 (Williamson and Lynch-Wood, 2008; Rowbottom and Schroeder, 2014).

After repealing OFR, the Business Review Report (under the Operating and Financial Review and Directors' Report) passed through two stages – Old Business Review and New Business review. The first stage started with the repealing of the OFR in 2005 which required directors of large-sized firms to prepare a director's report including the business review. Under this section two main points should be clarified:

> *"(a) analysis using financial key performance indicators, and (b) where appropriate, analysis using other key performance indicators, including information relating to environmental matters and employee matters" (The Companies Act 1985 (Operating and Financial Review) (Repeal) Regulations 2005).*

The second stage of amendments was applied through The Companies Act 2006 which required (voluntary) the directors to reveal information about:

> *"(a) environmental matters (including the impact of the company's business on the environment), (b) the company's employees, and (c) social and community issues, including information about any policies of the company in relation to those matters and the effectiveness of those policies" (Companies Act 2006 (c. 46) Part 15, Accounts and reports, Chapter 5, Directors' report).*

Table 2.1 summarises the disclosure requirements across the three stages mentioned above.

[5] For more readings see The Companies Act 1985 (Operating and Financial Review) (Repeal) Regulations 2005 (the explanatory notes section).

Table 2.1

Voluntary CSR Reporting Development Stages.

Who Should Disclose	**What Should be Disclosed**
Stage 1: **OFR** ((**4/2005_** The Companies Act 1985 (Operating and Financial Review and Directors' Report etc.) Regulations 2005)) Quoted firms[6] must produce OFR	To the extent necessary to comply with the general requirements of the OFR, the review must include: a) information about environmental matters (including the impact of the company on the environment); b) information about the company's employees; c) information about social and community issues; d) information about the policies of the company in each of these areas; e) information about the extent to which those policies have been successfully implemented; f) analysis using financial and, where appropriate, other key performance indicators, including information relating to environmental matters and employee matters g) If the review does not contain this information and analysis, it must state which kinds of information and analysis it does not contain
Stage 2: **Old Business Review** ((**11/2005_** The Companies Act 1985 (Operating and Financial Review) (Repeal) Regulations 2005)) Directors of companies must produce directors' report containing a business review Except for: -Medium-sized companies do not have to provide CSR type information in the business review -Small companies do not have to produce a business review	To the extent necessary for an understanding of the development, performance or position of the company, the review must include: where appropriate, analysis using key performance indicators, including information relating to environmental and employee matters.
Stage 3: **New Business Review** ((**11/2006_**Companies Act 2006 (c. 46) Part 15, Accounts and reports, Chapter 5, Directors' report) Directors must prepare a directors' report -Unless the company is a small company, the directors' report must contain a business review	To the extent necessary for an understanding of the development, performance or position of the company, the review must include information about: -environmental matters (including the impact on the environment), employees, social and community issues -information about any policies in relation to the above and the effectiveness of these policies -If the review does not contain information on these issues it must state which kinds of information it does not

[6] A Quoted firm is a firm whose equity share capital has been included in the official list; or is officially listed in a European Economic Area (EEA) State; or is accepted to dealing on either the New York Stock Exchange or NASDAQ (http://www.legislation.gov.uk/ukpga/2006/46/part/15/chapter/1/crossheading/quoted-and-unquoted-companies).

-Medium-sized companies do not need to provide CSR-type information	contain Large companies: To the extent necessary for an understanding of the development, performance or position of the company, the review must include, where appropriate, analysis using key performance indicators including information relating to environmental and employee matters

Source: Companies Act 1985, (Operating and Financial Review and Directors' Report) Regulations 2005); The Companies Act 1985 (Operating and Financial Review) (Repeal) Regulations 2005; The Companies Act 2006 (Accounts and Reports) Regulations 2008.

2.2.4.2 Mandatory CSR Reporting Regulation

The Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013 is the latest provision for The Companies Act 2006 which in July 2013, was approved by the Parliament for application to the financial year 'ending on or after' the end of September 2013. This government-launched action plan set out guidance about the importance of integrating human rights and environment into firms' operations and business plans, and how to apply that. Under this vision, however, firms face growing pressure to reveal information about their environmental, social, and governmental (ESG) business impact to the public for reputational and legal issues, in addition to stakeholder's pressure.

This provision is in line with the business review reporting requirements (which replaced the OFR as discussed previously) that necessitates quoted firms (large- and medium-sized firms and groups) to disclose information about business environmental impact, and firm's policies. Following the new requirements, this information needs to be included under the strategic report instead of in the business review[7], in addition to new details about gender diversity and human rights issues, and the firm strategy business model (The Companies Act 2006/414c)[8].

Another section was introduced to the new provision and applied for quoted firms (large- and medium-sized firms and groups) namely (Directors' report – Greenhouse gas emission).

[7] The business review report (which was a part of the directors' report) is now separated into two sections: the strategic report (which includes the original disclosure from the business review in addition to new requirements), and the directors' report (which discusses the greenhouse gas emissions disclosure requirements).

[8] The Companies Act 2006/414c refers to The Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013, section 414c.

This section requires disclosure about a firm's annual quantity of emission[9]. Following the strategic report and directors' report requirements of 2013, the main changes arising from new regulations were:

1. Replace the duty of producing 'business review report' with a duty of producing strategic reports (excludes small companies);
2. Include an explanation of "the main trends and factors likely to affect the future development, performance and position of the company's business" as it used to act under business review report (The Companies Act 2006/414c);
3. Report an "analysis using key performance indicators, including information relating to environmental matters and employee matters" (The Companies Act 2006/414c), as it used to act under the business review report.
4. As it used to act under the business review report (for quoted firms other than those subject to the small firms' regime), report information about:
    4.1 "Environmental matters (including the impact of the company's business on the environment),
    4.2 The company's employees, and
    4.3 Social, community and human rights issues, including information about any policies of the company in relation to those matters and the effectiveness of those policies" (The Companies Act 2006/414c).
5. Disclose information about employees' gender diversity.
6. Disclose information about 'greenhouse gas emissions' (GHG) (for quoted firms, large- and medium-sized firms and groups).

Table 2.2 summarises the above-mentioned new regulations as the BDO (2013 p.4) presents in their strategic report (practical guide) guidelines.

Along with these new regulations, the risk of non-compliance increased. However, The Companies Act 2006/414c clarified that failing to report on the environmental, social, and

[9] ICAEW (2015, p.13) represents the exact requirements for greenhouse gas emission as "the annual quantity of emissions, in tonnes of carbon dioxide equivalent, produced by 'activities for which that company is responsible', including fuel use and those resulting from the purchase of 'electricity, heat, steam or cooling' by the company; and appropriate 'intensity ratios' which compare the company's emissions data with an appropriate metric such as sales revenues, to allow comparisons of performance over time and with other similar organisations."

employee matters in the strategic report may incur a risk of penalty for the firm. The Companies Act 2006/414c mentions:

> *"…the strategic report must be approved by the board of directors and signed on behalf of the board by a director or the secretary of the company". "If a strategic report is approved that does not comply with the requirements of this Act, every director of the company who" "knew that it did not comply, or was reckless as to whether it complied", and "failed to take reasonable steps to secure compliance with those requirements or, as the case may be, to prevent the report from being approved", " A person guilty of an offence under this section is liable" "on conviction on indictment, to a fine"; "on summary conviction, to a fine not exceeding the statutory maximum".*

However, the UK government has taken real steps regarding ESG reporting, that compel the firms to comply with this regulation rather than only explaining why they are not disclosing it. These legalisations accompany with stakeholders' increased desire to receive extensive information about firms' ESG practices.

Table 2.2

New Requirements of the Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013

Subject	Mandatory For	Activity	Disclosure	Linkage Examples
Environmental matters	Quoted companies only	-Consider and draft a description of the impact of the company's business on the environment -Identify the policies the business has in respect of environmental matters -Assess the effectiveness of those policies	-The strategic report should, to the extent necessary for an understanding of the development, performance or position of the company's business, include information about environmental matters -Information should include the company's policies and the effectiveness of those policies	-How have environmental matters affected or manifested themselves in the company's strategies? -To which part of the business model do the environmental matters relate? -Which (key performance indicator's (KPIs) are affected by environmental matters? -How have environmental matters affected or might affect performance?
Employees	Quoted companies only	-Review and draft a description of the impact of the company's business on employees? -Identify the policies the business has in respect of its employees -Assess the	-The strategic report should, to the extent necessary for an understanding of the development, performance or position of the company's business, include information on the company's employees -Information should include	-How have employee matters affected or manifested themselves in the company's strategies? -To which part of the business model do the employee matters relate?

		effectiveness of those policies	the company's policies and the effectiveness of those policies	-Which KPIs are affected by the employee matters? -How have employee matters affected performance or how might they affect it?
Social, community and human rights issues	Quoted companies only	-Review and draft a description of the impact of the company's business on society, community and human rights -Identify the policies the business has in respect of social, community and human rights issues -Assess the effectiveness of those policies	-The strategic report should, to the extent necessary for an understanding of the development, performance or position of the company's business, include information about social, community and human rights issues -Information should include the company's policies and the effectiveness of those policies	-How have social, community and human rights issues affected or manifested themselves in the company's strategies? -To which part of the business model do the social, community and human rights issues related? -Which KPIs are affected by the social, community and human rights issues? -How have social, community and human rights issues affected performance or how might they affect it?

Source: BDO, 2013, the strategic report - a practical guide, page 4.

2.3 Theories Related to the First Empirical: CSR Reporting Regulation and CSR Reporting Quality

2.3.1 Legitimacy Theory

One of the most commonly used theories in CSR reporting is the legitimacy theory (Perks et al., 2013). As defined by Lindblom (1994: p. 2), legitimacy theory is

> *"…a condition or status which exists when entities value system is congruent with the value system of a larger social system of which the entity is a part. When a disparity, actual or potential, exists between the two value systems, there is a threat to the entities legitimacy."*

According to this definition, legitimacy theory assumes that firms do their best to fit their norms and values with the society they are working with, particularly when they are in an expanded social system (Brown and Deegan, 1998; Perks et al., 2013). Deegan (2002) argues that the main purpose behind following the social norms is to ensure that their business activities and practices are realised as being 'legitimate'. Thus, when firms make sure that they are running their activities within the accepted norms of the community, their aim is to be noticed by stakeholders and satisfy them as a reaction to the negative response they may

face if their values do not match with the values of the community concerned. In turn, this reflected negatively on their business that is mainly dependent on how satisfied society is in the first place (Lindblom, 1994).

The legitimacy theory assumes that the firm operates via a social contract with the community, considering legitimacy as the survival source of the firms (Tewari and Dave, 2012). Accordingly, when firms anticipate a legitimacy threat, they act more responsibly through enhancing their voluntary reporting (Perks et al., 2013). However, firms will use various strategies to enhance and influence their voluntary reporting; for instance, they will provide information about their intention to enhance their performance, or will distract stakeholders' attention from problems or negative issues by focusing on unrelated positive activities (Lindblom, 1994). However, these strategies might vary between firms, societies, and different countries (Deegan, 2002).

2.3.1.1 Types of Legitimacy Theory

Legitimacy theory offers three broad types identified by Suchman (1995):

1- Pragmatic legitimacy: develops from a firms' ability to accomplish real results in its immediate environment (Aldrich and Ruef, 2006). The pragmatic legitimacy which is based upon the self-interests of the firm's stockholders is further classified into three sub-types:
    a- Exchange legitimacy: this type supports the firm policies which in turn enrich the constituencies.
    b- Influence legitimacy: take into account stockholders' belief that the firm will react to their benefit and is not concerned about the impact on the firm.
    c- Dispositional legitimacy: this type, conversely, deliberates the support of the constituencies that a firm receives resulting from believing that it has good characteristics like being trustworthy, decent and wise.

However, concerning Aldrich and Ruef (2006), this type of legitimacy theory is the least common type, and it has been rejected as being a description of a firm's degree of learning rather than being one of legitimacy.

2- Moral legitimacy: is described as when the firms' practise are assessed by stockholders to be moral; that is, the firm is complying with the economic and

political system regulations for moral intentions. This type is classified into four sub-types:

a- Consequential legitimacy: this type considers a firm's success based on certain norms of that firm.
b- Procedural legitimacy: this type is achieved by firms when they commit to socially admitted procedures.
c- Structural legitimacy: firms are considered legitimate due to their organisational features which permit them to perform some types of work exclusively.
d- Personal legitimacy: this type relates to the personal characteristics of firm leadership.

3- Cognitive legitimacy; incurred when firms follow targets that are deemed suitable and preferable by the society (Brinkerhoff, 2005).

2.3.1.2 Legitimacy Theory and CSR Reporting Quality

Perrow (1970) asserts that legitimacy theory focuses on the extent to which a firm's actions are desirable or appropriate within the context (such as norms, beliefs, and values) of some social systems.[10] This context posits that CSR reporting is an approach to legitimise a firm's continued existence to the society (Gray et al., 1995; Hooghiemstra, 2000). However, Jennings and Zandbergen (1995) provide evidence that annual report users such as stakeholders, and social pressure, would impact the level at which sustainable development activities are prevalent among firms. Also, previous literature evinces increased use of voluntary CSR reporting by managers as a tactic to protect and manage their legitimacy (Hutchings and Taylor, 2000; Woodward et al., 2001).

Altogether, these discussions imply that CSR reporting can be used by managers as a strategy to shield themselves by impressing stakeholders with the fact that the firms are performing socially to gain approval of their objectives and other benefits, which eventually assures their continued existence (Neu et al., 1998).

However, in the context of mandating CSR reporting, firms are required to report about their CSR activities which increase stakeholder's scrutiny of the firm's practices. Thus, this

[10] Dowling and Pfeffer (1975, p. 125) define organisational legitimacy as "the outcome of, on the one hand, the process of legitimation enacted by the focal organization, and on the other, the actions affecting relevant norms and values taken by other groups and organizations. Social norms and values are not immutable."

feeling of threat may push firms to enhance their CSR performance to legitimise themselves and avoid any governmental penalties. Consequently, this study expects the CSR-related regulation to improve the quality of CSR reporting by legitimacy theory.

2.4 Theories Related to the Second Empirical: Regulation of CSR Reporting and Earnings Management

2.4.1 Impression Theory

Impression theory is considered as a part of legitimacy theory (Perks et al., 2013). As discussed in section 2.2.1 legitimacy theory assumes that a firm has a social contract with the community to operate, considering legitimacy as the survival source of the firms (Tewari and Dave, 2012). Accordingly, impression theory, as Goffman (1959) discusses, focuses on how people in situations present themselves and how a person directs the impression others build about him. In business, this theory is reflected as managing impressions; this means, generally, that a manager is trying to direct the impression that a significant stakeholder has of him or her (Sornes et al., 2010).

2.4.1.1 Impression Theory Perspectives

As clarified later, impression management in business is about the efforts of someone to direct and influence his or her image with significant stakeholders. The ethics behind this theory have been argued under two types (Sornes et al., 2010):

1- Effective self-revelation; from this viewpoint, impression management would adopt the strategy of being transparent – that is, a type of openness. This view is considered a useful adaptation due to its ability to produce valuable transparent information for the end users, which is easier to provide than the manipulated information.

2- Cynical manipulation: this view suggests that impression management aims to increase the interests of the manipulator by influencing and changing others' perceptions and responses using tactics of abuse, deception, or deviousness (Leonhardt, 2003).

Nowadays, firms use the second form of 'impression management' (cynical manipulation) to present themselves indirectly in a better light, which influences the stakeholders'

impression of the firm's performance. In other words, the firms manage the content of information in their reports with the intention of "distorting readers' perceptions of corporate achievements" (Godfrey et al., 2003, p. 96). However, the descriptive section of the annual reports (including CSR reporting) is now longer, more complex, and more important compared to previous years. As a result, a firm's chances to impress stakeholders are increased by adding more detailed information about the firm in the best possible light, thus getting the desired reaction from the stakeholders.

2.4.2 Agency Theory – Opportunistic Perspective

As Jensen and Meckling (1976) discussed that agency theory demonstrates the relationship between shareholders (principals) and managers (agents) is affected by the structure of the finance in the firm, in addition to the compensation structure of the executives; this results in an interesting conflict between the principals and the agents. Due to the fact that managers have broader access to the firms' information compared to the owners and stakeholders (information asymmetry problem), this motivates managers' interests to maximise their wealth related to position, compensation and job security, particularly in that stakeholders are not able to control and monitor the managers' activities (Weir et al., 2002).

The risk behind this problem is highlighted by Fama and Jensen (1983), where managers' opportunistic behaviour would direct their attention to maximising their wealth instead of improving the firm's future and performance, which raises the importance of controlling the agency problem where it can be regarded as an important survival aspect for a firm.

The work of Watts and Zimmerman (1978) is considered as the first study to introduce the opportunism approach to clarify the discretionary behaviour of managers towards reported earnings. The opportunistic behaviour of managers can be seen clearly through manipulating earnings regarding maximising their wealth and interests. Consequently, earnings manipulation would mislead and conceal a firm's financial performance by reporting unreliable information, which in turn would impact stakeholders' decisions (Schipper, 1989; Healy and Wahlen, 1999).

The agency theory argues that managerial benefit rather than stakeholder and shareholder benefits would result from increasing financial spending on other voluntary activities such as

CSR reporting (Brammer and Millington, 2008). Such activities of voluntary CSR reporting can be used to gain support from stakeholders and, consequently, provides a prospect for entrenchment to those managers who exercise earnings management practices. Therefore, when managers deceive stakeholders about the firm's actual financial status while pursuing their interests and benefits, they try to validate such act by seeking the stakeholders' participation in such activities. They achieve this by enhancing CSR activities and reporting in the firm to attract and satisfy stakeholders' interests. Accordingly, this study argues that managers who are motivated to manage earnings will boost the firm's voluntary CSR activities and reporting.

Taken together, drawing on both impression theory and the opportunistic perspective of agency theory, managers who manipulate earnings are more interested in reporting voluntary firm CSR activities as a sugar cover for their opportunistic behaviour. Thus, this practice is considered as a chance for the managers to impress the stakeholders with their performance, and to cover their poor performance and opportunistic behaviour while enhancing their interests.

On the other hand, in the context of mandating CSR reporting, managers who manipulate earnings become less interested in using CSR reporting as a tool to cover their opportunistic behaviour after mandate CSR reporting. The explanation for this is based on both impression and opportunistic theories, where transferring CSR reporting from being an extra voluntary task distinguishes managers from other competitors who do not report CSR voluntarily, to a mandatory task that all firms' managers are required to deliver on (Hong and Andersen, 2011; Kim et al., 2012). Specifically, managers lose the chance to impress the stakeholders concerning their earnings performance using CSR reporting after being mandated.

Finally, this empirical are developed over the previous discussion of both theories. Thus, this study expecting managers who manipulate earnings to be more interested in reporting CSR voluntarily as a sugar cover for their opportunistic behaviour, to impress, and to redirect stakeholders' attention to other practices the managers would prefer that they focused on it. Conversely, after mandating CSR reporting the managers might lose the advantages mentioned above of reporting CSR voluntarily; hence, they might lose interest in utilising

CSR reporting to cover their manipulation activities. Drawing on these theories, these study hypotheses are developed as discussed in chapter four, section 4.2.5.

2.5 Theories Related to the Third Empirical: Regulation of CSR Reporting Quality and Subsequent Performance

2.5.1 Economic Theory and Agency Theory

The economic-neoclassical theory essentially is interested in shareholder wealth maximisation, indicating that CSR activities which increase the value of the firm should be considered. Other CSR practices which a firm can be engaged in will be accepted if they are required to comply with them by regulation or if it is maximising the shareholders' wealth. This perspective is found under the economic theory.

The primary representatives of this perspective are Milton and Rose Friedman. They state that,

> *"In such an economy, there is one and only one social responsibility of business to use resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competitions, without deception or fraud" (Friedman and Friedman, 1962, p.133).*

Moreover, Friedman (1970) argues that wealth maximisation is the only responsibility of any business towards the society, within the restrictions of the country's legal framework and its ethical tradition.

Generally, this perspective is in line with agency theory. Specifically, when the maximisation of shareholders' interests is the primary aim of the firm, then the managers (the agents) are motivated and responsible for boosting the owners' (the principals) profits, which is consistent with their economic interests as well (Jensen and Meckling, 1976).

The efficiency of this view is supported by the notion that creating and maximising wealth would not only increase the shareholder's profit but also improve the economic status of the country. Accordingly, the best conditions to boost the wealth could be created if the firm's priorities are on being profitable, while it is competing in a free market (Jensen, 2000). The later conditions could be a privilege for the society where it offers motivation for innovation; decreases the prices and related costs; increases the economic added value of the produced items, and allocates capital for future projects. In parallel with that, according

to the tax system, these firms could donate part of their tax for the good of society. With regards to the negative impact of the firms on the society, this can be controlled by governmental regulations.

A more recent view regarding maximising the shareholder's wealth combines this desire with the benefits of becoming engaged in CSR practices which, as Drucker (1984) argues, means that the profitability and social responsibility could be compatible if the managers could convert the social responsibility problems into economic opportunities.

Altogether, the relation between CSR and firm financial performance discussed through the negative perspective of neoclassical economic theory suggests that CSR practices add unnecessary additional costs to a firm, which is a disadvantage against the competitors (Friedman, 1970; McWilliams and Siegel, 1997; Jensen, 2002). Agency theory supports this by manifesting that financial resources spent on CSR practices would produce managerial benefits instead of financially benefiting the shareholders of the firm (Brammer and Millington, 2008).

2.5.2 Stakeholder Theory

2.5.2.1 Who is the Stakeholder?

In the first place, it is important to address the meaning of the term 'stakeholder' before referring to stakeholder theory. The term 'stakeholder' is defined as "those groups without whose support the organisation would cease to exist" (Freeman, 2010, p. 31). Hence, stakeholders are individuals that have a stake in the firms and are affected by their practices and responses. However, Friedman and Miles (2006) indicate that the term 'stakeholder' is generated to denote that others have a 'stake' in making managerial decisions in the firm. Generally, the list of stakeholders consists mainly of society, shareowners, suppliers, employees, customers, and lenders. Agle and Mitchell (2008) provide a classification of stakeholders depending on their main characteristics – these are power, legitimacy, and urgency. The *power* aspect appears clearly through the ability of the stakeholder to implement unexpected decisions (Kamann, 2007) and could be applicable only if the stakeholder were supported politically and socially to withdraw the firm's resources. Regarding *legitimacy* and *urgency*, both are related to each other. Under the legitimacy characteristic, stakeholder demands are always convenient (Friedman and Miles, 2006);

thus, they can increase the pressure on the firms regarding their urgent demands, particularly if their claims are classified on a time-sensitive basis and the perceived importance of these claims (Mainardes et al., 2012).

2.5.2.2 Stakeholder Theory

Stakeholder theory underlines that a firm can be presented as a set of interdependent relationships through stakeholders, which includes not only shareholders but all groups or individuals who can impact or be influenced by the firm's practices (Freeman, 1984). This perspective asserts that stakeholders' satisfaction is the main factor for firm success.

Stakeholder theory is presented in various types - these are normative stakeholder theory, instrumental stakeholder theory, and descriptive stakeholder theory (Crane and Marten, 2010). *Descriptive stakeholder* theory aims to recognise how firms deal with stakeholders' interests and how they consider these in their operations. Under this type, the firm is viewed as a set of interests which at times can be competitive and at other times cooperative. *Instrumental stakeholder* theory indicates that managers should consider and direct their attention to stakeholders' relationships to maximise shareholders' value. It also helps to understand whether considering the stakeholders' interests would maximise shareholders' wealth or not (Donaldson and Preston, 1995), which links CSR performance and firm financial performance. *Normative stakeholder* theory focuses on determining philosophical or ethical guidelines related to the practices or the management of firms to justify the extent to which complying with stakeholders' interests is accepted.

In the 1990s the main focus of stakeholder theory was on CSR phenomena. Thus, this theory calls for the important need to balance between shareholders' and stakeholder's interests in the firms, arguing that firms should be accountable for both parties equally (Heath and Norman, 2004). Overall, this theory is considered the best framework to introduce and explain the CSR issues, particularly the instrumental stakeholder theory type which reflects CSR issues on the firm's financial performance (Schwartz and Carroll, 2008).

Moreover, this theory introduces two incentive levels to firms to reveal information about their CSR practices – namely, ethical and managerial motives (Deegan, 2013). The *managerial motive* level indicates that the firm will react to stakeholders who have either economic influence on the firm's decisions (O'Dwyer, 2003) or those interested parties

regarding the firm's practices which can exert influence. The *ethical* level implies that all stakeholders should know about the social and environmental impacts of the firm's business (Deegan, 2013).

Accordingly, CSR is a key factor to gain stakeholders' satisfaction and support. On the other hand, such type of extensive reporting would provide critical information to meet stakeholders' and shareholders' demand and also affect the firm's future profits and cash flows, which would reduce the related problem of information asymmetry and agency problem between managers, stakeholders, and shareholders (Dhaliwal et al., 2011). Moreover, under this theory, Waddock and Graves (1997) posit that CSR reporting has a positive impact on the firm, whereby it would attract more qualified employees (Greening and Turban, 2000), attract more social responsible customers (Sen and Bhattacharya, 2001), and gain more social legitimacy (Hawn et al., 2011). These, in turn, attract higher socially responsible investors (Kapstein, 2001), which ultimately affect the firm's financial performance.

2.5.2.3 Signalling Theory

Signalling theory demonstrates the motivation behind a firm's desire to reveal CSR information voluntarily to the market because voluntary reporting is considered a competitive advantage for firms in the market. This type of private information about the firm and its prospects is not available unless managers (insiders) reveal it to the public; which in turn would influence the firm's value from the perspectives of the investors. Disclosing this information is considered as a signal for the market and the investors about the success of the firm, which would reduce their uncertainty (Connelly et al., 2011). In the first instance, signalling theory is developed to illustrate the information asymmetry in the market (Spence, 1973), but it is also used to clarify the impact of firms' business on the society in their annual reports (Ross, 1977). Accordingly, firms signal particular CSR information to investors to distinguish themselves from other competitors in the market, aiming to enhance their investments and reputation (Verrecchia, 1983).

Signalling means could be explained by CSR reporting practices, where firms report CSR in a way that exceeds the regulation requirements, thereby aiming to signal to the market that they are better than other competitors (Thorne et al., 2014). Prior literature supports this notion, suggesting that a firm's good environmental reputation could be created and

enhanced significantly through reporting about implementation, monitoring, and complying with environmental policies. Conversely, this reputation cannot be created and improved by the firm's financial status. Furthermore, it is found that the quality of reported CSR has a stronger impact on building and enhancing the firm’s environmental reputation amongst executive and investor stakeholder groups (Thorne et al., 2014).

Overall, firms would enhance future performance by signalling to the market about the firm’s positivity toward sustainability issues. Accordingly, firms are more likely to spend financial resources on CSR activities to communicate a positive private vision of managers about the future financial performance of the firm to stakeholders or increase their spending on extra CSR activities relating to the mandatory reporting requirement to distinguish themselves from other competitors.

The expected results of this empirical study are supported by the previous discussion about all four theories, where it is expected that engaging firms in CSR practices would harm firms’ profitability due to the increased spending on such activities. This expectation is clarified by the neoclassical economic theory and agency theory. Moreover, it is anticipated that the firm’s future performance might be enhanced after mandated CSR reporting, supporting stakeholder and signalling theories, where firms might achieve benefits from the mandatory regulation by signalling to the market about their positivity toward sustainability issues. Accordingly, this reporting would enhance investors’ assessment of a firm’s future performance or risk status; or it might lead to reduced cost of capital (Easley and O’Hara, 2004), or even improve stock price (Grewal et al., 2018). Employing the neoclassical economic theory and agency theory, the hypotheses of this empirical is developed as discussed later through chapter five, section 5.2.1.3.

2.5 Summary and Conclusion

This chapter discusses the key theories that connect between CSR regulation and three key issues namely; CSR reporting quality, earnings management, and future performance in the UK. Accordingly, several observations are presented from these relationships.

First, the legitimacy theory clarifies the first relationship between CSR-related regulation and CSR reporting quality. Where mandating CSR reporting increase threaten feeling of

firms from the stakeholders' increased scrutiny, which in turn push firms to enhance their CSR practice to legitimise themselves (e.g., Ioannou and Serafeim, 2017).

Second, in the context of mandating CSR reporting, both the impression and the opportunistic perspective of agency theories are used to explain the association between CSR reporting quality and earnings management. Managers who opportunistically manipulate earnings become less interested in using CSR reporting as a strategy to impress stakeholders and conceal their manipulation behaviour (e.g., Kim et al., 2012).

Third, based on four theories of the neoclassical economic theory, agency theory, stakeholder and signalling the impact of CSR-related regulation on subsequent performance are explained. Firstly, the neoclassical economic theory and agency theory indicates that increasing the cost because of engaging firms in CSR practices would harm firms' profitability (Grewal et al., 2018) also, according to the agency theory, managers serve their own interests rather than maximising the shareholders' wealth and the firm profitability which as a result harm the firm performance. Secondly, stakeholder and signalling theories debate that in the context of mandatory CSR reporting the firm's future performance will enhance by signalling to the market about their positivity toward sustainability issues and the benefits related to that (Liu and Zhang, 2017).

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CHAPTER THREE

The Impact of Regulation on Corporate Social Responsibility Reporting Quality

Abstract

I examine how mandatory reporting of CSR influences the quality of CSR reporting. Using Ordinary Least Squares (OLS) regression for the period 2009 to 2017. The empirical analysis utilises the FTSE All-share firms listed in the UK to find that mandatory CSR reporting has helped to enhance CSR reporting quality in the UK significantly. Also, three firm characteristics enhance the quality of CSR reporting in the context of mandatory CSR reporting; these are corporate governance (CG), international listing, and firms listed in sensitive industries. In an additional test uses high and low CSR reporting scores as a substitute dependent variable, I find that mandatory CSR reporting alters the behaviour of providers of low CSR quality, specifically those who are more mature and listed in multinational markets. Compared to providers of high-quality CSR reports, it is found that large firms are impacted by the new regulation to improve their reporting quality.

Keywords: Mandatory Regulation, Mandatory CSR, Firm Characteristics, CG, High and Low CSR Quality.

3.1 Introduction

Earlier studies have tried to understand what drive managers to undertake CSR reporting for their stakeholders (Adams, 2002; Bebbington et al., 2009). Within this stream of research, it has been found that CSR reporting is a communicating channel that firms use to present their ethical activities to stakeholders (Halme et al., 2014) which enhances the organisation’s image and reputation (Branco and Rodrigues, 2006; Bronn and Vidaver-Cohen, 2009; Popoli, 2011) and satisfies investors' increasing desire to receive more information about firms' narrative reporting (Cohen et al., 2011).

Extensive literature has investigated CSR reporting from four core aspects; determinants of CSR reporting (e.g., Henri and Journeault, 2010; Rodrigue et al., 2013); the relation between

CSR reporting and financial performance (e.g., Dhaliwal et al., 2011; Plumlee at al., 2015); roles of CSR reporting and assurance (e.g., O'Dwyer, 2011; Casey and Grenier, 2015); and the consequences of CSR reporting such as carbon emission, information asymmetry, firms' reputation, tax payments, and earnings management and quality (e.g., Kim et al., 2012; Barton et al., 2015). Conversely, there is very little evidence of the influence of mandatory CSR reporting regulations on the quality of CSR reporting (Ioannou and Serafeim, 2017; Chen et al., 2018). The reason is that only a few regions –such as South Africa, Denmark, Malaysia, China and the UK – mandate this type of reporting.

In the context of mandating CSR reporting, this study focuses on the UK environment as one of the few regions to have enforced a regulation requiring CSR reporting. Moreover, depending on the country-specific context, the use of CSR reporting might vary between different environments and regions (e.g., Cahan et al., 2016); thus, the findings of this study presents details about a new important institutional environment. However, in July 2013, the United Kingdom (UK) Parliament approved the Strategic Report and Directors' Report Regulations 2013 as the latest provision for The Companies Act 2006, to be applied for the financial year 'ending on or after' the end of September 2013. The UK government launched an action plan to set out guidance about the importance of integrating human rights and the environment within firms' operations and business plans, and how to achieve that. Following this announcement, the UK government has taken a real step regarding Environmental, Social, and Governmental (ESG) reporting, that encourages firms to comply with this regulation rather than simply explaining why they are not reporting it. These legalities run alongside stakeholders' increased desire to receive extensive information about firms' ESG practices.

Recent studies of mandatory CSR reporting suggest that adopting regulations related to CSR reporting has improved firms' CSR reporting specifically in South Africa, Denmark, Malaysia, and China. This outcome has reflected positively on firms' value and encouraged these firms to adopt guidelines to enhance their reports' credibility and comparability (Ioannou and Serafeim, 2017). It is also found that mandatory CSR reporting regulations have changed firms' behaviour to increase their spending on CSR activities even though it is not a requirement of the regulation; this, in turn, generates a positive externalities support (Chen et al., 2018).

From the above, two aspects can be concluded: first, CSR reporting can be used as a strategy to impress stakeholders, where firms perform socially to gain approval for their objectives and other benefits (Neu et al., 1998). Second, when firms are mandated to report about their CSR activities, they will feel under scrutiny from stakeholders and externals which pushes them to enhance their CSR activities to legitimise the firm's practices and avoid any governmental penalties.

Later findings directed scholars' attention to the role of the new regulation in firms' strategies in term of legitimising themselves by enhancing their CSR reporting quality, in addition to understanding the effect of firms' characteristics on complying with this regulation and developing the quality of CSR reporting in its context. These two primary aspects are the main aims of this research. In particular, this study sheds light on whether moving to set up new mandatory regulations affects the quality of CSR reporting in the UK and, by extension, the firm characteristics of size, leverage, firm age, auditing, listing, growth, industry sensitivity, and profitability effect on the quality of CSR reporting in terms of the new regulations.

To investigate the main aims, this empirical work gathers a sample from the 402 FTSE All-share firms listed on the London Stock Exchange (LSE) which includes the Main Market from 2009 to 2017. From this, data can be collected for the periods before- and after the adoption of the mandatory CSR reporting regulation. Hence, OLS analysis is conducted to estimate the impact of mandating CSR reporting regulations on CSR reporting quality.

While the prior empirical results are limited, the findings of this study based on legitimacy theory enrich the literature through three points. First, the impact of mandating CSR reporting on CSR reporting quality is strongly positive, and the new regulation has helped to enhance CSR reporting quality in the UK. However, this effect varies across different firm characteristics. Second, the reported results denote that in a mandatory context, the quality of CSR reporting provided by high-quality CG firms is higher than that of lower quality CG firms. Moreover, firms listed in multi-international markets report higher CSR quality than that reported by domestically listed firms. In the same context, a higher quality of CSR reporting is delivered by higher-risk industries' firms (sensitive industries). Third, in terms of mandatory regulation influence on high- CSR reporting quality compared to low- CSR reporting quality, results indicate that mandatory regulation does not influence producers

of high-quality CSR reports directly, except for the large firms where it is a motivation for them to increase their reporting quality in the extreme, similar to the case of multinational listed firms. Moreover, the findings imply that more mature firms that are highly leveraged and listed in multinational markets are more likely to enhance their low CSR reporting quality after the mandatory regulation.

This study makes several contributions to the accounting literature. First, it is a response to Christensen's (2016, p.138) call for papers, that "… future research could also examine how mandatory CSR reporting affects firms" to complement the literature that evinces the impact of voluntary CSR reporting. These findings add to a growing body of literature that studies the consequences of mandating CSR reporting. One such research stream focused on firm value and market responses to disclosure (Grewal et al., 2015; Chen et al., 2018), whereas another focuses on disclosure activities and environmental impacts (Hung et al., 2015; Ioannou and Serefeim, 2017). This study provides a new research insight by examining the impact of mandating CSR reporting on the quality of CSR report itself which resulted from firms' sustainable practices as presented in the firms' financial reports measured after the regulation. This research stream needs to be explored in the first place due to its importance in enhancing our understanding about the firms' behaviour towards such regulations, this to be carried out before exploring the consequences of CSR-related regulation on other streams. In specific, this thesis investigates the firm characteristics, such as firm size, debt ratio, firm age, firm external auditors, firm cross-listing, firm growth, firm industry sensitivity classification, and firm profitability, and their impact on the CSR reporting quality in the context of the new regulation, which would restrict or enhance the impact of CSR-related regulation on CSR reporting quality. Studying these characteristics are limitedly applied in the literature, thus, investigate them will expand our understanding of the variation in the consequences of adopting the new regulation.

However, to date, only limited literature focuses on mandatory CSR reporting because only a few regions mandate this reporting type specifically in the context of the UK environment, almost no evidence is found regarding adopting the new regulation in the UK. Consequently, this narrows the understanding of the impact of these regulations on the quality of CSR reporting in general, and specifically in the UK environment which has different institutional characteristics and capital market aspects than other environments that mandate CSR

reporting. Also, UK institutional investors collect private social information to assist them with investment decision-making, thus, CSR reporting considers as value-relevant to them (Solomon, 2006).

Particularly, the Act 2006 (regulation 2013) requirements different than other countries that mandate CSR reporting. For instance, in China, the Shenzhen Stock Exchange and Shanghai Stock Exchange require ESG disclosure for some specifically listed firms such as cross-listed firms and financial industry firms compared to LSE which mandates CSR reporting for all listed firms in the main market. Also, the required information to be disclosed vary from region to another between requiring ESG reporting, or CSR reporting (which includes environmental and social information according to Act 2006 (regulation 2013)). Accordingly, this study contributes to the literature by investigating the consequences of adopting regulation of CSR reporting and the intentions behind the CSR practices in a firm, which improves stakeholder's decisions towards these firms in the UK environment and shrinks the lack of research in different environments which limits our understanding of the consequences of this regulation on the firms. Second, this study is distinguished by the wider audience target which is mainly the stakeholders and public users in addition to stockholders compared to the financial reporting audience target that is stockholders only.

The remainder of this chapter is organised as follows. Section 3.2 presents the related literature of CSR reporting starting with related definitions and overview of CSR reporting including the determinants and measures of CSR. This review, furthermore, demonstrates the new regulations of CSR reporting in the UK and concludes by developing the study hypotheses. Section 3.3 discusses the research approach. Section 3.4 presents sample and sources. Section 3.5 presents the research methodology and variables metrics, and Section 3.6 presents the analysis of the data collected and applies these to the study hypotheses. Also, the results are interpreted, discussed, and concluded and the implication for policies are addressed. Section 3.7 concludes the main issues discussed in the chapter.

3.2 Literature Review and Hypotheses Development

3.2.1 Determinants of Corporate Social Responsibility Reporting

Prior literature evinces that the CSR reporting scope could vary across several factors (determinants). Scholars usually employ a range of appropriate theories such as legitimacy

and stakeholder theories to explain the probable effects of chosen determinants on levels of CSR reporting as summarised in table 3.1 (Brammer and Pavelin, 2008; Branco and Redrigues, 2008; Wang et al., 2008; Reverte, 2009; Chih, 2010; Chiu and Wang, 2015; Christensen, 2016; Ioannou and Serafeim, 2017).

Generally, these factors could be summarised into eight main characteristics (e.g., firm size, industry sensitivity, the firm's international listing, auditor type, firm age, profitability, leverage and corporate governance).

3.2.1.1 Firm Characteristics

Drawing from stakeholders' theory, many researchers suggest that larger firms are more visible to the public and more liable to scrutiny from stakeholders (Wang et al., 2008; Chiu and Wang, 2015). Therefore, they are likely to report and act in a more social responsibility manner compared to smaller firms (Brammer and Pavelin 2008; Branco and Rodrigues 2008; Reverte 2009). Thus, stakeholders scrutinise large firms regarding their environmental impact (Reverte, 2009).

Being classed as a sensitive industry is another effective factor that influences CSR reporting. Sensitive industries as identified by Branco and Redrigues (2008)[11] include all sectors that may have a direct negative impact on the environment, such as the oil and chemical sectors. Such firms with high-risk impact on the environment are subject to higher pressure from stakeholders compared to less risky firms. Due to that, sensitive industries report more CSR information than other industries to legitimise and enhance their image among the society and stakeholders (Gao et al., 2005; Brammer and Pavelin, 2008; Reverte, 2009).

Regarding firms' cross-listing, according to Cooke (1989), Reverte (2009) and Chiu and Wang (2015), a firm will report more CSR information when it operates in foreign markets where it needs to consider two or more stock markets' disclosure rules. Hence, under cross-listing, firms become more visible to the public and thus are subject to greater pressure from stakeholders and analysts, which motivates them to protect their reputation by enhancing CSR practices (Boubakri et al., 2016).

[11] Branco and Redrigues (2008) identify more sensitive sectors as: "mining, oil and gas, chemicals, construction and building materials, forestry and paper, steel and other metals, electricity, gas distribution and water". All other industries are considered as less sensitive.

Moving to the auditor type factor, Wang et al. (2008) attest that firms that use the Big4 auditors may have stronger motivation to report extensive information about CSR and apply more reporting standards to protect their reputation. This, however, is manifested by the restricted procedures which Big4 audit firms apply to avoid legal claims and enhance the audited firm's reputation (DeAngelo, 1981). Moreover, Chen et al. (2016, p. 53) state that "*a commitment to higher financial reporting quality has the potential to bring positive externality to firms' nonfinancial disclosures and ultimately affects the issuance of CSR reports.*"

Another characteristic is the firm age. Christensen (2016) provides evidence that firm age has a positive relationship with CSR reporting. It is shown that firms' CSR practices and financial reporting act could be affected by the different development levels across the firm's life cycle. The underlying logic is that the longer a firm has been operating, the greater its visibility to stakeholders and scrutiny, which increases the pressure on the firm to disclose and practice more CSR activities.

Several studies explore two additional main factors to capture a firm's financial resources availability, firm's profitability and firm's leverage (Brammer and Pavelin, 2008; Branco and Redrigues, 2008; Wang et al., 2008; Reverte, 2009; Chiu and Wang, 2015). In the context of stakeholder and agency theories, literature evinces the positive relationship between CSR reporting and profitability of the firm, where higher profitability results in a financial surplus to be spent on more CSR activities (Chih, 2010; Chiu and Wang, 2015; Ioannou and Serafeim, 2017). Conversely, the legitimacy theory perspective suggests that less profitable firms are more likely to focus on enhancing their earnings than spending on CSR and environmental activities (Ullmann, 1985; Roberts, 1992). Also, the literature documents an insignificant relationship for the same variables (Brammer and Pavelin, 2008; Reverte, 2009) which present inconsistent results across the prior studies.

On the other hand, leverage is considered an important factor regarding CSR determinants. Several arguments suggest various signs for this factor; for example, Chiu and Wang (2015) and Branco and Redrigues (2008) document a negative sign for the leverage arguing that highly leveraged firms are more likely to direct their financial resources to enhance the firm's earnings than to practice more CSR activities. Conversely, in a few studies such as Ioannou and Serafeim (2017), a positive sign for the leverage is documented. An explanation

could be that creditor shareholder will apply less pressure to restrict managers' decisions over CSR reporting in firms with a lower level of leverage, which is consistent with Richardson and Welker (2001) who support the notion that highly leveraged firms are more likely to engage in more CSR activities to earn the creditor's support. Another set of studies finds that leverage and CSR have an insignificant relationship (Brammer and Pavelin, 2008; Wang et al., 2008; Reverte, 2009).

One of the main factors studied in the literature of CSR determinants is the corporate governance (CG) characteristic (e.g., Flammer and Luo, 2017; Liu and Zhang, 2017) for its role in improving CSR reporting quality (Jo and Harjoto, 2012). Based on legitimacy theory, this factor could be utilised to send positive signals to stakeholders to enhance their performance and legitimise their existence (Mathews, 1995).

Overall, this study highlights the total effect of CG on the CSR quality, which employs a net score to measure such effect rather than individual variables. In general, extensive literature has studied the association between CSR reporting and CG, and most of the literature evinces the positive impact of CG on practicing CSR (Jamali et al., 2008; Jo and Harjoto, 2011, 2012; Jizi and Salama; 2014; Hashim et al., 2015; Shin et al., 2015; Beeks et al., 2016; Shahzad et al., 2016; Flammer and Luo, 2017; Liu and Zhang, 2017). From this, it is clear that CG and CSR work in parallel under the same umbrella, in addition to the fact – as Jo and Harjoto (2012) argue – that CG improves CSR practices in firms.

Finally, less common factors (determinants) are introduced in the literature; most are external rather than internal determinants, such as media exposure (Branco and Redrigues, 2008; Reverte, 2009; Chiu and Wang, 2015), consumer proximity (Branco and Redrigues, 2008), firm's strategic posture (Chiu and Wang, 2015), and economic environment (Chih, 2010).

Table 3.1

Key Articles on the Determinants of CSR Reporting

Author, Date, Country, & Journal Rank	Research Objective	Theory	Data Source	External Variables (Finding)	Internal Variables (Finding)
Chen et al. (2018) China ****(*)	Examine how mandatory disclosure of corporate social responsibility (CSR) impacts firm performance and social externalities.	Stakeholder theory	GTA Regional Economy database (2006-2011)		-ROA / ROE (-) -CSR (-) -Firm size (+) -Cash flow (+) -State Ownership (0)
Fiechter et al. (2018) E.U Working Paper	Examine firms' investment decisions in anticipation of stakeholder reactions to mandated disclosures	Not stated	ASSET4 (2011-2015)		- Ln(Total assets) (+) - Ln(financial analyst) (+) - Firm leverage (0) - Cash flow (0) - Assets to sales ratio (+) - PP&E (+) - Market value (-) - ROA (0) - CG (+)
Grewal et al. (2018) E.U ****(*)	Examine the equity market reaction to mandating ESG disclosure	-Voluntary disclosure theory -Legitimacy theory	*Bloomberg* database (2011– 2014)		- CAR (+) - CG (+) - Asset Manager (+) - Asset Owner (+) - MTB ratio(+)
Ioannou and Serafeim (2017) China, Denmark, Malaysia, South Africa Working Paper	Examine the implications of regulations mandating the disclosure of ESG	Signalling Theory	*Bloomberg* 2005-2012		- Environmental, Social, and Governmental disclosure (+) - Firm size (-) - Leverage (+) - Profitability (+) - Tobin's Q (+)
Boubakri et al. (2016) US	Examine the dynamics of cross-listing and corporate social responsibility	Bonding theory	Hand collected (2002–2011)		- International listing (+) - Firm size (+) - Firm Age (+) - Sales growth (-) - Profitability (+) - Leverage (-) - Research and development expenditures (+) - Corporate Governance (+) - Cash flow riskiness (-)
Christensen (2016) US ****	Examine whether CSR reporting actually helps firms prevent high-profile misconduct from occurring	Agency theory	The Global Reporting Initiative, CorporateRegister.com, the UN Global Compact, SocialFunds.com, Internet searches, and companies' Websites 1999 to 2010		- Future misconduct (-) - Manager Compensation (0) - Cost of Capital (0) - Profitability (0) - Financial strength (+) - Firm size (+) - Tobin's Q (0) - Institutional ownership (0) - Research and development expenditures (+) - Firm Age (+)
Chiu and	Examine	Stakeholder theory	Questionnaire	- Pressure from the	- Firm's strategic posture (+)

Wang (2015) Taiwan ***	determinants of social reporting quality and the ability of the theory to explain disclosure quality		(2010-2011)	global supply Chain (+) - Pressure from international capital markets (+) - Stockholder power (+) - Media exposure (+)	- Profitability (+) - Leverage (-) - Firm size (+)
Jo and Harjoto (2012) USA ***	Examine the empirical association between corporate governance and corporate Social responsibility engagement	Stakeholder theory and agency theory	The Investor Responsibility Research Centre (IRRC)		- Corporate Governance (+) - Firm size (+) - Research and development expenditures (0) - Industry classification (0) - Profitability (+)
Chih et al. (2010) International. ***	Examine whether or not, and if so why, corporations will tend to act in socially responsible ways	Institutional theory	Dow Jones World index (2003-2005)		- Firm size (+) - Competition (+) - Legal environment (+) - Profitability (0) - Economic environment (+)
Reverte (2009) Spain ***	Examine determinants of corporate social responsibility (CSR) disclosure practices	-Legitimacy theory -Stakeholder theory -Agency theory	Observatory on the corporate social responsibility (OCSR) (2005-2006)	-Media exposure (+)	- Firm size (+) - Industry sensitivity (+) - Profitability (0) - Ownership structure (-) - International listing (+) - Leverage (0)
Wang et al. (2008) China ***	Examine determinants of voluntary disclosure	Information asymmetry theory	Hand collected content analysis (2005)		- State ownership (+) - Foreign ownership (+) - Auditor type (+) - Leverage (0) - Profitability (+) - Firm size (+)
Branco and Redrigues (2008) Portugal ***	Understand social responsibility disclosure effect both on the Internet and in annual reports	-Legitimacy theory -Resource-based perspective	Content analysis (2003-2004)	-Media exposure (+)	- International experience (0) - Firm size (+) - Industry affiliation (0) - Consumer proximity (0) - Environmental sensitivity (+) - Profitability (+) - Leverage (-)
Brammer and Pavelin (2008) GB ***	Examines patterns in the quality of voluntary environmental disclosures	Stakeholder theory	FTSE All-Share Index (2000)	-Media exposure (0)	- Firm size (+) - Industry sensitivity (+) - Environmental performance (0) - Profitability (0) - Leverage (0) - Board composition (-) - Foreign ownership (-)
Gao et al. (2005) HK ***	Examine the patterns and determinants of corporate social and environmental disclosure	Stakeholder theory	Content analysis (1993-1997)		- Firm size (+) - Industry sensitivity (+)

This table presents the key studies of CSR reporting determinants. In the first column, (*, **, ***) represent journal ranking based on ABS classification. Signs identified as follow: significant positive relationship (+), significant negative relationship (-), insignificant relationship (0).

3.2.2 Corporate Social Responsibility and New Regulation

In contrast to the generous voluntary CSR reporting literature, only limited research to date has investigated mandatory CSR reporting because only a limited number of countries have mandated CSR reporting until now, and for those that do, the regulation is not very clear about the exact required information and the form of the reporting that firms need to apply. For instance, Ioannou and Serafeim (2017) examine the impact of mandatory CSR regulation across four countries (South Africa, Malaysia, China, and Denmark). One remarkable note the study documents is that some of these regulations rely on the 'apply or explain' rule and this regulation mostly does not offer accurate guidance about the required reporting information and its form. However, the study documents an increase in the firms' CSR reporting post the new regulations, in parallel with an increase in adopting GRI as guidance for CSR reporting.

Another study that investigates the mandatory adoption of CSR reporting is by Fiechter et al. (2017); they examine the impact of mandating CSR reporting by the European Union (EU) in 2014, providing evidence of an increase in CSR expenditure after the introduction of this regulation. However, they find that this increase in expenditure is related to being able to predict unfavourable stakeholder reactions around mandatory reporting of CSR performance.

Conversely, Grewal et al. (2018) conduct an event study to capture the market reaction around announcing the new regulation enforcement in EU stock exchange-listed firms. They record a negative market reaction (on average) to the mentioned regulation, relating that to the higher associated costs that firms will carry to apply this regulation except for firms with excellent non-financial performance before the announcement of this passage.

In line with that, Chen et al. (2018) conduct a study on the Chinese sample and document an improvement in the spending associated with CSR practices (specifically environmental protection spending). Also, they observe a decrease in the firm's profitability after enforcing the new regulation, in addition to a negative stock market response to the mandated regulations.

3.2.3 Hypotheses Development

Perrow (1970) contends that legitimacy theory focuses on the firm’s actions to be desirable or appropriate with the context (such as norms, beliefs, and values) of some social systems.[12] This approach posits that CSR reporting is a method to legitimise a firm’s continued existence to the society (Gray et al., 1995; Hooghiemstra, 2000). However, Jennings and Zandbergen (1995) document that the externals’ (e.g., stakeholders and society) pressure influences the levels at which sustainable development activities are prevalent among firms. They also assert that previous literature discusses increased voluntary desire of firms to report CSR information as a tactic to protect and manage their legitimacy (e.g., Nasi et al., 1997; Campbell, 2000; Hutchings and Taylor, 2000; Woodward et al., 2001).

Overall, it can be posited that CSR reporting can be used by firms as a strategy to shield themselves from negative perceptions of stakeholders. Instead, they impress their stakeholders by showing they are performing socially. This approval ensures their continued existence. (Neu et al., 1998). Nevertheless, when firms are mandated to report about their CSR activities, they will feel under scrutiny from stakeholders and externals which pushes them to enhance their CSR activities to legitimise the firm’s practices and avoid any governmental penalties.

Therefore, this study sheds light on whether moving to set new mandatory regulations affects the quality of CSR reporting in the UK and, by extension, the factors of size, leverage, firm age, auditing, listing, growth, industry sensitivity, and profitability effect on the quality of CSR reporting in terms of the new regulations. In the UK, as discussed later, the new regulations require firms to only report about their CSR practices; failure to do so incurs a penalty for not complying with these regulations (Act 2006/414c). Accordingly, the first hypothesis of this study is stated as follow:

First Hypothesis*: CSR reporting regulation will improve the quality of CSR reporting.*

Burks et al. (2018, p.1) state that “*Accounting research commonly incorporates interaction terms in a linear regression to examine if hypothesized effects are moderated, or reinforced,*

[12] Dowling and Pfeffer (1975, p. 125) define organisational legitimacy as “the outcome of, on the one hand, the process of legitimation enacted by the focal organization, and on the other, the actions affecting relevant norms and values taken by other groups and organizations. Social norms and values are not immutable.”

by another variable". Accordingly, for more understanding of the impact of the new regulations on the quality of CSR reporting, and the factors which may enhance or diminish this impact, this study develops sub-hypotheses to capture the influence of the most common factors used in the literature (size, leverage, firm age, auditing, listing, growth, industry sensitivity, and profitability) in terms of CSR reporting. Another eight sub-hypotheses related to each factor as discussed below are proposed.

3.2.3.1 Interaction Effect with Corporate Governance (CG):

The impact of CG on CSR reporting and practices in the firms has been extensively studied in the literature (e.g., Jamali et al., 2008; Arora and Dharwadkar, 2011**;** Jo and Harjoto, 2011, 2012; Jizi and Salama, 2014**;** Young and Thyil, 2014**;** Shin et al., 2015**;** Beeks et al., 2016; Shahzad et al., 2016**;** Flammer and Luo, 2017; Liu and Zhang, 2017); however, a considerable number of the evidence provided supports the idea that good CG strengthens the CSR practice in the firms (Jamali et al., 2008; Jo and Harjoto,2011, 2012; Jizi and Salama; 2014; Shin et al., 2015; Hashim et al., 2015; Beeks et al., 2016; Shahzad et al., 2016; Flammer and Luo, 2017; Liu and Zhang, 2017).

Liu and Zhang (2017, p. 1076) state that *"Corporate governance refers to the extensive relationships between the enterprise and stakeholders or between the enterprise and society. High levels of corporate governance could safeguard stakeholders' rights and ensure social responsibility".* Meanwhile, Jo and Harjoto (2012) document that CG and CSR have similar core content but CG improves CSR reporting quality. Thus, managers could employ this type of effect as a tool to send positive signals to the market to enhance their performance and legitimise their existence (Mathews, 1995). Altogether, based on legitimacy theory, the first sub-hypothesis is:

> ***First Sub-hypothesis****: The effect of regulation on CSR reporting quality will be greater for high-quality CG firms.*

3.2.3.2 Interaction Effect with Firm Age

A firm's CSR practices and financial reporting could be affected by the different development levels of the firm's life cycle (Kim et al., 2012). Moreover, a firm's age reflects on the firm's performance concerning CSR activities (Kim et al., 2012), and increases the scrutiny of stakeholders about the reasons behind the lack of CSR activities and reporting.

The underlying logic is that older firms would like to engage in higher CSR practices where they are more visible to the public and under higher pressure from stakeholders and analysts. Therefore, they have incentives to protect their reputation through higher CSR practices (Christensen, 2016). Accordingly, based on legitimacy theory, this informs the second sub-hypothesis of this study:

> ***Second Sub-hypothesis****: The effect of regulation on CSR reporting quality will be greater for older firms.*

3.2.3.3 Interaction Effect with Firm Size

Where the CSR practices offer benefits for stakeholders, employees, and the firm's reputation and performance (Servaes and Tamayo, 2013), it is found, in general, that these practices are closely and positively associated with firm size (Brammer and Pavelin, 2008; Branco and Rodrigues, 2008; Reverte, 2009). In particular, different sized firms behave differently under such a relationship. For instance, larger firms are likely to report and act in a more socially responsible manner compared to smaller firms in order to legitimise themselves (Reverte 2009). Arguably, this is related to the fact that larger firms are more liable to scrutiny from stakeholders where they are more visible to the public (Wang et al., 2008; Chiu and Wang, 2015), particularly regarding their environmental impact (Reverte, 2009). Therefore, they are likely to report and act in a more socially responsible manner to legitimise themselves compared to the case of smaller firms (Reverte, 2009).

Moreover, since the larger firms are more liable to scrutiny from stakeholders than smaller firms are, then under the mandatory regulation, they are in a sensitive political/governmental position, which in turn would increase the political cost risk of not complying with these regulations (Watts and Zimmerman, 1978). Accordingly, the third sub-hypothesis of this study is stated as follows:

> ***Third Sub-hypothesis****: The effect of regulation on CSR reporting quality will be greater for larger firms.*

3.2.3.4 Interaction Effect with Firm Profitability

In the context of agency theory literature evinces the positive relationship between CSR reporting and profitability of the firm, where as much as the firm has a surplus in their financial resources, so the spending on CSR activities would increase. Because profitable

firms are more visible to the public and are more exposed to stakeholders' scrutiny, this in turn explains the strong incentives to increase their CSR performance in order to protect and enhance their reputation (Branco and Redrigues, 2008; Wang et al., 2008; Chih, 2010; Chiu and Wang, 2015).

The legitimacy theory perspective suggests that less profitable firms are more likely to focus on enhancing their earnings than spending on CSR and environmental activities (Ullmann, 1985; Roberts, 1992). However, Neu et al. (1998) argue that the relationship between CSR practices and profitability would vary between positive and negative. Also, the literature documents an insignificant relation for the same variables (Brammer and Pavelin, 2008; Reverte, 2009). Overall, these inform the fourth sub-hypothesis of this study:

> ***Fourth Sub-hypothesis****: There is an effect of regulation on CSR reporting quality for profitable firms.*

3.2.3.5 Interaction Effect with Firm Leverage

Researchers argue that highly leveraged firms are less likely to be incentivised to direct their financial resources towards CSR activities due to the additional required cost (Hull and Rothenberg, 2008). Also, Purushothaman et al. (2000) emphasis that highly leveraged firms may have stronger relationships with their stakeholders' creditors; hence they use other means to report information about social responsibility in the firm.

Conversely, Richardson and Welker (2001) support the notion that highly leveraged firms with high debt ratio are more likely to engage in more CSR activities to earn the creditor's support. Jensen and Meckling (1976) explain that to reduce the agency cost, firms with high leverage would report more CSR information.

On the contrary, Brammer and Pavelin (2008) and Branco and Redrigues (2008) document a negative sign for the debt ratio, arguing that highly leveraged firms are more likely to direct their financial resources to enhance the firm's earnings rather than practice more CSR activities.

In the context of mandatory CSR reporting, firms are motivated to comply with legislation to avoid any penalties. Even when they are highly leveraged, they are likely to exhaust their financial resources in order to enhance and legitimise their image among their stakeholders and creditors. Overall, this informs the fifth sub-hypothesis of this study:

> ***Fifth Sub-hypothesis****: There is an effect of regulation on CSR reporting quality for higher leveraged firms.*

3.2.3.6 Interaction Effect with Auditor Type (BIG4)

Large auditing (Big4) accounting firms perform stricter audit procedures to avoid legal claims, increase the goodwill, and enhance the firms' internal control systems (DeAngelo, 1981). Accordingly, as Wang et al. (2008) suggest, firms that hold Big4 auditors may have stronger motivation to report extensive information about CSR and imply more reporting standards to protect their reputation.

Moreover, it is found that Big4 auditing firms encourage their clients to enhance their reporting level which in turn sends positive signals to the market regarding the firm's performance (Joshi and Said, 2012). Thus, the literature provides evidence, based on signalling theory, that firms provide higher levels of CSR reporting when the financial auditor is one of the Big4 (Fernandez-Feijoo et al., 2018). The sixth sub-hypothesis is therefore proposed:

> ***Sixth Sub-hypothesis****: The effect of regulation on CSR reporting quality will be greater for Big4-audited firms.*

3.2.3.7 Interaction Effect with Firm Cross-listing

According to Cooke (1989), Reverte (2009) and Chiu and Wang (2015), a firm will report more CSR information when operating in foreign markets where it needs to consider two or more stock markets' reporting rules. Hence, under international listing, firms become more visible to the public and under higher pressure from stakeholders and analysts as a result.

Relatedly, evidence shows that international listing firms have a strong motivation to increase their CSR performance in terms of enhancing their reputation (Boubakri et al., 2016) as a mechanism against the external scrutiny and pressure of stakeholders (Lang et al., 2003; El Ghoul et al., 2011), and to mitigate market litigation risks and fines (Hong and Liskovich, 2015)[13]. Thereby, a positive relationship between CSR performance and firms' international listing status is expected which enhances the stakeholders' wealth (Boubakri et al., 2016).

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[13] Hong and Liskovich (2016) suggest the use of CSR activities as a halo effect or 'the first impression effect' that helps to mitigate the increased risk of market litigations.

This suggestion might be derived from two views; either the managers desire to impress stakeholders for self-interests such as to protect their positions (the opportunistic perspective of legitimacy theory), or to increase the stakeholders' wealth and enhance the firm's performance in front of investors and analysts ("doing well by doing good" perspective of stakeholder theory). Both perspectives enhance the firm and stakeholder wealth. Overall, this informs the seventh sub-hypothesis of this study:

> ***Seventh Sub-hypothesis:*** *The effect of regulation on CSR reporting quality will be greater for international listed firms.*

3.2.3.8 Interaction Effect with Sensitive Industries

Firms in sensitive industries with high-risk impact on the environment (such as chemical and energy industries) are subject to higher pressure from stakeholders compared to less risky firms are. Less risky firms including service firms whose businesses do not have an impact on the environment such as water consumption or emission still have a high level of CSR reporting, but this type of reporting requires little additional reporting cost to satisfy stakeholders, contrary to the case of the sensitive industries. As a result, sensitive industries report more CSR information compared to other industries' counterparts due to the high pressure they are exposed to from stakeholders (Gao et al., 2005; Brammer and Pavelin, 2008; Reverte, 2009). Accordingly, based on legitimacy theory, the eighth sub-hypothesis of this study is posited as follows:

> ***Eighth Sub-Hypothesis****: The effect of regulation on CSR reporting quality will be greater for sensitive industries firms.*

3.3 Research Approach

The research approach is a strategy employed by the researcher to develop the study. In general, there are two methods in the research methodology: the deductive method and inductive method. The deductive method mainly is built on starting the research with developing theories and hypotheses then moving to collect the required data to test the hypotheses. Conversely, the inductive method starts with extracting the data then analyses it to develop hypotheses and find a proper theory (Saunders et al., 2009). In this study, mainly the inductive approach is adapted to conduct the primary data of this research (the empirical part of the research). However, the deductive method is employed at the beginning of the research to collect the secondary data which found in the prior literature.

Moreover, research methodology identifies two main forms of data collection and analysis: quantitative and qualitative forms. The quantitative type focuses on numbers, but the qualitative type focuses on the words or the narrative type of data (Bryman and Bell, 2011). This research uses the quantitative method to collect the required data to test the developed hypotheses.

3.4 Data and Sampling

The study gathers a sample consisting of 402 FTSE All-share firms listed on LSE which includes the Main Market from 2009 to 2017. The period is chosen considering the comparison criterion in this study to be four years around the new regulations of mandating CSR reporting in the UK in 2013.

Following prior literature (e.g., Reverte 2009; Sun et al., 2010; Chen et al., 2018), firms of financial institutions (banks, insurance, and investment) (SIC 6000-6799)[14] and utility industries (SIC 4400-4999) are excluded. Later literature enlightens that this exclusion enhances the comparability of the results among the sample, where the mentioned sectors operate in highly regulated industries which differ with their accounting rules to those in other industries. Thus, this treatment reduces the initial sample from 3390 observations to 2395 observations. Also, excluding the missing values reduces the sample to reach the final number of observation 1378. Moreover, following the literature, the sample variables are winsorized in both tails at the 1% level of their distribution to avoid the influence of extreme observations (Boubakri et al., 2016).

The study dataset is collected using the following sources: (1) financial data for all firms and the control variables, in addition to the SIC codes, were obtained from the *DataStream* database and WorldScope database; (2) the *Bloomberg* database was used to extract the CSR reporting and CG scores; and (3) firms are identified using the list of FTSE All-share on the London Stock Exchange website during the period 2009-2017.

[14] SIC code stands for Standard Industrial Classification. Each industry is defined as a division by its 2-digit SIC code.

Table 3.2

Sample Construction

Sample Selection Criteria	**Number of Firms**	**Number of Observations**
Firm-year observations have sufficient data from *Bloomberg* database from 2009 to 2017 for CSR reporting score *Less*:	*402*	*3390*
Missing data observations	55	1017
Firms in the financial and utility industries	121	995
The full sample used for testing the hypotheses	226	1378

3.5 Research Methodology and Methods

3.5.1 Dependent Variable

3.5.1.1 Corporate Social Responsibility Reporting Quality

The *Bloomberg* database evaluates CSR level on dimensions including environmental, social, and governmental (ESG) practices. Reporting net scores range from 0 to 100 reflecting the overall extensiveness of firms' reporting of each dimension rather a detailed score for each component in these dimensions.[15] *Bloomberg* adjusts the ESG score consistently with each industry to make sure that each firm is assessed based on relevant data related to its specific industry and weights each item in the score by its importance (Gutsche et al., 2017). However, the ESG *Bloomberg* score includes the following headings for the environmental dimension; CO2 emissions, energy consumption, water use, and total waste. The social dimension items are number of employees, contract type and turnover, community service spending, and human rights. The last dimension is corporate governance, which consists of information about board structure, board independence, board executives and diversity, board committees, audit committee, compensation committee, and others (*Bloomberg* database).

The new regulations mandating CSR reporting in the UK requires the firms to report about: the impact of firm's business on the environment, the company's employees, and social, community and human rights issues (Act 2006, s414 (7)). Hence, this regulation needs to include two dimensions of the main ESG score – environmental and social – to understand

[15] Bloomberg provides a score (net score) for each dimension of ESG individually (which comes from evaluating set of related components for each dimension), and a total score for all three dimensions together, but it doesn't provide a score for each component included in these dimensions separately.

the effect of mandating CSR reporting. However, this study is controlling for CG quality; therefore, it is excluded (to be used separately) from the total score to finish with only two scores of ESG – environmental and social reporting. To calculate a total score to measure CSR reporting, this study is taking the average of summing the total score of CSR to the total score of the environmental dimension.

3.5.2 Independent Variable

3.5.2.1 The New Regulations of Mandated Corporate Social Responsibility

This study investigates the effect of the new regulations Act 2006 (regulation 2013) which mandates the reporting of CSR on the quality of CSR reporting. To measure the new regulations, a dummy variable takes the value "1" if firm i is located in the mandatory year's group, and "0" otherwise.

3.5.3 Empirical Models

The purpose of this study is to determine the effect of the new regulations Act 2006 (regulation 2013) of mandating CSR reporting on the quality of CSR reporting in FTSE All-share firms listed in LSE. To capture this impact, the following basic set of OLS regression models is used.

Firstly, to examine the first hypothesis which suggests *'CSR reporting regulation will improve the quality of CSR reporting',* the first model (3.1) examines the relation around the year of mandating CSR reporting (2013):

$$CSR_Score_{i,t} = \alpha_0 + \beta_1 Reg_{i,t} + \beta_2 CG_{i,t} + \beta_3 Age_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 Lev_{i,t} + \beta_7 BigN_{i,t} + \beta_8 Listing_{i,t} + \beta_9 Ind.Sens_{i,t} + \Sigma Year + \varepsilon_{i,t} \quad \textbf{(3.1)}$$

Secondly, in order to examine the sub-hypotheses of this study which investigate the influence of each discussed factor independently on the relationship between new regulation and CSR reporting quality, the following model is employed around the year of mandating CSR reporting (2013) to capture this effect through the interaction term in each model:

$$CSR_Score_{i,t} = \alpha_0 + \beta_1 Reg_{i,t} + \beta_2 CG_{i,t} + \beta_3 Age_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 Lev_{i,t} + \beta_7 BigN_{i,t} + \beta_8 Listing_{i,t} + \beta_9 Ind.Sens_{i,t} + \beta_{10} (Reg_{i,t} * CG_{i,t}) + \beta_{11} (Reg * Age_{i,t}) + \beta_{12} (Reg_{i,t} * Size_{i,t}) + \beta_{13} (Reg_{i,t} * ROA_{i,t}) + \beta_{14} (Reg_{i,t} * Listing_{i,t}) + \beta_{15} (Reg * Lev_{i,t}) + \beta_{16} (Reg_{i,t} * BigN_{i,t}) + \beta_{17} (Reg_{i,t} * Ind.Sens_{i,t}) + \Sigma Year + \varepsilon_{i,t} , \quad (3.2)$$

where,

Variable	Definition	Measurement	Expected Sign
CSR_Score $_{i,t}$	Indicates the CSR disclosure score at the end of the year.	Disclosure net score ranges from 0 to 100.	+
Reg $_{i,t}$	Indicates the new regulation of Act 2006 (Regulation 2013).	A dummy variable equal zero if the year before 2013 and one otherwise.	+
CG $_{i,t}$	Indicates the corporate governance score at the end of the year.	Corporate governance net score ranges from 0 to 100.	+
Age $_{i,t}$	Indicates the firm age.	The natural logarithm of the number of the firms' listing year (BDATE) plus one.	+
Size $_{i,t}$	Indicates the size of the firm.	The natural logarithm of the market value of equity (MVE_WC08001) of firm i, measured at the end of year t.	+
ROA $_{i,t}$	Indicates the profitability of the firm by Return on Assets ratio.	The net income before extraordinary items scaled by total assets of firm i at year t.	?
Lev $_{i,t}$	Indicates the leverage (debt) of the firm.	The total debt scaled by total assets of firm I at year t.	?
BigN $_{i,t}$	Indicates the auditor type of the firm (Big 4 or not).	An indicator variable equals one if the firm audited by one of the Big4 auditing firms and zero otherwise.	+
Listing $_{i,t}$	Indicates the cross-listing status of the firm.	An indicator variable equal to one when a firm is listed in one or more international markets and zero otherwise.	+
Ind.Sens $_{i,t}$	Indicates the sensitivity of the industry under which a firm is classified.	Sensitive industries are: "mining, oil and gas, chemicals, construction and building materials, forestry and paper, steel and other metals, electricity, gas distribution and water". All the remaining industries are considered as less sensitive.	+

This table presents the variables' measures. More details about the signs' prediction are in the hypotheses development section. For the data source see Appendix A.

3.6 Results and Analysis

This section first presents the industry and time distributions over the nine-year sample period, followed by the descriptive statistics and correlation matrix of all variables included in the study. Next, OLS regression tests the impact of mandating CSR reporting on CSR reporting quality for the whole sample followed by the mean difference of variables between CSR reporting quality before and after the new regulation. This study conducts a dynamic analysis on two levels/models to include the individual effect of each control variable on the original study context. Moreover, additional tests are conducted based on the classification of CSR reporting quality as high or low separately.

3.6.1 Univariate Analysis

First, this section shows descriptive statistics of all variables considered in this study. Table 3.3 reports the sample distribution. Panel A in Table 3.3 shows the industry distribution of the CSR reporting quality sample during 2009-2017. Seven main industries are included in this study with a net number of 266 firms. The Manufacturing and Service industries are the largest populations of CSR reports with 38.46% and 19.3%, respectively, of the sample firms. The Wholesale Trade and Transportation and Public Utilities industries both provide the lowest CSR reports with 3.34% and 4.64%, respectively, of the sample firms. Table 3.3 Panel B presents the time distribution of the CSR reporting quality sample over the study period. However, an increase in the number of CSR reports is noted across 2009 to 2017 starting with 1.45% in 2009, increasing to 15.09% in 2016.

Table 3.3

Industry and Time Distribution for CSR Reporting Quality Sample during 2009-2017

Panel A: Industry Distribution			
Industry Type	Freq.	Per cent	Cum.
Mining	158	11.47	11.47
Construction	101	7.33	18.8
Manufacturing	530	38.46	57.26
Transportation & Public Utilities	64	4.64	61.9
Wholesale Trade	46	3.34	65.24
Retail Trade	213	15.46	80.7
Services	266	19.3	100
Total	1,378	100	

Panel B: Time Distribution

Year	Freq.	Per cent	Cum.
2009	20	1.45	1.45
2010	161	11.68	13.13
2011	170	12.34	25.47
2012	178	12.92	38.39
2013	185	13.43	51.81
2014	205	14.88	66.69
2015	217	15.75	82.44
2016	208	15.09	97.53
2017	34	2.47	100
Total	1378	100	

This table presents the frequency of CSR reporting firms by industry and year over the period 2009-2017.

Table 3.4 reports the descriptive statistics of the core variables employed in this study. First, the average (median) of CSR reporting quality score is 30.472 (29) out of a full score of 100 for all of the sample firm-year observations, thus showing a relatively low CSR reporting quality of FTSE All-share firms in the UK. However, firms' score of reporting CG is about 56 on average out of a full score of 100, which is considered higher than the CSR reporting score. Regarding firms' size, the mean firm size score is 14.315 (equivalent to approximately £4,697 million market value of equity) with a median score of 14.083. On average, the sample firms are more profitable with 0.2% than their peers in the same industry, and the average level of firm debt is about 22%. Moreover, about 72% on average of the sample firms are audited by one of the Big4 auditing companies, and around 96% of the sample firms in average are listed in one or more international markets (in addition to LSE), where 19% of the sample firms are classified as sensitive industries.

Table 3.4

Descriptive Statistics on Firm-level Variables

	CSR_Score	CG	Age	Size	ROA	Lev	BigN	List	Ind.Sens
Mean	30.472	56.674	32.365	14.315	0.002	0.220	0.723	0.957	0.188
Median	29.000	57.000	3.367	14.083	0.001	0.212	1.000	1.000	0.000
SD	11.259	6.940	16.685	1.433	0.003	0.169	0.448	0.203	0.391
Min	11.000	39.000	2.000	10.496	0.000	0.000	0.000	0.000	0.000
Max	65.000	77.000	54.000	18.127	0.029	1.014	1.000	1.000	1.000
N	1378	1378	1378	1378	1378	1378	1378	1378	1378

This table presents the descriptive analysis of all employed variables in this study. All variables are defined in Appendix A.

Before conducting the multivariate analysis, this study carried out a series of sample tests to verify the regression results' reliability. A multicollinearity test is implemented and found to be normal in the context of this study. A Huber/White estimator and Newey-West procedure are used to make sure that the model is free of auto-correlation and heteroscedasticity problems, and both give similar results; hence the Newey-West procedure results are used in the context of this study.

Table 3.5 presents the pairwise Pearson correlation matrix including all different variables employed in this study, reflecting the multicollinearity test results, in addition to testing the variance inflation factor (VIF) which does not exceed the accepted level of 10.

The pairwise Pearson correlation matrix shows three results worth noting. Firstly, CSR reporting quality and CG are highly correlated with about 68%, which indicates that firms which are interested in reporting their CSR are also interested in reporting about their CG. Secondly, CSR reporting and firm size correlation is about 57%, demonstrating that big-sized firms are more likely to engage in reporting CSR; this is in parallel with a high correlation of 55.9% with CG as well. However, a negative correlation was found between ROA and firm size with approximately 51%. Finally, CSR reporting quality and auditing firm type (one of the big4 or not) are weakly correlated (1%) which provides evidence that it is not necessarily the case that firms audited by one of the Big4 are engaged with CSR activities. Generally, the statistical tests this study employed do not present problems in the employed variables and model specification.

Table 3.5

Pairwise Pearson Correlation among all Variables

	1	2	3	4	5	6	7	8	9
1. CSR_Score	1								
2. CG	**0.678***	1							
3. Age	0.110*	0.213*	1						
4. Size	**0.567***	**0.559***	0.116*	1					
5. ROA	-0.290*	-0.242*	-0.135*	-0.507*	1				
6. Lev	0.077*	0.052*	-0.250*	0.127*	-0.156*	1			
7. BigN	**-0.010**	0.100*	-0.060*	0.135*	-0.112*	0.045*	1		
8. List	0.083*	0.102*	-0.090*	0.285*	-0.151*	0.021	0.067*	1	
9. Ind_Sens	0.185*	0.196*	-0.007	0.080*	-0.168*	-0.108*	-0.016	-0.038	1

* Represents significance at 0.10 level. All variables are as defined in Appendix A.

3.6.2 Multivariate Analysis

3.6.2.1 The Mandatory CSR Reporting and the Quality of CSR Reporting.

To investigate the impact of mandatory adoption of CSR reporting on CSR reporting quality, this study runs OLS regression using the full sample. Table 3.6 reports the multivariate regression results of model 1. According to legitimacy theory and consistent with this study's expectations in the first hypothesis (and also consistent with Ioannou and Serafeim's (2017) and Wang et al.'s (2017) findings) a positive coefficient of 1.169 and significance at the 1% level (t = 4.02) is observed, which indicates that firms' engagement in CSR reporting was enhanced after the mandatory adoption of CSR reporting.

Further, the variable CG is strongly related to CSR reporting quality with positive coefficient 0.199 and significant at the 1% level (t = 6.54). This outcome is in accordance with the correlation findings reported in table 3.6, indicating that firms that are reporting about their CG practices are more likely to report about their CSR practices too, which is consistent with the prior literature (Flammer and Luo, 2017; Liu and Zhang, 2017).

With regard to the impact of the remaining variables, and consistent with prior literature, firm's age, size (Reverte, 2009), leverage (Richardson and Welker, 2001), international listing (Boubakri et al., 2016) and the industry sensitivity (Gao et al., 2005) are all positively related to CSR reporting quality. These results indicate that mature firms with high market capitalisation and higher debt ratio that would be listed in multiple international markets and classified under sensitive industries have a tendency to engage in CSR practices and offer higher quality CSR reporting. However, profitability and external auditor type were found to be insignificant.

As discussed earlier, in 2013, the Companies Act 2006/414c required firms to report about their CSR practices and their business impact on the society and the environment. To understand the impact of mandating CSR reporting on CSR reporting quality, this study divides the pooled sample for two clusters – namely pre- and post-new regulation. This to test CSR reporting quality significance differences pre- and post-adoption year of the new regulation by employing a mean t-test.

Table 3.6

Regression of Mandatory CSR Reporting Regulation on the Quality of CSR Reporting

	Dep. Var. = CSR Reporting Quality	
	Coef.	*t*-Test
Reg	1.169	**4.02*** **
CG	0.199	**6.54*** **
Age	4.352	**4.14*** **
Size	2.214	**9.56*** **
ROA	17.365	0.26
Lev	5.592	**3.47*** **
BigN	-0.315	-0.43
List	6.412	**3.27*** **
Ind_Sens	5.745	**4.06*** **
_cons	-31.912	-6.64
N (firm-years)	1378	
R-squared	0.179	
Year effect	Yes	

Notes: This table presents OLS regression results estimated based on the following model:

$CSR_Score_{i,t} = \alpha_0 + \beta_1 Reg_{i,t} + \beta_2 CG_{i,t} + \beta_3 Age_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 Lev_{i,t} + \beta_7 BigN_{i,t} + \beta_8 Listing_{i,t} + \beta_9 Ind.Sens_{i,t} + \Sigma Year + \varepsilon_{i,t}$

*, **, and *** represent significance at 10%, 5%, and 1% levels, respectively. All variables are as defined in Appendix A.

Table 3.7 reports the mean t-test difference pre-new regulation adoption and post-new regulation adoption; the mean for the first cluster (pre-adoption) is about 27 (out of a full score of 100), and the mean for the second cluster (post-adoption) is about 32 (out of a full score of 100). In line with Wang et al. (2017), these results indicate that the average score of CSR reporting quality increased after adopting the new regulation. Also, the difference between the two clusters is statistically significant, which support the study first hypothesis.

Table 3.7

Mean Difference between CSR Reporting Quality pre- and post-New Regulation

	Observation frequency	Mean
Post new regulation	677	31.154
Pre-new regulation	701	26.804
Combined (Pre and Post)	1378	28.764
Difference		4.352
t	7.110	

This table presents the mean difference of CSR reporting quality pre- and post-New Regulation.
Difference = mean (post) - mean (pre)

3.6.2.2 The Mandatory CSR Reporting and the Quality of CSR Reporting in terms of Specific Factors

This study develops eight sub-hypotheses to capture the influence of adopting the new regulations on the quality of CSR reporting, and the factors which may enhance or diminish this impact. Common factors used in the literature are CG (Jo and Harjoto, 2012), firm age (Christensen, 2016), firm size, profitability, debt ratio (Ioannou and Serafeim, 2017), external auditor type (Wang et al., 2012), international listing (Reverte, 2009), and industry sensitivity (Brammer and Pavelin, 2008) which are found to be effective on CSR reporting quality.

Table 3.8 presents the results from a cross-sectional data regression testing the original relation in model 1 regarding firm-specific characteristics that were developed in the form of model 2. Thus, model 2 is developed and employed to examine the sub-hypotheses using interaction terms for each mentioned factor.

In line with legitimacy theories, prior literature (e.g., Flammer and Luo, 2017; Liu and Zhang, 2017) suggests that CG has a strong impact on the quality of CSR reporting. Combined with this study's findings that are mandating CSR reporting enhance the quality of CSR reporting, this supports the findings of model 2 analysis reported in table 3.8. A positive coefficient of the interaction term (*Reg*CG*) 0.121 and significant at the 1% level (t = 2.65) is reported, which indicates that the effect of adopting the new regulations on CSR reporting quality is stronger in CG firms, which is consistent with sub-hypothesis 1.

According to the interaction term (*Reg*List*), the positive coefficient 2.543 is statistically significant at the 1% level (t = 2.21), which indicates that listing firms in multi-international markets would strengthen the relationship between adopting CSR new regulation and CSR reporting quality. However, this result is consistent with this study's seventh sub-hypothesis, and it could be related to legitimacy theory, where managers desire to protect their interests and satisfy stockholders' requirements using CSR activities.

Moreover, the interaction term (*Reg*Ind.Sens*) presents a positive coefficient 2.001 at the 1% level (t = 2.31). This result supports this study's eighth sub-hypothesis that sensitive industries with high-risk impact on the environment (such as chemical and energy industries) are subject to higher pressure from stakeholders, compared to less risky firms, which motivates them to legitimise themselves by reporting higher quality CSR.

In contrast to this study's predictions for the rest of the sub-hypotheses, table 3.8 indicates, through the interaction terms, that none of the variables – firm age, size, profitability, debt ratio, and external auditor type –has a significant effect on the relation between adopting new CSR regulation and CSR reporting quality. Thus, the remaining sub-hypotheses are rejected.

Table 3.8

Regression of Mandatory CSR Reporting on the CSR Reporting in terms of Specific Factors

Dep. Var. = CSR Reporting Quality		
	Coef.	*t*-Test
Reg	**7.352**	**1.980***
CG	**0.157**	**3.990*****
Age	**4.236**	**2.100****
Size	**1.401**	**2.600*****
ROA	20.997	0.260
Lev	4.514	1.630
BigN	-0.582	-0.500
List	**9.373**	**5.960*****
Ind_Sens	**4.387**	**2.060****
Reg *CG	**0.121**	**2.650*****
Reg *Age	-0.489	-0.950
Reg *Size	-0.176	-0.550
Reg *ROA	18.317	0.230
Reg *Lev	-0.838	-0.500
Reg *Big	-0.422	-0.700
Reg *List	**2.543**	**2.210****
Reg * Ind_Sens	**2.001**	**2.310****
_cons	-28.760	-3.260
N (firm-years)	1378	
R-squared	0.272	
Year effect	Yes	

Notes: This table presents OLS regression results that are estimated based on the following model:

$CSR_Score_{i,t} = \alpha_0 + \beta_1 Reg_{i,t} + \beta_2 CG_{i,t} + \beta_3 Age_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 Lev_{i,t} + \beta_7 BigN_{i,t} + \beta_8 Listing_{i,t} + \beta_9 Ind.Sens_{i,t} + \beta_{10} (Reg_{i,t}*CG_{i,t}) + \beta_{11}(Reg*Age_{i,t}) + \beta_{12} (Reg_{i,t}*Size_{i,t}) + \beta_{13} (Reg_{i,t}*ROA_{i,t}) + \beta_{14} (Reg_{i,t}*Listing_{i,t}) + \beta_{15} (Reg*Leverage_{i,t}) + \beta_{16} (Reg_{i,t}*BigN_{i,t}) + \beta_{17} (Reg_{i,t}*Ind.Sens_{i,t}) + \Sigma Year + \varepsilon_{i,t}$

*, **, and *** represent significance at 10%, 5%, and 1% levels, respectively. All variables are as defined in Appendix A.

3.6.3 Endogeneity Concerns and Additional Analyses

3.6.3.1 Endogeneity Concerns

In general, a variable is categorised as endogenous if it is correlated with the regression error term (Wooldridge, 2002), and arises primarily from simultaneity (Larcker and Rusticus, 2010), which happens when the independent variable is simultaneously determined by the dependent variable (Wooldridge, 2002). Accordingly, this study repeats the main analysis in tables 3.9 employing the lagged approach to check the possible impact of endogeneity, this by estimating a lagged values of independent variables (Christensen; Dhaliwal, 2011). The results are consistent with OLS results reported earlier as table 3.9 presents. Some variables have either more or less significant level, but direction and significance stayed the same. Thus, endogeneity does not affect these study findings (e.g., Brammer and Pavelin, 2008; Branco and Redrigues, 2008; Wang et al., 2008; Reverte, 2009; Chiu and Wang, 2015; Ioannou and Serafeim, 2017; Chen et al., 2018).

Table 3.9

Regression of Mandatory CSR Reporting Regulation on the Quality of CSR Reporting: Controlling for Endogeneity.

Dep. Var. = CSR Reporting Quality		
Lagged Independent Variables	Coef.	*t*-Test
Reg	**2.190*** **	**4.170**
CG	**0.762*** **	**12.600**
Age	**1.818*** **	**3.150**
Size	**1.995*** **	**6.300**
ROA	-23.182	-0.230
Lev	2.758	1.460
BigN	**-1.682*** **	**-2.420**
List	0.346	0.250
Ind_Sens	**2.563** **	**2.590**
_cons	-48.019***	-11.280
N (firm-years)	1378	
R-squared	0.56	
Year effect	Yes	

Notes: This table presents OLS regression results considering the potential endogeneity problem. The number of observations include missing variables due to lagging the independent variables.

*, **, and *** represent significance at 10%, 5%, and 1% levels, respectively. All variables are as defined in Appendix A.

3.6.3.2 Sub-sample Tests on High and Low CSR Reporting Quality

To validate the main regression results and check whether they would hold after using an alternative dependent variable, the following test is conducted. This study replaces the net score of CSR reporting quality with high and low CSR reporting scores as a substitute dependent variable. However, following Schleicher et al. (2007), the main sample is divided into two sub-samples – high CSR reporting score and low CSR reporting score – that are measured based on the upper and lower quartiles. High CSR takes the two upper quartiles, and low CSR takes the lower two quartiles of the main sample. Then, a logit test is used to support the results based on the same sub-samples' measurement but as a dummy variable instead of the actual score of CSR reporting quality, where high CSR equals 1 and low CSR equals 0.

Table 3.10 presents the regression results of adopting the new regulation on high and low CSR reporting quality covering all independent and control variables used in the original tests. This study uses OLS regression to run the first, third, and fourth models, and a logistic test for the fifth model.

The result of model 3 (high CSR) indicates an insignificant impact of adopting the new regulation on high CSR reporting quality (CSR score). The explanation for this could be that firms that used to report a high-quality CSR would keep reporting the same way after mandating this type of reporting. In other words, firms that voluntarily consider CSR practices and report them at a high standard will not be affected in mandating CSR reporting since it might be disclosing more information than required.

The coefficient on the *Regulation* variable of model 4 (low CSR) is 8.851 at 1% level (t = 5.13). However, this indicates a significant positive impact of adopting the new regulation on low CSR reporting quality. That means that mandating CSR reporting enhances CSR reporting quality for the firms with low CSR reporting.

In terms of model 5 (logistic model), an insignificant coefficient 0.208 (t = 1.37) on the *Regulation* is presented, which supports model 3's empirical findings (high-CSR sub-sample findings). Results report that the adoption of the new regulation has no significant impact on the high CSR reporting quality. All control variables are in line with the rest of the models' findings.

Table 3.10

Regression of Mandatory CSR Reporting Regulation on the Quality of High/Low CSR Reporting

	Dep. Var. = CSR Reporting Quality (High and Low)							
	Model 1 CSR		Model 3 High-CSR		Model 4 Low-CSR		Model 5 High_Low CSR	
	Coef.	*t*-Test	Coef.	*t*-Test	Coef.	*t*-Test	Coef.	*z*-Test
Regulations	1.169	**4.02*** **	7.635	1.270	8.851	**5.130*** **	-0.208	-1.370
CG	0.199	**6.54*** **	0.216	**4.320*** **	0.089	**2.490** **	0.137	**7.320*** **
Age	4.352	**4.14*** **	-3.175	-1.240	0.811	1.540	0.734	**4.400*** **
Size	2.214	**9.56*** **	1.312	**1.690***	0.639	**2.620*** **	0.373	**3.410*** **
ROA	17.365	0.26	-23.765	-0.210	137.361	**1.770***	0.704	0.020
Lev	5.592	**3.47*** **	0.244	0.060	2.693	**1.790***	0.556	0.890
BigN	-0.315	-0.43	-0.764	-0.720	-0.817	-1.140	-0.332	-1.300
List	6.412	**3.27*** **	7.918	1.500	0.362	0.270	0.559	0.850
Ind.Sens	5.745	**4.06*** **	5.062	1.630	-0.851	-0.790	0.601	**2.010** **
_cons	-31.912	-6.64	1.639	0.140	-0.769	-0.170	-15.716	-9.120
N (firm-years)	1378		684		694		1378	
R-squared	0.179		0.190		0.310		0.240	
Year effect	Yes		Yes		Yes		Yes	

Notes: *, **, and *** represent significance at 10%, 5%, and 1% levels, respectively. High (Low) CSR is the net score divided using a dummy variable equal 1 (0) if upper (lower) quantile. High_Low CSR is the logit model where High-Low CSR is a dummy variable equal to 1 if high CSR and 0 otherwise. The rest of the variables are as defined in Appendix A. The alternative models are as follow:

Model_3: $High\text{-}CSR_Score_{i,t} = \alpha_0 + \beta_1 Reg_{i,t} + \beta_2 CG_{i,t} + \beta_3 Age_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 Lev_{i,t} + \beta_7 BigN_{i,t} + \beta_8 Listing_{i,t} + \beta_9 Ind.Sens_{i,t} + \Sigma Year + \varepsilon_{i,t}$

Model_4: $Low\text{-}CSR_Score_{i,t} = \alpha_0 + \beta_1 Reg_{i,t} + \beta_2 CG_{i,t} + \beta_3 Age_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 Lev_{i,t} + \beta_7 BigN_{i,t} + \beta_8 Listing_{i,t} + \beta_9 Ind.Sens_{i,t} + \Sigma Year + \varepsilon_{i,t}$

Model_5: $High_Low_CSR_{i,t} = \alpha_0 + \beta_1 Reg_{i,t} + \beta_2 CG_{i,t} + \beta_3 Age_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 Lev_{i,t} + \beta_7 BigN_{i,t} + \beta_8 Listing_{i,t} + \beta_9 Ind.Sens_{i,t} + \Sigma Year + \varepsilon_{i,t}$

Table 3.11 presents the results from running a cross-sectional data regression testing the original relation in model 2 using alternative sub-samples of high and low CSR quality reporting net score. The result of testing model 3 indicates that the coefficient of interaction term (*Regulation*List*) is positive 0.132 and significant at the 10% level (t = 1.79). This indicates, consistent with model 2 results, listing firms in multi-international markets would strengthen the relationship between adopting CSR new regulation and high CSR reporting quality.

In contrast with this study's predictions for the rest of the sub-hypotheses, table 3.11 indicates that none of the interaction terms of CG, firm age, size, profitability, debt ratio, external auditor type, and industry sensitivity has a significant effect on the relation between adopting CSR new regulation and high CSR reporting quality.

Model 4 in table 3.11 reports the regression results of adopting the new regulation on low CSR reporting quality. According to the interaction term (*Regulation*Age*), the negative coefficient 2.477 is statistically significant at the 1% level (t = -3.94), which indicates that older age of firms would weaken the relation between adopting CSR new regulation and low CSR reporting quality.

The negative coefficient 2.562 of the interaction term (*Regulation*Lev*) is significant at the 10% level (t = -1.97); thus the debt ratio of firms would weaken the relation between adopting CSR new regulation and low CSR reporting quality. In line with prior literature (Hull and Rothenberg, 2008), the explanation could be that highly leveraged firms are less likely to be incentivised to direct their financial resources towards CSR activities due to the additional required cost.

Moreover, interaction term (*Regulation*List*) shows a positive coefficient of 0.131 at the 1% level (t = 2.54). Thus, the results support this study's seventh sub-hypothesis, indicating that the effect of adopting CSR new regulation on low CSR reporting quality would be greater if firms are listed in multi-international markets, and in turn would enhance low CSR reporting quality in those firms.

Model 5 in table 3.11 presents an alternative regression method to test the same relations using a logistic model. Results of the interaction terms are in line with the OLS regression results of model 3 and model 4, and report a positive coefficient 1.77 of the interaction term (*Regulation*Size*) at the 5% level (t = 2.010), and a positive coefficient 0.87 of the interaction term (*Regulation*List*) at the 1% level (t = 2.760). These results indicate that the effect of adopting CSR reporting new regulation on high CSR reporting quality would be greater if firms are larger and if they are listed in multi-international markets.

Table 3.11

Regression of Mandatory CSR Reporting on the Quality of High/Low CSR Reporting in terms of Specific Factors

	Dep. Var. = CSR Reporting Quality							
	Model 2 CSR		Model 3 High-CSR		Model 4 Low-CSR		Model 5 High_Low CSR	
	Coef.	*t*-Test	Coef.	*t*-Test	Coef.	*t*-Test	Coef.	*z*-Test
Regulation	7.352	**1.980***	11.928	**1.810***	3.354	0.680	-3.924	1.400
CG	0.157	**3.990*****	0.184	**3.440*****	0.033	0.730	0.104	**4.670*****
Age	4.236	**2.100****	-2.823	-1.020	0.607	0.830	0.702	**3.150*****
Size	1.401	**2.600*****	1.756	**2.010*****	0.458	1.390	0.432	**3.460*****
ROA	20.997	0.260	-28.882	-0.250	157.486	**1.790***	9.394	0.250
Leverage	4.514	1.630	-0.106	-0.020	1.969	1.090	-0.286	0.370
BigN	-0.582	-0.500	-1.367	-1.080	0.851	1.040	-0.277	0.980
List	9.373	**5.960*****	7.524	1.580	1.825	1.030	0.401	0.580
Ind_Sens	4.387	**2.060****	2.894	0.850	-1.246	-0.930	0.419	1.180
Regulation *CG	0.121	**2.650*****	-0.716	-1.520	0.139	0.470	-0.147	1.110
Regulation *Age	-0.489	-0.950	1.140	1.290	-2.477	**-3.940*****	-0.169	0.510
Regulation *Size	-0.176	-0.550	-1.241	-0.410	1.394	0.840	1.776	**2.010****
Regulation *ROA	18.317	0.230	-0.088	-0.100	0.156	0.300	0.129	0.500
Regulation *Lev	-0.838	-0.500	-1.588	-0.750	-2.562	**-1.970***	0.337	0.820
Regulation *Big	-0.422	-0.700	24.591	0.100	-27.427	-0.350	-65.854	0.810
Regulation *List	2.543	**2.210****	0.132	**1.790***	0.131	**2.540*****	0.087	**2.760*****
Regulation * Ind_Sens	2.001	**2.310****	0.980	0.800	0.332	0.310	0.290	0.640
_cons	-28.760	-3.260	-3.434	-0.260	2.989	0.530	-14.342	7.060
N (firm-years)	1378		684		694		1378	
R-squared	0.272		0.212		0.341		0.250	
Year effect	Yes		Yes		Yes		Yes	

Notes:*, **, and *** represent significance at 10%, 5%, and 1% levels, respectively. All variables are as defined in Appendix A. The alternative models are as follow:

Model_3: $High_CSR_Score_{i,t} = \alpha_0 + \beta_1 Reg_{i,t} + \beta_2 CG_{i,t} + \beta_3 Age_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 Lev_{i,t} + \beta_7 BigN_{i,t} + \beta_8 Listing_{i,t} + \beta_9 Ind.Sens_{i,t} + \beta_{10} (\mathbf{Reg_{i,t}*CG_{i,t}}) + \beta_{11}(\mathbf{Reg*Age_{i,t}}) + \beta_{12} (\mathbf{Reg_{i,t}*Size_{i,t}}) + \beta_{13} (\mathbf{Reg_{i,t}*ROA_{i,t}}) + \beta_{14} (\mathbf{Reg_{i,t}*Listing_{i,t}}) + \beta_{15} (\mathbf{Reg*Leverage_{i,t}}) + \beta_{16} (\mathbf{Reg_{i,t}*BigN_{i,t}}) + \beta_{17} (\mathbf{Reg_{i,t}*Ind.Sens_{i,t}}) + \Sigma Year + \varepsilon_{i,t}$

Model_4: $Low_CSR_Score_{i,t} = \alpha_0 + \beta_1 Reg_{i,t} + \beta_2 CG_{i,t} + \beta_3 Age_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 Lev_{i,t} + \beta_7 BigN_{i,t} + \beta_8 Listing_{i,t} + \beta_9 Ind.Sens_{i,t} + \beta_{10} (\mathbf{Reg_{i,t}*CG_{i,t}}) + \beta_{11}(\mathbf{Reg*Age_{i,t}}) + \beta_{12} (\mathbf{Reg_{i,t}*Size_{i,t}}) + \beta_{13} (\mathbf{Reg_{i,t}*ROA_{i,t}}) + \beta_{14} (\mathbf{Reg_{i,t}*Listing_{i,t}}) + \beta_{15} (\mathbf{Reg*Leverage_{i,t}}) + \beta_{16} (\mathbf{Reg_{i,t}*BigN_{i,t}}) + \beta_{17} (\mathbf{Reg_{i,t}*Ind.Sens_{i,t}}) + \Sigma Year + \varepsilon_{i,t}$

Model_5: $High_Low_CSR_Score_{i,t} = \alpha_0 + \beta_1 Reg_{i,t} + \beta_2 CG_{i,t} + \beta_3 Age_{i,t} + \beta_4 Size_{i,t} + \beta_5 ROA_{i,t} + \beta_6 Lev_{i,t} + \beta_7 BigN_{i,t} + \beta_8 Listing_{i,t} + \beta_9 Ind.Sens_{i,t} + \beta_{10} (\mathbf{Reg_{i,t}*CG_{i,t}}) + \beta_{11}(\mathbf{Reg*Age_{i,t}}) + \beta_{12} (\mathbf{Reg_{i,t}*Size_{i,t}}) + \beta_{13} (\mathbf{Reg_{i,t}*ROA_{i,t}}) + \beta_{14} (\mathbf{Reg_{i,t}*Listing_{i,t}}) + \beta_{15} (\mathbf{Reg*Leverage_{i,t}}) + \beta_{16} (\mathbf{Reg_{i,t}*BigN_{i,t}}) + \beta_{17} (\mathbf{Reg_{i,t}*Ind.Sens_{i,t}}) + \Sigma Year + \varepsilon_{i,t}$

3.7 Summary and Conclusion

This study examined the impact of adopting the new regulation mandates CSR reporting on CSR reporting quality in the UK. To the best of the author's knowledge, this study is the first of its kind to investigate this relationship in the UK. This study can present numerous observations from the empirical results.

First, consistent with Ioannou and Serafeim's (2017) findings, the impact of mandating CSR reporting regulation on CSR reporting quality is positive, and the new regulation has helped to enhance CSR reporting quality in the UK. This enhancement influences investors' beliefs and valuations, which in turn guide the firm's investment decisions, the firm's investment decisions affect the stock price and return, and the stock price feedback into the firm's investment choices (e.g., Gao, 2010). In other words, when investors decide where to invest their money, then they will direct employees to decide where to work, and as consequence policymakers and regulators will decide what to regulate, thus they finally will direct the consumers to decide what items to purchase (Eccles and Krzus 2010) which presents the importance of the study results.

However, the positive impact of regulation on CSR reporting quality varies across different firm characteristics of CG, firm age, firm size, firm-debt ratio, listing firm in multi-international markets, and the sensitivity of the industry under which the firm is classified. Particularly, the impact of mandatory regulation will be greater for firms with high MVE, firms listed in multi-international markets, high CG quality firms, older firms, firms have a high debt ratio and are classified as sensitive industries that impose a high risk on the environment.

Second, the relation between mandatory regulation and CSR reporting quality could be affected by individual firm characteristics. However, the reported results denote that in a mandatory context, the quality of CSR reporting provided by high-quality CG firms is higher than that of lower-quality CG firms. Moreover, firms listed in multi-international markets report higher CSR quality than that reported by domestically listed firms, which mainly results from the legitimacy perspective where these firms are under more scrutiny from stakeholders than domestic listed firms are.

In the same context, a higher quality of CSR report is delivered by higher risk industries' firms (sensitive industries), as a result of legitimacy perspective where sensitive industries' firms would disclose higher CSR quality reports compared to their other industries counterparts due to the high pressure they are exposed to from stakeholders (Gao et al., 2005; Brammer and Pavelin, 2008; Reverte, 2009).

Third, regarding the influence of mandatory regulation on high CSR reporting quality compared to low CSR reporting quality, the conclusions reached by this study are consistent with legitimacy theory and indicate that mandatory regulation affects providers of low CSR reporting quality but not providers of high-quality CSR reports. Hence, the mandatory regulation enhances the low quality of CSR reports. In specific, the results indicate that mandatory regulation does not influence producers of high-quality CSR report directly, except in the case of the large firms where it is a motivation for them to increase their reporting quality to extreme levels. Similarly, multinational listed firms are motivated after the mandatory regulation to enhance their high CSR reporting quality. Regarding the low CSR reporting quality, the findings imply that older firms, which are highly leveraged and listed in multinational markets, are more likely to enhance their low CSR reporting quality after the mandatory regulation.

Generally, the practical implication of this study is related to policy-makers and regulators who enforce this new regulation or are willing to do so, by providing them with feedback to understand the effect of their decision in terms of their efforts to improve communication between firms and stakeholders in the annual report CSR-section (FASB 2013, FRC 2013). Also, the findings increase firms' reporting quality of financial reporting, enhance firms' environmental and social roles to make them more loyal to sustainability issues. This study also extends accounting literature about mandatory CSR reporting, where few countries mandate this reporting type. Thus, understanding the extent to which these regulations affect the quality of CSR reporting. Finally, further investigation of each firm's characteristic individually in terms of its impact on CSR reporting, and testing that regarding profit and loss firms could be a fruitful topic for future research. [16]

[16] The study limitation discussed in chapter six section 6.2.

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Appendix

Appendix A Variables Definitions		
Variable	**Definition**	**Source**
CSR_Score $_{i,t}$	Indicates CSR disclosure net score at the end of the year.	*Bloomberg* database
Reg $_{i,t}$	Indicates the new regulation of Act 2006 (Regulation 2013).	
Size $_{i,t}$	Indicates the size of the firm.	Datastream
BigN$_{i,t}$	Indicates the auditor type of the firm (Big 4 or not).	Datastream
Lev $_{i,t}$	Indicates the leverage (debt) of the firm.	Datastream
Age $_{i,t}$	Indicates the firm age.	Datastream
Listing $_{i,t}$	Indicates the international listing status of the firm.	Datastream, London Stock Exchange Market
ROA $_{i,t}$	Indicates the profitability of the firm by Return on Assets ratio.	Datastream
CG$_{i,t}$	Indicates the corporate governance score at the end of the year.	*Bloomberg* database
High-CSR	Indicates High CSR as a dummy variable equal one if upper quartile.	
Low-CSR	Indicates Low CSR is a dummy variable equal 1 (0) if lower quartile.	
High-Low-CSR	Indicates the logit model where High-Low CSR is a dummy variable equals one if high CSR and zero otherwise.	

CHAPTER FOUR

The Impact of CSR-related Regulation on Earnings Quality through Real and Accrual Earnings Management Proxies

Abstract

I explore the impact of mandating corporate social responsibility reporting on earnings quality through real earnings management (REM) and accrual earnings management (AEM). The empirical analysis uses the UK's FTSE All-Share data set for the period 2009 to 2017 and employs the OLS model. I document two main findings: first, I find a positive relationship between voluntary CSR reporting and REM, indicating that managers will report CSR to cover their earnings manipulation practices. Second, I find that mandating CSR reporting has helped to restrict the opportunistic behaviour of REM in the UK. In an additional test it is found that mandating CSR reporting restricts providers of both high and low CSR reporting quality in practising REM activities; specifically, it has a greater effect on firms reporting low CSR quality. However, I find no evidence that mandating CSR reporting has an impact on the AEM practice.

Keywords: Mandatory regulation, CSR, Earnings quality, Real Earnings Management, Accrual Earnings Management, High and Low CSR Quality.

4.1 Introduction

Financial statements' accounting numbers should present a genuine picture of the firm's financial position and stock in the current year. However, for short-term personal benefits and opportunistic incentives, managers might intentionally manipulate some of the year's accounting results (Healy and Wahlen, 1999). As the literature documents, managers are mainly motivated to engage in earnings management activities to manage reported earnings either within the boundaries of the Generally Accepted Accounting Principles (GAAP), where adjustments of the financial recording are done at the end of the year (accrual earnings management activities), or throughout the year (real earnings management activities)

(Roychowdhury, 2006). However, managing reported earnings might occur by violating the GAAP which is referred to as 'accounting fraud' (Beneish, 1999; Dechow and Skinner, 2000).

Recently, earnings management has received extensive attention from scholars (Kim et al., 2012). In line with that, Corporate Social Responsibility (CSR) reporting as an important type of narrative disclosure has also received considerable attention in the literature (Gao and Zhang, 2015) due to the documented fact that CSR firms react differently in terms of earnings management than non-CSR firms do (e.g., Dhaliwal et al., 2012; Kim et al., 2012). This study discusses the relationship between corporate social responsibility reporting practice and the opportunistic behaviour of earnings management under two common types (accrual and real activities) in the context of mandating CSR reporting in the UK. The study focuses on the UK environment as one of the few regions to have enforced a regulation requiring reporting of CSR. Moreover, depending on the country-specific context, the use of CSR reporting might vary between different environments and regions (e.g., Cahan et al., 2016); thus, the findings from this study would suggest the existence of a new important institutional environment.

Prior literature documents studies about the relationship between CSR reporting and earnings management but the results are mixed and varied. For instance, Cho and Chun (2016) suggest that CSR reporting enhances constraints on REM, based on the stakeholder's perspective, which explains the negative relationship between CSR reporting and REM that is found in their evidence. Similarly, Hong and Andersen (2011) and Kim et al. (2012) argue that firms with better CSR disclosure are less likely to engage in aggressive (opportunistic) earnings management through discretionary accruals and/or real activities manipulation. Conversely, Petrovits (2006) and Prior et al. (2008) provide evidence about the strategic use of CSR reporting as a shield to cover up managers' earnings management practices.

Previous findings have two implications: first, they direct researchers' attention to the role of CSR reporting as a strategy used to avoid negative response of the stakeholder groups against the managers' earnings management practices. Second, they help researchers to understand the effect of the new regulation on restricting managers' opportunistic behaviour in term of earnings management practices. These two primary aspects are the main aims of this research.

To achieve the main aims, a sample consisting of 402 FTSE All-share firms listed on the London Stock Exchange (LSE) which includes Main Market from 2009 to 2017 is gathered. From this, data for both, the period before and after the adoption of the mandatory CSR reporting regulation can be collected. Hence, OLS analysis is conducted to estimate the impact of mandating CSR reporting regulation on EM quality.

While the prior empirical results are limited, the findings of this study enrich literature through three points. Firstly, they evince the existence of REM practice before mandating CSR reporting specifically through sales manipulation, which supports the notion that managers will report CSR to cover their earnings manipulation practices. This evidence endorses the highlighted directional trend by Prior et al. (2008) and Choi et al. (2013). Secondly, the reported results denote that in a mandatory context of CSR reporting, the REM practices become more restricted, and decrease, due to the fact that managers lose competitive advantage of using CSR voluntary reporting as a shield to cover earnings management practices, which is consistent with Hong and Andersen (2011) and Kim et al. (2012). Thirdly, in the same context, a comparison between high- and low-quality CSR reporting firms implies that mandatory regulation restricts providers of both high and low CSR reporting quality of practising REM activities; more specifically, it has a greater effect on firms reporting low CSR quality.

The thesis makes several contributions to the accounting literature. First, it is a response to Christensen's (2016, p.138) call for papers, that "… future research could also examine how mandatory CSR reporting affects firms" to complement the literature that evinces the impact of voluntary CSR reporting. These findings add to a growing body of literature that studies the consequences of mandating CSR reporting. One such research stream focused on firm value and market responses to disclosure (Grewal et al., 2015; Chen et al., 2018), whereas another focuses on disclosure activities and environmental impacts (Hung et al., 2015; Ioannou and Serefeim, 2017). This study provides a new research insight by examining the impact of mandating CSR reporting on the quality of EM.

However, to date, only limited literature focuses on mandatory CSR reporting because of only a few regions mandate this reporting type specifically in the context of the UK environment, almost no evidence is found regarding adopting the new regulation in the UK.

Consequently, this narrows the understanding of the impact of these regulations on the quality of EM in general, and specifically in the UK environment which has different institutional characteristics and capital market aspects than other environments that mandate CSR reporting. Also, UK institutional investors collect private social information to assist them with investment decision-making, thus, CSR reporting considers as value-relevant to them (Solomon, 2006).

Particularly, the Act 2006 (regulation 2013) requirements different than other countries that mandate CSR reporting. For instance, in China, the Shenzhen Stock Exchange and Shanghai Stock Exchange require ESG disclosure for some specifically listed firms such as cross-listed firms and financial industry firms compared to LSE which mandates CSR reporting for all listed firms in the main market. Also, the required information to be disclosed vary from region to another between requiring ESG reporting, or CSR reporting (which includes environmental and social information according to Act 2006 (regulation 2013)). Accordingly, this study contributes to the literature by investigating the consequences of adopting the regulation of CSR reporting and the intentions behind the CSR practices in a firm, how it influences the harmful practice of earnings management in the firms, and to what extent does this regulation restricts such type of practices in the firms. Consequently, this finding improves stakeholder's decisions towards these firms in the UK environment and shrinks the lack of research in different environments which limits our understanding of the consequences of this regulation on the firms.

In more details, the findings provide unique evidence on the impact of mandated CSR reporting on earnings management, drawing on the impression theory and agency theory where managers are seen as the agents of all stakeholders seeking to impress stakeholders to conceal the harmful consequences of their earnings manipulation practices. Most of CSR literature employed the ethical perspective to explain sustainable practices in the firms, but employing the impression theory to explain the intention of managers behind practising CSR is limitedly used in the literature of CSR although it is explaining the logic behind the overinvestment in such practices.

While several studies endeavour to investigate the relationship between CSR reporting and earnings management (Chih et al., 2008; Prior et al., 2008; Sun et al., 2010; Hong and Andersen, 2011; Kim et al., 2012; Choi et al., 2013; Cho and Chun, 2016; Gao and Zhang,

2015; Martı´nez-Ferrero et al., 2016; Liu et al., 2017; Rezaee and Tuo, 2017), they present inconsistent evidence that restricts our understanding of this association. Specifically, almost no evidence provided in the literature regarding the mandatory CSR reporting impact on the earnings quality either in the UK or other countries adopts the same regulation. Accordingly, this study contributes to the literature through (i) introducing new evidence of research about the influence of mandating CSR reporting on utilising CSR practices as a shield to cover the consequences of the opportunistic behaviour of managers towards earnings management. (ii) Sending a red flag to regulators and stakeholders to warn them about the fake over-investment in CSR practices which reflects negatively on the accuracy of their decisions, and the quality of the financial reporting.

The remainder of this chapter is structured as follows. Section 4.2 reviews the related literature for the relationship between CSR reporting and earnings management. Further, presents hypotheses development. Section 4.3 discusses the research approach applied in this study. Section 4.4 presents the data sources and the sample used to test the hypotheses of the study. While section 4.5 discusses the research methodology and the metrics used to measure variables of the study. Section 4.6 shows the empirical results discussion and data analysis. Finally, section 4.7 concludes and summarises the chapter sections.

4.2 Literature Review and Hypotheses Development

4.2.1 Earnings Management Definition and Overview

Earnings management is considered one of the most interesting performance statistics for stakeholders whereby, through its financial reporting, the firm can distinguish its good performance from that of other poor financial performance firms, which in turn facilities the decision-making process of the shareholders (Healy and Wahlen, 1999). However, optimising earnings either by up-warding or down-warding income is considered an exercise of earnings management where managers manipulate earnings computation for their discretion (Watts and Zimmerman, 1978).

According to Davidson et al. (1987, p. 92), earnings management is defined as:

> “…a process of taking deliberate steps within the constraints of generally accepted accounting principles to bring about a desired level of reported earnings”.

Xu et al. (2007, p. 3), in particular, distinguish between the general definition of earnings management and the accrual earnings management (AEM) by defining accrual earnings management as follows:

> "…accrual earnings management occurs when management manipulates reported earnings by exploiting the accounting discretion allowed under GAAP. In contrast, real earnings management involves management attempts to alter reported earnings by adjusting the timing and scale of underlying business activities."

However, Roychowdhury (2006, p. 337) defines real earnings management (REM) as:

> "…departures from normal operational practices, motivated by managers' desire to mislead at least some stakeholders into believing certain financial reporting goals have been met in the normal course of operations. These departures do not necessarily contribute to firm value even though they enable managers to meet reporting goals."

Xu et al.'s (2007) definition clarifies that accrual earnings management occurs when managers utilise the way accounting choices and standards are employed in recording firms' transactions to control their reported earnings, in line with the boundaries of GAAP. On the other hand, Roychowdhury's (2006) definition suggests that real earnings management alters the structure or the time of the firm's real transactions, thus, harming the firm's future value by enforcing a new real cost. Accrual earnings management discretion could be limited by applying more restricted accounting standards, but real earnings management practices cannot be restricted in the same way (Ewert and Wagenhofer, 2005).

4.2.2 Activities and Measurements of Earnings Management

As defined above, earnings management is classified into two common types; real-based earnings management and accrual-based earnings management (e.g., Ewert and Wagenhofer, 2005; Roychowdhury, 2006; Xu et al., 2007). Both types occur in the boundaries of GAAP and before issuing the financial statements of the firm (at the end of the physical year) to mask the actual financial performance (Dechow et al., 2010).

Accrual earnings management has no direct effect on cash flow. Instead, it is biased in its reporting of earnings by adjusting accrual revenues or expenses without amending the real transactions; hence, it is less likely to harm the long-term firm value. For example, some

methods used are changing the used depreciation method, deferring taxes, and changing inventory (Xu et al., 2007).

Two main incentives support the managers' desire to upward- or downward-report earnings using AEM. The first is increasing the earnings to ensure that earnings benchmarks and/or analysts forecast is met. The second is decreasing earnings to reserve them for a later period to easily achieve future income targets (Levitt, 1998; Nelson et al., 2002).

In order to capture AEM, literature presents two methods to measure it; specific accruals method with the main focus on specific accruals such as 'bad debt provision' (e.g., McNichols and Wilson, 1988), and the aggregate accrual model which focuses on a firm's total accruals (e.g., Jones, 1991; Dechow et al., 1995). The mainstream literature employs the aggregate accrual method, specifically the Jones model or modified Jones model using a cross-sectional regression to discriminate total accruals into discretionary and non-discretionary accruals (Dechow et al., 1995). These models are preferred to capture AEM practice due to their superior specification and less restrictive data requirements, thus providing a powerful and comprehensive test for the AEM (e.g., Dechow et al., 1995; DeFond and Subramanyam, 1998).

Further, following Roychowdhury (2006) and Gunny (2010), REM activities can be classified into three types. The first is *sales manipulation*, which increases sales during the current year temporarily by offering more price discounts or more flexible credit conditions to accelerate sales from the next fiscal year to the current year. Although this would increase reported earnings of the current year, conversely, it would decrease the operating cash flow of the same year. Accordingly, it would cost the firm a loss in the future profitability once the firm restored the old prices. The second is *discretionary expenses manipulation*, which reduces the research and development (R&D) discretionary expenses, reduces the selling, general and administrative (SG&A) and reduces the discretionary expenses to improve reported earnings, but as a consequence, this reduction would harm the future cash flow. The last type is *production manipulation*; managers can increase the earnings by overproducing inventory at any time of the year to decrease reported cost of goods sold (COGS); however, this has a negative impact on the following period cash flows for the surplus of hold inventory.

Gunny (2010, p.856) argues that REM is more attractive for managers to engage in for two main reasons; first, she states that “ex-post aggressive accounting choices concerning accruals are at higher risk for Securities and Exchange Commission (SEC) scrutiny and class action litigation”. Second, “the firm may have limited flexibility to manage accruals”. For example, AEM is controlled by the firm’s business operations and accrual manipulation in later years and must occur at the end of the financial year; hence, managers cannot decide accurately which accounting treatments the auditor will authorise at that time.

Within the boundaries of GAAP, however, another less common type of earnings management is introduced in the literature – *classification shifting*. Under this activity, managers manipulate core earnings through relocating specific revenues, gains, expenses, or losses to different line items in the income statement (e.g., McVay, 2006; Athanasakou et al., 2009; Zalata and Roberts, 2017). Hence, associating the incentives behind earnings management with other aspects (e.g., executive compensation, accounting standards, audit quality, analysts’ forecast, corporate governance) can determine the type of earnings management activity which managers would apply (e.g., Roychowdhury, 2006; Chi et al., 2011; Zang, 2012).

Other less-used classifications of earnings management are introduced in the literature; these include big bath (Scott, 1997), earnings smoothing, earnings losses and decrease avoidance (Chih et al., 2008), cookie jar reserves, materiality, and revenue recognition (Levitt, 1998).

Following the majority of literature (e.g., Roychowdhury, 2006; Prior et al., 2008; Kim et al., 2012; Martı´nez-Ferrero et al., 2014), this study uses the two most common types of earnings management to capture the effect of CSR reporting on earnings management; namely, REM and AEM. To measure REM practice, Roychowdhury (2006) presents three main models – *sales manipulation*, *production manipulation*, and *discretionary expenses* manipulation. However, Gunny (2010) uses an additional but less common model of the timing of asset sales which is not used in this study.

4.2.3 Motivations of Earnings Management

According to Healy and Wahlen (1999) managers are incentivised to manage earnings for many different reasons, which can be sorted into three main groups:

The first type is the capital market incentive. The two major examples of this type are: (i) Earnings benchmarks which aim to meet or beat important earnings benchmarks, such as avoid earnings decrease (Burgstahler and Dichev, 1997) or report positive profit (Roychowdhury, 2006); but, as Degeorge et al. (1999) document, once the managers reach the desired profitability they attempt to encounter other benchmarks such as meeting the analysts' forecast (Dechow et al., 2003; Graham et al., 2005). (ii) Manipulating earnings upwards around specific stock market situations, such as an initial public offering (IPO) to boost the IPO stock price which misleads investors' decision-making process (Morsfield and Tan, 2006). Another example is seasoned equity offering (SEO) (Lee and Masulis, 2009), which proved that practising earnings management during the offering year negatively affected the subsequent stock market performance (Rangan, 1998).

The second motivation is contracting incentives; there are two types: (i) Managers' compensation contracts, where managers are motivated to manage earnings upward to meet compensation targets that are based on their performance (Efendi et al., 2014). (ii) Lending contracts which motivate firms' managers to utilise earnings practices to avoid debt covenant violations, for the high cost it causes to the firm and in turn to the manager's interests (Watts and Zimmerman, 1986; Sweeney, 1994; Franz et al., 2014).

The third type of motivation, political cost and regulatory incentives, appears when firms' earnings are subject to governmental scrutiny; therefore, managers exercised upward or downward earnings management in order to influence or avoid governmental interference (Han and Wang, 1998; Cho and Sachs, 2012).

4.2.4 Corporate Social Responsibility and Earnings Management

Although the literature documents studies about the relationship between CSR reporting quality and earnings management, the results are mixed and varied. Also, relatively few studies examine the relation between CSR and earnings management and its main focus is not on the opportunistic use of CSR within agency and impression theoretical frameworks (Chih et al., 2008; Prior et al., 2008; Sun et al., 2010; Hong and Andersen, 2011; Kim et al., 2012; Choi et al., 2013; Cho and Chun, 2016; Gao and Zhang, 2015; Martı´nez-Ferrero et al., 2016; Liu et al., 2017; Rezaee and Tuo, 2017). Therefore, this study's proposal is in line with

some previous researchers who shed light on the positive association between CSR reporting quality and earnings management under two types, REM and AEM.

Liu et al. (2017) examine the firm's practice of REM and AEM activities through its CSR activities in the context of family ownership based on the agency theory. Using the S&P 500 company sample[17], they find no relationship between earnings management practices and CSR activities among their sample, but the relations appear only in the context of family ownership and involvement in the firm's management. In a cross-country study, Martı´nez-Ferrero et al. (2016) investigate the relationship between CSR disclosure and the cost of AEM practices. They mainly determined the effect of AEM and CSR disclosure practices on the cost of capital and corporate reputation, particularly when CSR disclosure practices are carried out strategically to avoid negative response of the stakeholder groups against the managers' earnings management practices. They document a positive relationship where CSR practices can be used as a protection against the negative effect of AEM on the cost of capital. Another significant study is by Cho and Chun (2016), who investigate Korean firms to understand the relation between CSR disclosure and REM regarding CG characteristics. They find that CSR disclosure imposes constraints on REM, based on the stakeholders' perspective, which explains the negative relationship between CSR disclosure and REM that they reported in their findings.

One of the recent studies conducted among the US firms is that of Rezaee and Tuo (2017) who employ stakeholder theory, legitimacy theory and signalling theory to investigate the association between qualitative and quantitative CSR disclosure proxies and earnings management quality. They employ two proxies for earnings management, the AEM, and a specially constructed tool, 'innate' earnings (measures items such as production function, business model, and a competitive environment). They provide two pieces of evidence that CSR disclosure is positively related to innate earnings quality and negatively associated with AEM. These findings are in line with Alsaadi et al. (2017) results.

Recent evidence from US firms about the relation between CSR disclosure and AEM is found in Gao and Zhang's (2015) study which investigates earnings smoothing (AEM) association with value relevance based on the market efficiency theory, in the context of CSR disclosure.

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[17] S&P is an American stock market index based on the market capitalisations of 500 large companies having common stock listed on the NYSE or NASDAQ

Their study is applied on US firms and documents a negative relation between CSR disclosure score and earnings smoothness; that means CSR firms reduce or avoid earnings manipulation through discretionary smoothing, and CSR disclosure improves information quality.

Choi et al. (2013) conduct a study of Korean family ownership firms to examine the relation between quality of earnings management and CSR disclosure, in particular, under the effect of the business group affiliation and ownership structure of firms. They argue that managerial opportunism drives managers' incentives to engage in CSR disclosure, which weakens as the portion of shares held by institutional investors' increases. Moreover, they found two different results to clarify this relation; first, that the correlation between CSR disclosure and AEM is negative when all firms are considered. Second, the former result suggests that the relation weakens when institutional ownership concentration increases. Hence, CSR disclosure can be used as a mask by firms with highly concentrated ownership to conceal their poor quality of earnings. However, their argument holds to understand how the CSR disclosure ratings are associated with AEM quality.

Kim et al. (2012), however, contribute significantly to the literature in a study of US firms by examining the social responsible firms' relationship with earnings management behaviour. They cover two types of earnings management; accrual and real activities. However, they show that firms which disclose CSR are less likely to engage in aggressive (opportunistic) earnings management through discretionary accruals and/or real activities manipulation. In line with stakeholder theory, the results support the notion that CSR disclosures are motivated by managers' incentives to be honest, trustworthy, and ethical, which reflects on firms by them becoming more conservative in their accounting and operating decisions to provide more transparent financial information. Similarly, Hong and Andersen (2011) conduct a study among US firms to examine whether more CSR disclosure will have higher or lower earnings management quality. Their findings are consistent with the literature and the followed theory of stakeholder management, supporting the notion that firms with better CSR disclosure are less likely to engage in both REM and AEM. These findings are in line with Mouselli et al. (2012) results.

In the same context, Sun et al. (2010) conduct a study of UK FTSE firms over the year 2007 adopting a multi-theoretical base of signalling, agency, and stakeholder theories. They argue

that the relationship between corporate environmental disclosure (CED) and AEM is insignificant in regulated and unregulated industries. In their study, they analyse the CED through the waste, water, climate change (and energy use), and the European Union emissions trading scheme as a branch of CSR disclosure.

Further significant international evidence about the relation of CSR disclosure and earnings management is provided by Chih et al. (2008). They conduct a study of 46 countries to investigate whether CSR disclosure has a positive or negative effect on the quality of publicly announced financial information and whether CSR disclosure mitigates or increases the extent of earnings management. They examine three types of EM (earnings smoothing, earnings aggressiveness, and earnings losses and decreases avoidance), providing inconsistent results depending on which proxy of earnings management practice they test. They conclude that firms with more commitment to CSR disclosure are more likely to be aggressive in AEM but are less interested in engaging in earnings loss avoidance and earnings smoothing. These results are driven by opportunistic theory.

Moreover, Prior et al. (2008) investigate the strategic use of CSR disclosure as a shield in firms to cover earnings management practices, using an across-country sample from 26 multi-national countries. On the grounds of agency theory, they document that firms with higher CSR disclosure are more likely to practice AEM. One of the most significant studies to observe the strategical use of charitable plans in the firms to cover up the earnings management practices through earnings upward results from manipulating the charitable choices of the firm was conducted by Petrovits (2006). Similarly, McWilliams et al. (2006) provide evidence about the use of CSR activities by managers for their interests and gains.

Table 4.1

Key Articles on the Relation between CSR Reporting and EM

Author, Date, Country, & Journal Rank	Research Objective	Theory	Data Source & Year	Variables Used and (Finding)
Rezaee and Tuo (2017) **US** *******	Examine the association between the quantity and quality of sustainability disclosures and earnings quality in the context of corporate ethical value and culture.	- Stakeholder theory - Legitimacy Theory -Signalling Theory	Self-constructed measure 1999 -2015	- Innate earnings quality (+) - AEM (-) - Firm Size (+) - ROA (+) - Leverage (-)
Liu et al.	Examine how family	Agency theory	KLD	- AEM (0)

Author, Date, Country, & Journal Rank	Research Objective	Theory	Data Source & Year	Variables Used and (Finding)
(2017) **US** ***	involvement in the ownership and management, affects its engagement in earnings management through its corporate social responsibility activities.		2003–2010	- REM (0) - Firm Size (-) - Leverage (+) - Adj_ROA (0) - Market to book ratio (0) - Big Auditor (0) - Growth (+) - Loss (0) - Firm Age (0)
Cho and Chun (2016) **Korea** **	Examine whether a firm's corporate social responsibility activities are associated with real activities earnings management.	Stakeholder Perspective.	Korea Economic Justice Institute 2005–2010	- REM (-) - Firm Size (+) - Market to book ratio (-) - Adj_ROA (-) - Leverage (+) - Research & development intensity (-) - Big Auditor (0) - Equity offering (0) - Advertising intensity (0) - Firm age (+)
Gao and Zhang (2015) **US** ***	Examine the differential effects of earnings smoothing and CSR on firm valuation.	Market efficiency theory	KLD 1993-2010	- Total Accrual earnings management (-) - AEM (-)
Martı´nez-Ferrero et al. (2014) **Multi-national** ***	Examine the effect of CSR and EM on the cost of capital and corporate reputation.	-Stakeholder theory -Legitimacy theory	Ethical Investment Research Service (EIRIS) 2006-2010	- AEM (-) - Firm Size (+) - Leverage (0) - Risk (0) - Working capital (+) - Research and development intensity (0)
Choi et al. (2013) **Korea** ***	Examine CSR association with earnings quality for firms with different ownership structures.	- Stakeholder theory - Legitimacy theory	KEJI Index 2002-2008	- AEM (-) - Ownership concentration (-) - Shares held by institutions (+) - Shares held by foreigners (-) - Proportion of outside board members (0) - Firm Size (+) - Leverage (-) - Research and development intensity (+) - ROA (+) - Book to market ratio (-)
Kim et al. (2012) **US** ***	Examine whether socially responsible firms behave differently from other firms in their financial reporting.	-Ethical theory -Political theory -Integrative theory	KLD 1991-2009	- AEM (-) - REM (-) - Incidence of accounting and auditing enforcement releases (-) - Firm Size (-) - Market to book ratio (-) - Adj_ROA (+) - Big auditor (+) - Leverage (0) - Equity offerings (0) - Research & development intensity (-) - Advertising intensity (0)

Author, Date, Country, & Journal Rank	Research Objective	Theory	Data Source & Year	Variables Used and (Finding)
				- Corporate governance (0) - Firm age (-) - ADMIRED listing (+)
Hong and Anderson (2011) **US** ***	Examine the relationship between corporate social responsibility and earnings management.	Stakeholder theory	KLD 1995 - 2005	- AEM (-) - REM (-) - Firm Size (-) - Operating cycle (+) - Cash flows (+) - Net income (+)
Sun et al. (2010) **UK** **	Examine the association between corporate environmental disclosure and earnings management.	- Signalling theory - Agency theory - Stakeholder - Legitimacy theory.	(FTSE) All-share Index 2007	- AEM (0) - Firm Size (+) - Leverage (0) - ROA (0) - Audit committee meeting (0) - Industry sensitivity (-)
Prior et al. (2008) **Multi-national** ***	Examine the relationship between earnings management and corporate social responsibility.	Agency theory	KLD 2002 - 2004	- AEM (+) - Research & development intensity (0) - Ownership concentration (0) - Institutional ownership (0) - Risk (+) - Firm Size (+) - Leverage (-) - Financial resources (0)
Chih et al. (2008) **Multi-national** ***	Examine the impact of CSR-related features on the earnings quality.	Multi theory base	The FTSE4Good Index Series 1993–2002	- Earnings smoothing (-) - Earnings aggressiveness (+) - Earnings loss avoidance (-) - Firm Size (-) - Market to book ratio (0) - Debt to equity ratio (0) - Big auditor (-) - Anti director rights (-) - Legal enforcement (-)

Notes: This table summarises the most significant studies examining the relationship between CSR reporting and earnings management. *, **, and *** Represent the ABS journal ranking. Signs are identified as follow: significant positive relationship (+), significant negative relationship (-), insignificant relationship (0).

4.2.5 Hypothesis Development

Corporate social responsibility reporting, as Jensen and Meckling (1976) and McWilliams et al. (2006) argue, is indeed related to the managers' self-interests; in this context, managers' opportunistic intentions of practising and reporting CSR to reflect and reporting CSR to mislead stakeholders about the firm's performance. The authors concluded that managers would engage in CSR reporting to cover up their misconduct and impress stakeholders (Hemingway and Maclagan 2004; Prior et al., 2008). In this context, Goffman (1959) discusses impression management, where managers try to direct the impression that a significant stakeholder has of them (Sornes et al., 2010). Nowadays, firms use this form of

‘impression management’ to present themselves indirectly in a better light which influences the stakeholders’ impression about the firm’s performance; in other words, managing the content of information in firm reports with the intent of "distorting readers’ perceptions of corporate achievements" (Godfrey et al., 2003, p. 96).

However, the descriptive section of the annual reports (including CSR reporting) is now longer, more complex, and more important compared to the case in previous years. As a result, a firm’s chances to impress stakeholders are increased by adding more detailed information about the firm in the best possible light, which elicits the desired reaction from stakeholders. More specifically, when firms are mandated to report about their CSR activities, they will feel under scrutiny from stakeholders and externals, which pushes them to enhance their CSR activities to impress these parties and avoid any governmental penalties and at the same time they may lose the advantages of reporting CSR voluntary. Hence, this study investigates the mandatory reporting type and the voluntary type.

From the view of impression theory and opportunistic perspective of agency theory, the suggested relation between CSR reporting and earnings management is a positive and an essential one. The importance of this relationship is explained through its negative impact for shareholders, communities, job security, employees, and managers’ reputation as Zahra et al. (2005) document. The same study clarifies that managers are likely to behave defensively to protect their reputation and job positions against stakeholders’ and stockholders’ reactions to their practices of earnings management, which in turn incentivises the managers to seek stakeholders’ support to reduce the negative effect of earnings management practices. Fombrun et al. (2000, cited in Prior et al., 2008, p. 161) explain the consequences of managers’ defensive behaviour,

> *“The consequence is that the manager is under the threat of rogue behaviour by employees, misunderstanding from customers, pressure from investors, defection from partners, legal action from regulators, boycotts from activists, illegitimacy from the community, and exposure from the media. Ultimately, these threats may destroy the firm’s reputation capital. “*

Finally, this would leave the manager with no choice but to protect himself and avoid any rebuke or possible loss of their job by enhancing the firm’s performance, and satisfying the shareholders through investing in CSR practices and reporting as an entrenchment tactic (Cespa and Cestone, 2007; Martı´nez-Ferrero et al., 2014).

On the other hand, engaging in CSR practices such as environmental issues, employees' relationships, human rights, and social and community issues is a privilege. In addition to impressing stakeholders and enhancing their satisfaction, it helps to maintain a positive image for the firm, which increases legitimacy among the community, and in turn influences the firm's reputation (Orlitzky et al., 2003). Consequently, the good reputation of a firm enhances the regulatory treatment, improves suppliers' connections and trust, and decreases the scrutiny of investors (Prior et al., 2008). Overall, practising and reporting CSR helps to maintain the mentioned consequences of exercising earnings management activities, and vice versa, exercising earnings management activities motivates managers to practice more CSR even if they are not committed to sustainable practices.

This study draws on the impression theory and agency theory where managers are seen as the agents of all stakeholders seeking to satisfy and impress stakeholders. According to the later discussed literature about the CSR reporting association with earnings management and the motivations behind such a relation, it is highlighted that voluntary CSR reporting can be used to gain support from stakeholders and, consequently, offers the possibility for entrenchment to those managers that exercise earnings management practices and to conceal their practices consequences. Therefore, this study hypothesises that when managers deceive stakeholders about the firm's actual financial status seeking personal interests and benefits, they would like to validate such act by seeking the stakeholders' participation in such activities. Thus, enhancing CRS activities and reporting in the firm is sufficient to attract and satisfy stakeholders' interests. Accordingly, this study pre-assumes that managers who are motivated to manage earnings will boost the firm's voluntary CSR activities and reporting. This argument leads to the following hypothesis:

First Hypothesis*: There is a positive relationship between CSR reporting quality and firms' earnings management practice.*

On the other hand, if the CSR reporting method is changed from voluntary to mandatory, employing the same theories, the benefits of investing in CSR practices would be less attractive to opportunistic managers. Hence, they might be driven to other methods rather than mandatory CSR practices to distinguish themselves and impress and attract stakeholders while seeking to mask earnings management practices consequences. Thus,

we might not recognise any positive relation between mandatory CSR and earnings management. However, this suggestion leads to the following hypothesis:

***Second Hypothesis**: The relationship between CSR reporting quality and firms' earnings management practice will be negative after the new regulation of Act 2006 (Regulations of 2013).*

4.3 Research Approach

As discussed in chapter three section 3.3, this study mainly adopts the inductive approach to conduct the primary data of this research. However, the deductive method is employed to collect the secondary data which found in the prior literature. Moreover, this research uses the quantitative method to collect the required data to test the developed hypotheses.

4.4 Data and Sampling

The study sample consists of 402 FTSE All-share firms listed on the London Stock Exchange (LSE) which includes Main Market from 2009 to 2017. The period is chosen considering the comparison criterion in this study to be three years around the new regulation of mandating CSR reporting in the UK in the year of 2013. One additional year (2009) is added to the period for the requirements of running the regression (REM equations' requirements).

Following prior literature (e.g., Gunny, 2010; Sun et al., 2010; Kim et al., 2012; Liu, 2017), firms of financial institutions, banks, communication (SIC 6000-6799)[18], transportation and utility industries (SIC 4400-4999) are excluded. Later literature explains that this exclusion enhances the comparability of the results among the sample, where the mentioned sectors operate in highly regulated industries which differ with their accounting rules from those in other industries. Furthermore, Matsumoto (2002) argues that there are different incentives that drive managers to manage earnings from those in other industries. This requirement reduces the initial sample from 3390 observations to 2396 observations.

Following the literature (e.g., Roychowdhury, 2006; Gunny, 2010; Zang, 2012), the sample firm-year observations should include sufficient data to calculate REM, with none missing. In addition to excluding the missing data observations in the dependent variable, this criterion reduces the full sample to 1620 observation and 225 firms that the researcher uses to test the hypotheses as presented in Table 4.2. Moreover, following the literature (Gunny, 2010;

[18] SIC code stands for Standard Industrial Classification. Each industry is defined as division by its 2-digit SIC code

Athanasakou et al., 2011; Zang, 2012) the sample variables are winsorized in both tails at the 1% level of their distribution to avoid the influence of extreme outliers.

The study dataset is compiled using the following sources: (1) financial data for all firms, and the control sample were obtained from the *Datastream* database; (2) the *Bloomberg* database was used to extract the CSRD and CG scores; and (3) firms are identified using the list of FTSE All-share on the London Stock Exchange website during the period 2009-2017.

Table 4.2

Sample Selection Criteria for CSR Reporting and EM

Sample Selection Criteria	Number of Firms	Number of Observations
Firm-year observations FTSE All-share firms listed on the London Stock Exchange available on *Bloomberg* database from 2009 to 2017 for CSR reporting score.	402	3389
Less:		
Missing data observations	55	775
Firms in the financial and utility industries.	121	994
Firms without sufficient data to calculate the proxies of EM.	1	783
The full sample used by the author to test the hypotheses	225	1620

This table presents the sample selection criteria used in the study.

4.5 Research Methodology and Methods

4.5.1 Independent Variables

4.5.1.1 Corporate Social Responsibility Reporting Quality

The *Bloomberg* database evaluates CSR level on dimensions including environmental, social, and governmental (ESG) disclosure. Reporting net scores range from 0 to 100 reflecting the overall extensiveness of firms' reporting of each dimension rather a detailed score for each component in these dimensions.[19] *Bloomberg* adjusts ESG score consistently with each industry to ensure that each firm is assessed based on relevant data related to its specific industry, and weights each item in the score by its importance (Gutsche et al., 2017). However, ESG *Bloomberg* score includes the following headings for the environmental dimension; CO2 emissions, energy consumption, water use, and total waste. The social

[19] Bloomberg provides a score (net score) for each dimension of ESG individually (which comes from evaluating set of related components for each dimension), and a total score for all three dimensions together, but it does not provide a score for each component included in these dimensions separately.

dimension items are number of employees, contract type and turnover, community service expenditure, and human rights. The last dimension is corporate governance (CG), which consists of information about board structure, board independence, board executives and diversity, board committees, audit committee, and compensation committee, among others (*Bloomberg* database).

With regards to the new regulations of mandating CSR reporting in the UK, it requires the firms to disclose the impact of firms' business on the environment, the company's employees, and social, community and human rights issues (Act 2006, s414 (7)). Hence, this regulation is required to include two dimensions of the main ESG score – environmental and social – to understand the effect of mandating CSR reporting. However, because this study is controlling for CG quality, it is excluded (to be used separately) from the total score to finish with only two scores of ESG – environmental and social disclosure. To calculate a total score to measure CSR reporting, this study takes the average of summing the total score of CSR with the total score of environment disclosure.

4.5.1.2 The New Regulations of Mandated Corporate Social Responsibility Reporting

This study investigates the effect of the new regulations Act 2006 (regulation 2013) which mandates the reporting of CSR on the quality of CSR reporting. To measure the new regulation, a dummy variable will take the value "1" if firm i is located in the mandatory year's group, and "0" otherwise.

4.5.2 Dependent Variables

Firms have the choice to use one type or two types of earnings management, REM and AEM or both together depending on the firm's business conditions, costs and advantages of each method (Cohen et al., 2008; Zang, 2012). Following the literature (e.g., Cohen et al., 2008; Kim et al., 2012) this study employs REM and AEM as the dependent variables, considering the relation between CSR reporting and the two main earnings management methods.

4.5.2.1 Real Earnings Management

Following prior studies (e.g., Prior et al., 2008; Kim et al., 2012**;** Choi et al., 2013; Gao and Zhang, 2015; Martı´nez-Ferrero et al., 2016; Liu et al., 2017; Rezaee and Tuo, 2017), this study examines REM using five measures developed by Roychowdhury (2006), and Gunny

(2010): (1) abnormal discretionary expenditures (*Ab_DISC*); (2) abnormal production (*Ab_PROD*), (3) abnormal cash flow from operations (*Ab_CFO*), (4) first aggregate measure of real earnings management (*REM_1*), and (5) second aggregate measure of real earnings management (*REM_2*). Hence, the residuals from these estimation models denote measures of real earnings management activities[20]:

(1) $(CFO_{i,t}/TA_{i,t-1}) = \alpha_0+\beta_1*(1/TA_{i,t-1})+\beta_2*(SR_{i,t}/TA_{i,t-1})+\beta_3*(\Delta SR_{i,t}/TA_{i,t-1}) +\varepsilon_{i,t},$

(2) $DISC_{i,t} / TA_{i,t-1} = \alpha_0 + \beta_1 * (1/TA_{i,t-1}) + \beta_2 * (SR_{i,t-1}/ TA_{i,t-1}) + \varepsilon_{i,t},$

(3) $PROD_{i,t} / TA_{i,t-1} = \alpha_0 + \beta_1 (1/TA_{i,t-1}) + \beta_2 (SR_{i,t} / TA_{i,t-1})+\beta_3 (\Delta SR_{i,t} / TA_{i,t-1})+\beta_4 (\Delta SR_{i,t-1} / TA_{i,t-1}) +\varepsilon_{i,t},$

(4) *REM_1 = Ab_DISC**(-1) + *Ab_PROD.*

(5) *REM_2 = Ab_DISC* *(-1) + *Ab_CFO* *(-1).

4.5.2.1.1 The Abnormal Level of Cash Flows from Operations

The first measure of REM activities is the *Ab-CFO*, where firms can manage earnings by employing sales price discounts or offering more flexible credit conditions to clients to increase sales revenues. Still, this increase in sales volume is temporary, and once the firm returns to the original sales prices, earnings are going to disappear (Roychowdhury, 2006). Accordingly, sales-based earnings management may lead to a decrease in the period operating cash flow.

To capture REM through *Ab_CFO*, this study follows models implemented in the studies of Roychowdhury (2006), Cohen et al. (2008), Badertscher (2011) and Cohen and Zarowin (2010). First, the actual cash flows from operations are generated as a linear function of sales revenue and change in revenue in the current year. It is worth mentioning that all variables are deflated by lagged total assets, consistent with later studies[21].

Next, this study runs a cross-sectional regression for all firms listed in the LSE for each industry and year of the sample firms to estimate the following model,

$$(CFO_{i,t}/TA_{i,t-1}) = \alpha_0+\beta_1*(1/TA_{i,t-1})+\beta_2*(SR_{i,t}/TA_{i,t-1})+\beta_3*(\Delta SR_{i,t}/TA_{i,t-1}) +\varepsilon_{i,t}, \quad \textbf{(4.1)}$$

[20] Following Cohen and Zarowin (2010) and Zang (2012) *Ab_PROD* and *Ab_CFO* are not combined because adding these two amounts leads to double counting REM.

[21] Easton and Sommers (2003) argue that there are numerous possible benefits of that. For instance, scale differences largely disappear, risk differences tend to become smaller through time for a given company than across companies, and biases in coefficients on leverage and size would be inconsequential without deflating.

where $CFO_{i,t}$ is cash flows from operations for firm i in the year t, defined as cash flows from operations divided by lagged total assets; $TA_{i,t-1}$ is the total assets at the beginning of period t for firm i; $SR_{i,t}$ is the sales revenue during period t for firm i; $\Delta SR_{i,t} = SR_{i,t} - SR_{i,t-1}$; i is the firm; and $\varepsilon_{i,t}$ is the error term.

The second step is to estimate the normal cash flow from operations ($Normal\text{-}CFO_{i,t}$). The researcher uses the estimated coefficients α_0, β_1, β_2, and β_3 from equation (4.1) for each year and industry as follows:

$$Normal\text{-}CFO_{i,t} = \hat{a}_0 + \hat{B}_1*(1/TA_{i,t-1}) + \hat{B}_2*(SR_{i,t}/TA_{i,t-1}) + \hat{B}_3*(\Delta SR_{i,t}/TA_{i,t-1}), \qquad \textbf{(4.2)}$$

Finally, this study calculates the abnormal level of cash flows from operations ($Ab_CFO_{i,t}$) for every firm as actual cash flows from operations ($CFO_{i,t}/TA_{i,t-1}$) minus the prediction of ($Normal\text{-}CFO_{i,t}$) from equation (4.2) as follows:

$$Ab_CFO_{i,t} = (CFO_{i,t} / TA_{i,t-1}) - (Normal\text{-}CFO_{i,t}). \qquad \textbf{(4.3)}$$

If firms manage earnings by boosting sales, *Ab_CFO* is expected to be negative; therefore, the researcher multiplies the abnormal cash flows by (-1) so that higher values indicate more REM to produce the variable *Ab_CFO*.

4.5.2.1.2 The Abnormal Level of Dictionary Expenses

Managing earnings through delaying some expenses like R&D, advertisement, and education – which are measured as an abnormal level of selling, general and administrative expenses (*SG&A*) – is the second method of REM; namely, the abnormal level of discretionary expenses (*Ab_DISC*) (Graham et al., 2005). If managers reduce or delay the spending in SG&A expenses to achieve some earnings targets in the current period, then *Ab_DISC* will be negative.

To derive the normal level of dictionary expenses associated with REM cross-sectionally for each industry and year, this study draws from Roychowdhury's (2006) model[22], by estimating the actual dictionary expenses from operations (*Normal_DISC*) as a linear

[22] For calculating the Ab-Disc, Roychowdhury (2006) includes separately the advertising expenses item for discretionary expenses. In this study, advertising expenses are already included in the annual *Datastream* data items for selling, general and administrative.

function of lagged sales for the current period for all firms listed on the LSE for each industry and year as follows,

$$DISC_{i,t} / TA_{i,t-1} = \alpha_0 + \beta_1 * (1/TA_{i,t-1}) + \beta_2 * (SR_{i,t-1}/ TA_{i,t-1}) + \varepsilon_{i,t}, \quad \textbf{(4.4)}$$

where $DISC_{i,t}$ is the discretionary expenses that are defined as the sum of research and development (R&D), advertising, and selling, general and administrative expenses (SG&A) in year t for firm i[23]; $TA_{i,t-1}$ is the total assets at the beginning of period t for firm i; and $SR_{i,t-1}$ is the sales revenue at the beginning of year t for firm i[24].

Using the generated coefficients from equation (4.4) this study computes the normal dictionary expenses from operations and then finds the difference between the actual discretionary expenses ($DISC_{i,t}/TA_{i,t-1}$) and the normal level of discretionary expenses ($Normal_DISC_{i,t}$) as follows:

$$Ab_DISC_{i,t}= (DISC_{i,t}/TA_{i,t-1}) - Normal_DISC_{i,t}. \quad \textbf{(4.5)}$$

This study, however, multiplies the abnormal expenses by (-1) so that higher values imply more REM to produce the variable *Ab_DISC*.

4.5.2.1.3 The Abnormal Level of Production Costs

The last measure of real earnings management activities is *Ab_PROD*. To increase net income for the current period, managers would reduce fixed manufacturing overhead costs by increasing their normal inventory production, which resulted in decreasing the costs per unit and increasing net income, and vice versa (Cohen et al., 2008). Thus, if firms produce a greater volume of products than they need in order to manage earnings upward, *Ab_PROD* will be positive.

$$PROD_{i,t}/TA_{i,t-1}= \alpha_0 + \beta_1(1/TA_{i,t-1})+\beta_2(SR_{i,t}/TA_{i,t-1})+\beta_3(\Delta SR_{i,t}/TA_{i,t-1})+\beta_4(\Delta SR_{i,t-1}/TA_{i,t-1}) +\varepsilon_{i,t}, \quad \textbf{(4.6)}$$

where $PROD_{i,t}$ is the sum of the cost of goods sold in year t for firm i and the change in inventory from t-1 to t; $TA_{i,t-1}$ is the lagged total assets in firm-year; $SR_{i,t}$ is the sales revenue

[23] As long as SG&A expenses are available, advertising expenses and R&D are set to zero if they are not available in the *Datastream* database.

[24] Generally, firms with higher sales have higher expenses so the coefficients on lagged sales should be positive.

in year t for firm i; $\Delta SR_{i,t}$ is the change in sales revenue from year i to t; and $\Delta SR_{i,t-1}$ is the change in sales revenue at the beginning of year t for firm i.

For each firm listed in the LSE for each industry and year, this study computes the abnormal level of production cost (*Ab_PROD*) as the difference between the actual productions values costs and the normal levels predicted from equation (4.6).

4.5.2.1.4 Aggregate Real Earnings Management Measures

Following Cohen and Zarowin (2010) and Zang (2012), two combined REM measures including the three individual proxies of REM (abnormal cash flows from operations, abnormal discretionary expenses, and abnormal production costs) have been developed to capture the total effect of REM.

REM_1 is the first measure which aggregated abnormal discretionary expenses and abnormal production cost as one measure after being multiplied by negative one, as the following:

$$REM_1 = Ab_DISC*(-1) + Ab_PROD. \qquad \textbf{(4.7)}$$

A higher amount of *REM_1* indicates that firm-years are more likely to be cutting discretionary expenses and overproduction to increase reported earnings.

The second aggregate measure is *REM_2* which adds abnormal cash flows from operations to the abnormal discretionary expenses and multiplies it by negative one to aggregate into one measure, as the following:

$$REM_2 = Ab_CFO * (-1) + Ab_DISC * (-1). \qquad \textbf{(4.8)}$$

As for *REM_1*, the higher these amounts are, the more likely the firm is to be engaging in sales-based manipulation and cutting discretionary expenses to upward reported earnings[25].

4.5.2.2 Accrual-based Earnings Management

Following prior studies on earnings management (e.g., Kothari et al. 2005; Prior et al., 2008; Sun et al., 2010; Kim et al., 2012; Choi et al., 2013; Liu et al., 2017) that use measures of discretionary accruals as a proxy for earnings management, similarly, this study uses the

[25] Following Cohen and Zarowin (2010) and Zang (2012) the researcher does not combine *Ab_PROD* and *Ab_CFO* because the same activities that lead to abnormally high production costs also lead to abnormally low cash flow; thus, adding these two amounts leads to double counting REM.

cross-sectional version of the modified Jones' (1995) model. Following Kothari et al. (2005), this study uses the adjusted-performance modified Jones' model which includes return on assets (ROA) in the prior year as a regressor in the estimation model to control for the effect of performance on measured discretionary accruals, thus enhancing the reliability of inferences from discretionary accruals estimates[26].

Normal accruals are, therefore, estimated using the following cross-sectional regression for each 2-digit SIC industry and year for UK FTSE All-share firms as follows,

$$(Total\ ACC_{i,t}/TA_{i,t-1}) = \alpha_0 + \beta_1 * (1/TA_{i,t-1}) + \beta_2 * ((\Delta SR_{i,t} - \Delta AR_{i,t})/TA_{i,t-1}) + \beta_3 (PPE_{i,t}/TA_{i,t-1}) + \beta_4 * ROA_{i,t} + \varepsilon_{i,t}, \quad \textbf{(4.9)}$$

where $Total\ ACC_{i,t}$ is the total accruals calculated as the differences between net income before extraordinary items and cash flows from operations; $TA_{i,t-1}$ is lagged total assets; $CFO_{i,t}$ is cash flows from operations reported in the statement of cash flows in year t; $PPE_{i,t}$ is the gross value of property, plant, equipment; and $ROA_{i,t-1}$ is return on assets measured as net income before extraordinary items divided by total assets at the beginning of year t.

The coefficients estimates from equation (4.9) are used to estimate normal accruals ($Normal_Acc_{i,t}$) for UK FTSE All-share firms as follows:

$$Normal_ACC_{i,t} = \hat{\alpha}_0 + \hat{B}_1 * (1/TA_{i,t-1}) + \hat{B}_2 * ((\Delta SR_{i,t} - \Delta AR_{i,t})/TA_{i,t-1}) + \hat{B}_3 (PPE_{i,t}/TA_{i,t-1}) + \hat{B}_4 * ROA_{i,t-1} + \varepsilon_{i,t}, \quad \textbf{(4.10)}$$

where $\Delta AR_{i,t}$ is change in accounts receivable, calculated as net receivables in year t less net receivables in year t-1.

Following Kothari et al. (2005), this study subtracts the change in accounts receivable from the change in sales revenue before estimating equation (4.10), where the measure of discretionary accruals is the difference between total accruals and the fitted normal accruals, defined as

$$DISC_Acc_{i,t} = (Total_ACC_{i,t}/TA_{i,t-1}) - Normal_ACC_{i,t}. \quad \textbf{(4.11)}$$

However, this study employs unsigned abnormal accruals (absolute value of abnormal accruals) as a proxy for upward or downward AEM, as the managers might have a

[26] Dechow et al. (1995) provide evidence on the importance of controlling for firms' financial performance where it is considered as a problem that can bias accruals estimation.

motivation to practice either income-decreasing or income-increasing earnings management (Warfield et al., 1995; Dechow and Dichev, 2002; Klein, 2002). Therefore, the positive sign of residual indicates a practice of AEM through up-warded reported earnings and vice versa.

4.5.3 Empirical Models

The purpose of this study is to determine the relation between CSR reporting and earnings management practices in the FTSE All-share firms listed in LSE before and after adopting of the new regulations of Act 2006 (Regulation 2013) which mandates CSR reporting. To capture the relation, this study draws from Kim et al. (2012) by using the basic set of OLS regression models they developed. It then enhances these models to fit with this study's aims of examining the effect of the new regulations on the original relationship of CSR reporting and earnings management.

Firstly, to examine the first hypothesis which suggest *'a positive relationship between CSR reporting and firms' earnings management practices'.* The first set of models (4.12 and 4.13) examines the relation for the whole sample years (2009-2017):

$$REM_{i,t} = \alpha_0 + \beta_1\, CSR_Score_{i,t} + \beta_2\, Size_{i,t-1} + \beta_3\, Growth_{i,t-1} + \beta_4\, BigN_{i,t} + \beta_5\, Lev_{i,t-1} + \beta_6\, Age_{i,t} + \beta_7\, Listing_{i,t} + \beta_8\, R\&DI_t + \beta_9\, Adj_ROA_{i,t-1} + \beta_{10}\, CG_{i,t} + \beta_{11}\, Ind.Sens + \Sigma Year + \varepsilon_{i,t} \qquad \textbf{(4.12)}$$

$$AEM_{i,t} = \alpha_0 + \beta_1\, CSR_Score_{i,t} + \beta_2\, Size_{i,t-1} + \beta_3\, Growth_{i,t-1} + \beta_4\, BigN_{i,t} + \beta_5\, Lev_{i,t-1} + \beta_6\, Age_{i,t} + \beta_7\, Listing_{i,t} + \beta_8\, R\&DI_t + \beta_9\, Adj_ROA_{i,t-1} + \beta_{10}\, CG_{i,t} + \beta_{11}\, Ind.Sens + \Sigma Year + \varepsilon_{i,t} \qquad \textbf{(4.13)}$$

Secondly, in order to examine the second hypothesis of '*The relationship between CSR reporting and firms' earnings management practice will be negative after the new regulation of Act 2006 (Regulations of 2013)*', the following set of models (4.14 and 4.15) is employed around the year of mandating CSR reporting (2013):

$$REM_{i,t} = \alpha_0 + \beta_1\, CSR_Score_{i,t} + \beta_2\, Reg_{i,t} + \beta_3 (CSR_Score_{i,t} * Reg) + \beta_4\, Size_{i,t-1} + \beta_5\, Growth_{i,t-1} + \beta_6\, BigN_{i,t} + \beta_6\, Lev_{i,t-1} + \beta_7\, Age_{i,t} + \beta_9\, Listing_{i,t} + \beta_{10}\, R\&DI_{i,t} + \beta_{11}\, Adj_ROA_{i,t-1} + \beta_{12}\, CG_{i,t} + Ind.Sens_{i,t} + \Sigma Year + \varepsilon_{i,t} \qquad \textbf{(4.14)}$$

$$AEM_{i,t} = \alpha_0 + \beta_1\, CSR_Score_{i,t} + \beta_2\, Reg_{i,t} + \beta_3 (CSR_Score_{i,t} * Reg) + \beta_4\, Size_{i,t-1} + \beta_5\, Growth_{i,t-1} + \beta_6\, BigN_{i,t} + \beta_7\, Lev_{i,t-1} + \beta_8\, Age_{i,t} + \beta_9\, Listing_{i,t} + \beta_{10}\, R\&DI_{i,t} + \beta_{11}\, Adj_ROA_{i,t-1} + \beta_{12}\, CG_{i,t} + \beta_{13}\, Ind.Sens_{i,t} + \Sigma Year + \varepsilon_{i,t}, \qquad \textbf{(4.15)}$$

where,

Variable	Definition	Measurement	Expected Sign
REM	Indicates the real earnings management proxies.	The real earnings management estimated using Roychowdhury's (2006) five measures.	?
AEM	Indicates the accrual earnings management proxy.	The accrual earnings management measurement estimated using modified Jones models.	?
CSR_Score $_{i,t}$	Indicates CSR reporting quality score at the end of the year.	Reporting net score ranges from 0 to 100.	+
Reg $_{i,t}$	Indicates the new regulation of Act 2006 (Regulation 2013).	A dummy variable equal zero if the year before 2013 and one otherwise.	+
Size $_{i,t-1}$	Indicates the size of the firm at the beginning of the year.	The natural logarithm of the market value of equity (MVE_WC08001) of firm i, measured at the end of year t.	?
Growth $_{i,t-1}$	Indicates the firm growth at the beginning of the year.	The ratio of MTB measured at the beginning of the year.	?
BigN $_{i,t}$	Indicates the auditor type of the firm (Big 4 or not).	An indicator variable equals one if the firm audited by one of the Big4 auditing firms and zero otherwise.	+
Lev $_{i,t-1}$	Indicates the leverage (debt) of the firm at the beginning of the year.	The total debt scaled by total assets of firm *i* at year *t*.	?
Age $_{i,t}$	Indicates the firm age.	The natural logarithm of the number of the firms' listing year (BDATE) plus one.	?
Listing $_{i,t}$	Indicates the cross-listing status of the firm.	An indicator variable equal to one when a firm is listed in one or more international markets and zero otherwise.	+
R&DI $_{i,t}$	Indicates research and development intensity expenditure at the end of the year.	R&D expenses (WC01201) scaled by the sales revenue, for the current year.	?

$Adj_ROA_{i,t-1}$	Indicates the profitability of the firm by Return on Assets ratio at the beginning of the year.	The net income before extraordinary items scaled by total assets minus median of ROA.	?
$CG_{i,t}$	Indicates the corporate governance score at the end of the year.	Corporate governance net score ranges from 0 to 100.	+
$Ind.Sens_{i,t}$	Indicates the sensitivity of the industry which a firm is classified under. Sensitive industries are: "mining, oil and gas, chemicals, construction and building materials, forestry and paper, steel and other metals, electricity, gas distribution and water". All the rest of the industries are considered as less sensitive.	An indicator variable equal to one when a firm is classified as a sensitive industry and zero otherwise.	?

4.5.4 Control Variables

Prior literature employed various control variables which would affect the relationship between CSR reporting and earnings management resulting in a problem of correlated omitted variables. To avoid that, the following control variables are included in this study following Roychowdhury (2006); Prior et al. (2008); and Kim et al. (2012):

Size ($LnMVE_{I,t-1}$)*:* McWilliams and Siegel (2000) and Prior et al. (2008) argue that CSR reporting and size of firm are associated, considering the firm size as a widely used determinant for CSR reporting; however, the sign of this association varies across the literature between a negative relation (Hong and Anderson, 2011; Kim et al., 2012; Liu et al., 2017) and a positive relation (Chih et al., 2008; Prior et al., 2008; Sun et al., 2010; Choi et al., 2013; Cho and Chun, 2016; Martı´nez-Ferrero et al., 2016; Rezaee and Tuo, 2017). Furthermore, the size of the firm would explain the variation of earnings management level (Roychowdhury, 2006); also, large firms can meet the cost of providing CSR information for the stakeholders in their annual reports, contrary to the case of the smaller firms (Firth, 1979). Thus, firm size proxy is included in the regression model as the control variable and is defined as the natural logarithm of the market value of equity (MVE_WC08001) of firm *i*

measured at the beginning of year t (Roychowdhury, 2006; Kim et al., 2012; Choi et al., 2013). The predicted sign of this variable will not be determined due to the variations among the previous literature findings.

Growth Opportunities (Market-To-Book ratio, $MTB_{i,t-1}$): Previous research controls for the life cycle of the firm by market-to-book (MTB) ratio. According to the evidence that earnings management correlates with higher growing firms (McNichols, 2000; Matsumoto, 2002), and the argument that managers are more likely to engage in aggressive earnings management to avoid negative earnings in high-growth firms (Skinner and Sloan, 2002). The results vary between a positive relation (e.g., Roychowdhury, 2006; Liu et al., 2017), a negative relation (Kim et al., 2012; Choi et al., 2013; Cho and Chun, 2016) and no relation (Chih et al., 2008). Therefore, this study finds no predicted sign for this variable. Growth opportunities (MTB) are calculated as the ratio of MVE (WC08001) to book value of equity (WC03501) measured at the beginning of year t.

Auditor Type (Big4): Large auditing (Big4) accounting firms perform stricter audit procedures to avoid legal claims, increase the goodwill, and enhance the firms' internal control systems (DeAngelo, 1981). Accordingly, as Wang et al. (2008) suggest, firms that hold Big4 auditors may have stronger motivation to report extensive information about CSR, in addition to the evidence that the level of earnings management may vary between Big4 audited firms and non-Big4 audited firms (Becker et al., 1998; Francis et al., 1999). Thus, following the literature (e.g., Chih et al., 2008; Kim et al., 2012; Cho and Chun, 2016; Liu et al., 2017), this study controls for Big4 as an indicator variable that equals one if the firm is audited by one of the Big4 auditing firms and zero otherwise, but no predicted sign for this variable is due to the variation in the literature results.

Leverage (Lev_{t-1}): Leverage addresses the total debt to assets of the firm (likelihood of bankruptcy). The higher this ratio is, indicates a higher possibility of debt covenant violation (Gras-Gil, 2016), and increases in the cost of equity capital (Prior et al., 2008; Ferrero et al., 2016). Thus, it creates a good incentive for managers to manage the earnings upward to avoid loss resulting from reporting a financial problem (Park and Shin, 2004; Sun et al., 2010). On the other hand, Chih et al. (2008) provide opposing evidence that higher leveraged firms have less of a tendency to undertake less earnings aggressiveness. Moreover, Brammer and Pavelin (2008), Branco and Redrigues (2008) and Reverte (2009)

suggest that a low level of leverage in a firm confirms that creditor stakeholders will apply a lower level of pressure to restrict managers' decisions over CSR reporting practice, which are indirectly related to the financial success of the firm. Previous literature provides inconsistent evidence regarding the sign of this variable where Cho and Chun (2016) and Liu et al. (2017) find a positive relation (Kim et al., 2012), but Rezaee and Tuo (2017), Choi et al. (2013) and Prior et al. (2008) document a negative relation. Also, Chih et al. (2008), Sun et al. (2010), Kim et al. (2012) and Martı´nez-Ferrero et al. (2016) could not find any impact for the leverage; therefore, no predicted sign is suggested for this variable. The leverage ratio is calculated as the lagged of total debt (WC03255) scaled by lagged total assets (WC02999) (Prior et al., 2008; Dhaliwal et al., 2011; Kim et al., 2012, Choi et al., 2013).

Firm Age (Age): Firms' CSR practices and financial reporting act could be affected by the different development levels of the firm's life cycle (Christensen, 2016). Therefore, to control for such potential effects, this study controls for the firm age impact without suggesting any predictable sign for the inconsistent findings in the literature results. The firm age variable is measured as the natural logarithm of the number of the firms' listing year (BDATE) plus one (Kim et al., 2012; Cho and Chun, 2016; Liu et al., 2017).

International Listing (Listing): According to Cooke (1989), Reverte (2009) and Chiu and Wang (2015), a firm will report more CSR information when operating in foreign markets where it needs to consider two or more stock markets' reporting rules. Hence, under international listing, firms become more visible to the public and under higher pressure from stakeholders and analysts. Moreover, managers in listed firms are subject to more scrutiny from stakeholders, so they seek to enhance their performance through managing earnings to improve reported earnings to impress stakeholders and to protect their interests (Prior et al., 2008). Following Reverte (2009), this study controls for the international listing of firms by adding a dummy variable 'Listing', equal to one if the firm is listed in one or more international markets, and zero otherwise. However, no predicted sign is suggested for this variable for the different results found in the literature.

Research and Development Intensity ($R\&DI_{i,t}$): Research and development investments open a track for customers to become integrated into the product design by making the firm's technology more flexible. Consequently, this would enhance the customers' satisfaction and in turn impact positively on CSR reporting of the firm (McWilliams and Siegel, 2001; Prior et

al., 2008). At the same time, investment in the R&D intensity increases the managers' motivations to exercise earnings management practices to achieve some certain earnings targets (Kim et al., 2012; Cho and Chun, 2016). Previous literature employed R&D intensity as a control variable for the relation of CSR reporting and earnings management, measuring this variable as the R&D expenses (WC01201) scaled by the sales revenue, for the current year (Prior et al., 2008; Kim et al., 2012; Cho and Chun, 2016; Martı´nez-Ferrero et al., 2016). The estimation of this variable's impact on CSR reporting relation with earnings management is to be non-directed due to the variation in the provided evidence of the later literature between a negative relation and no relation.

Financial Profitability ($Adj\text{-}ROA_{i,t-1}$): Profitable firms' are more likely to disclose information about CSR activities to impress stakeholders (Branco and Redrigues, 2008; Wang et al., 2008; Chih, 2010; Chiu and Wang, 2015). Moreover, managers of less profitable (lower income) firms are more incentivised to engage in earnings management activities than managers of higher profitable firms are, where they can present better performance to investors (e.g., Sun et al., 2010; Kim et al., 2012; Cho and Chun, 2016). Therefore, later studies include either return on assets (ROA) or industry-adjusted ROA (Adj-ROA) in their models as a control variable to isolate the ethical feature influence of CSR on earnings management (Kim et al., 2012). However, the relation sign differs between positive (Kim et al., 2012; Choi et al., 2013; Rezaee and Tuo, 2017), negative (Cho and Chun, 2016), and no relation (Prior et al., 2008; Sun et al., 2010; Liu et al., 2017); hence, no predicted sign for this variable is suggested. This study employs industry-adjusted ROA which is calculated as net income before extraordinary items scaled by lagged total assets minus median ROA for the same year and industry.

Corporate Governance ($CG_{i,t}$): The impact of corporate governance (CG) on CSR reporting and practices in the firms has been studied in the literature extensively (e.g., Jamali et al., 2008; Arora and Dharwadkar, 2011; Jo and Harjoto, 2011 ,2012; Jizi and Salama, 2014; Shin at el., 2015; Beeks at el., 2016; Shahzad et al., 2016; Flammer and Luo, 2017; Liu and Zhang, 2017); however, most of the provided evidence supports the idea that good CG strengthens firms' CSR practices (Jamali et al., 2008; Jo and Harjoto, 2011 ,2012; Jizi and Salama; 2014; Hashim et al., 2015; Shin et al., 2015; Beeks et al., 2016; Shahzad et al., 2016; Liu and Zhang, 2017; Flammer and Luo, 2017). As a result, the managers' opportunistic behaviour against

earnings management is constrained (Choi et al., 2013). Hence, these studies controlled for the CG impact using a net score provided by the *Bloomberg* database. This net score scales the CG from 0 to 100 using measures to detect the following main headings: board structure; board independence; board and executive diversity; board committees; audit committee; compensation committee; nomination committee; board executive activities; shareholder's rights; annual general manager's voting results; and global initiative reporting.

Sensitive Industries (Sens.Ind $_{i,t}$): Sensitive industries can be classified as: "mining, oil and gas, chemicals, construction and building materials, forestry and paper, steel and other metals, electricity, gas distribution and water". All the rest of the industries are considered less sensitive (Brammer, 2008; Reverte, 2009). However, firms in a sensitive industry with high-risk impact on the environment are subject to higher pressure from stakeholders compared to less risky firms. Due to that, sensitive industries report more CSR information than other industries do (Brammer, 2008; Reverte, 2009). However, no predicted sign is suggested for this variable for the different results found in the literature.

4.6 Results and Analysis

This section first presents the industry and time distribution over the nine-year sample period, followed by the descriptive statistics and correlation matrix of all variables included in the study. Next, OLS regression tests the impact of mandating CSR reporting on earnings management proxies for the whole sample. This study conducts a dynamic analysis on two levels/models to include the effect of voluntary and mandatory adoption of reporting CSR in the UK. Moreover, additional tests are conducted based on the classification of CSR reporting quality as high or low separately.

4.6.1 Univariate Analysis

In this section, descriptive statistics of all variables covered in this study are presented. Table 4.3 reports the sample distribution. Panel A in Table 4.3 shows the industry distribution of the CSR reporting quality sample during 2009-2017. Seven main industries are included in this study with a net number of 225 firms. The Manufacturing and Service industries are the heaviest represented industries (37.78% and 19.88%, respectively). The Wholesale Trade and Transportation and Public Utilities industries are both the least represented industries (3.4% and 4.81%, respectively).

Panel B of Table 4.3 presents the time distribution of the CSR reporting quality sample over the study period. However, an increase in the number of CSR reports is noted across 2009 to 2017 starting with 10.37% in the year 2009 increasing to 13.15% in the year 2016.

Table 4.3

Industry and Time Distribution for CSR Reporting Quality Sample during 2009-2017

Panel A: Industry Distribution			
Industry Type	Freq.	Per cent	Cum.
Mining	189	11.67	11.67
Construction	116	7.16	18.83
Manufacturing	612	37.78	56.6
Transportation & Public Utilities	78	4.81	61.42
Wholesale Trade	55	3.4	64.81
Retail Trade	248	15.31	80.12
Services	322	19.88	100
Total	1620	100	
Panel B: Time Distribution			
Year	Freq.	Per cent	Cum.
2009	168	10.37	10.37
2010	177	10.93	21.3
2011	183	11.3	32.59
2012	190	11.73	44.32
2013	209	12.9	57.22
2014	220	13.58	70.8
2015	226	13.95	84.75
2016	213	13.15	97.9
2017	34	2.1	100
Total	1620	100	

Note: This table presents the frequency of CSR reporting firms by industry and year over the period 2009-2017 including the missing values.

Table 4.4 reports descriptive statistics for all incorporated variables in this study. The average (median) of CSR reporting quality score is 30.44 (28) out of a full score of 100 for all of the sample firm-year observations, representing a relatively low CSR reporting quality of the UK FTSE All-share firms. The median values of *Ab_Prod*, *Ab_CFO*, *Ab_Disc*, and *Ab_Acc* are all positive around zero (0.006, 0.000, 0.019, 0.003 respectively) similar to the findings reported by prior research[27] (Kothari et al., 2005; Gunny, 2010; Al-Shattarat et al., 2018).

[27] REM Proxies of Abnormal CFO and Abnormal discretionary are multiplied by negative sign following prior literature (e.g., Roychowdhury, 2006); hence, higher values imply more REM.

However, the findings imply that, on average, firms are likely to engage in REM and AEM practices of cutting discretionary expenses, boosting sales, and overproducing inventory.

For the control variables, results are consistent with the prior literature (e.g., Kim et al., 2012). Regarding firms' size, the mean firm size score is 14.203 (equivalent to approximately £4,697 million market value of equity) with a median score of 13.958. The Big4 auditing companies audit about 71% on average of the sample firms, and around 95% of the sample firms on average are listed in one or more international markets (in addition to LSE), where around 19% of the sample firms are classified as sensitive industries. On average, the sample firms' present profitability of 0.1%, with the average debt ratio of 21%, and the average value of R&D expenditure is 0.25% of the net sales. Also, the results indicate the average firms' age is about 33 years, and firms' score of reporting CG is about 57 on average out of a full score of 100 which is considered higher than CSR reporting score.

This study employed a series of sample tests to verify the regression results' reliability. A multicollinearity test is implemented and found to be normal in the context of this study. A Newey-West procedure is used to make sure the model is free of auto-correlation and heteroscedasticity problems following Al-Shattarat et al. (2018).

Table 4.5 presents the pairwise Pearson correlation matrix including all different variables of this study reflecting the multicollinearity test results, in addition to testing the variance inflation factor (VIF), which indicates the normal level. The analysis of the Pearson correlation matrix shows that CSR reporting quality significantly and positively correlated with both *Ab_Disc* and *REM1* aggregate measures with about 10%. This evidence implies that firms with higher CSR reporting quality are more likely to engage in real earnings impression theories, this finding indicates that managers use CSR reporting as a sugar cover management through cutting discretionary expenses to enhance earnings of the firm compared to less quality of CSR reporting counterparts. Also, it is observed that CSR reporting quality is positively correlated with firm size, debt ratio, international listing, CG, Age, and industry sensitivity, but negatively correlated with R&D expenditure.

Table 4.4

Descriptive Statistics of Firm-level Variables

	Mean	Median	SD	Min	Max	N
Variable of Interest						
CSR_Score	30.440	28.000	11.335	11.000	65.000	1620
Dependent Variable						
Ab_Prod	0.032	0.006	0.253	-2.128	1.131	936
Ab_CFO	0.009	0.000	0.076	-0.359	0.231	1074
Ab_Disc	0.017	0.019	0.217	-0.809	0.532	954
Ab_Acc	0.001	0.003	0.059	-0.282	0.250	939
REM1	0.062	0.012	0.457	-2.428	1.438	830
REM2	0.041	-0.010	0.296	-2.117	1.132	935
Control Variables						
Size	14.203	13.958	1.514	10.441	18.127	1620
Growth	3.334	2.368	4.782	-12.980	26.919	1620
BigN	0.716	1.000	0.451	0.000	1.000	1620
Leverage	0.211	0.203	0.170	0.000	1.014	1620
Age	3.304	3.401	0.673	1.099	3.989	1620
Age in years	32.769	30.000	17.056	3.000	54.000	1620
List	0.950	1.000	0.219	0.000	1.000	1620
R&DI	0.025	0.000	0.084	0.000	0.979	1620
Adj_ROA	0.010	0.003	0.078	-0.312	0.261	1620
CG_Score	56.649	57.000	7.052	39.000	77.000	1620
Ind.Sens	0.189	0.000	0.392	0.000	1.000	1620

Notes: This table presents sample descriptive statistics for all incorporated variables in this study over the period 2009-2017. All variables are winsorized at 1% of their distribution and are as defined in Appendix A.

Table 4.5

Pairwise Pearson Correlation among all Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. CSR_Score	1																
2. Ab-Prod	0.030	1															
3. Ab-CFO	0.041	0.492*	1														
4. **Ab-Disc**	**0.094***	0.734*	0.180*	1													
5. Ab-Acc	-0.020	0.1881*	0.445*	0.120*	1												
6**. REM1**	**0.085***	0.942*	0.383*	0.920*	0.156*	1											
7. REM2	0.032	0.973*	0.679*	0.665*	0.277*	0.892*	1										
8. Size	**0.581***	-0.062*	-0.156*	-0.017	0.010	-0.027	-0.095*	1									
9. Growth	0.045	-0.083*	-0.135*	-0.120*	0.033	-0.167*	-0.109*	0.151*	1								
10. BigN	-0.010	-0.040	-0.058*	-0.013	-0.043*	-0.022	-0.051*	0.147*	0.017	1							
11. Lev	**0.063***	0.110*	0.074*	0.161*	-0.023	0.140*	0.107*	0.129*	0.030	0.052*	1						
12. Age	**0.110***	0.099*	0.037*	0.032	0.110*	0.066*	0.094*	0.115*	-0.012	-0.069*	-0.256*	1					
13. List	**0.083***	-0.049*	-0.071*	-0.069*	-0.047*	-0.070*	-0.060*	0.292*	0.053*	0.068*	0.018	-0.098*	1				
14. RDI	**-0.097***	0.053*	0.190*	-0.213*	-0.037	-0.084*	0.099*	0.110*	0.090*	0.009	0.148*	-0.075*	0.073*	1			
15. Adj_ROA	-0.024	-0.285*	-0.446*	-0.110*	-0.027	-0.256*	-0.360*	0.142*	0.181*	0.028	0.087*	0.066*	0.040	0.307*	1		
16. CG_Score	**0.678***	0.029	-0.022	0.054	-0.012	0.049	0.021	0.571*	0.059*	0.101*	0.029	0.213*	0.102*	0.018	0.007	1	
17. Ind_Sens	**0.185***	0.000	0.000	0.000	0.000	0.033	0.000	0.086*	0.150*	0.018	0.115*	0.001	0.038	0.087*	0.084*	0.196*	1

Notes: * Represents significance at 0.10 level. This table presents the Pearson correlation matrix for all covered variables in this study. All variables are as defined in Appendix A.

4.6.2 Multivariate Analysis

4.6.2.1 The Relationship between CSR Reporting Quality and Earnings Quality

Table 4.6 reports OLS regression analysis results using proxies of REM and AEM. For the regression of *Ab_CFO*, the estimated coefficient for CSR reporting quality is positive 0.001 and significant at the 1% level (t = 2.98). Given that higher level of abnormal cash flow implies less conservative operating decisions, this evidence confirms this study first hypothesis, suggesting that CSR reporting firms are more likely to engage in REM practices through inflating cash flow, which is consistent with Prior et al. (2008) and Choi et al. (2013) and in line with impression and agency theories which underpin this study. Considering AEM, no evidence is found about a relation between AEM and CSR reporting quality, indicating that firms prefer REM activities rather than AEM activities to enhance their earnings performance.

Turning to control variables, in the aggregate REM regressions, the coefficients on *Size*, *Leverage*, and *Age* variables are positive and significant suggesting that larger firms, firms with higher debt ratio, and older firms are more likely to practice REM activities. On the contrary, *Growth*, *R&DI*, and *Adj_ROA* variables are found to be negatively associated with one or both of the aggregate REM measures, indicating that firms with low growth and poor earnings performance and those that spend less on research and development activities are more likely to engage in REM activities.

Altogether, these results demonstrate that managers who manipulate earnings through REM activities are more interested in reporting CSR as a sugar cover for their opportunistic behaviour. Thus, this practice is considered as a chance for the managers to impress the stakeholders with their performance or to cover their poor performance, consistent with opportunistic and impression theories.

Table 4.6

Regression of the Quality of CSR Reporting on Real Earnings Management

	Ab_Prod	**Ab_CFO**	**Ab_Disc**	**REM1**	**REM2**	**Ab_Acc**
	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
	(*t*-Test)	(*t*-Test)	(*t*-Test)	(*t*-Test)	(*t*-Test)	(*t*-Test)
CSR_Score	-0.0004	**0.001*** **	0.0002	-0.0004	0.0002	-0.0001
	-(0.39)	**(2.99)**	(0.26)	-(0.24)	(0.20)	-(0.32)
Size	0.008	-0.001	**0.011***	**0.030****	0.008	**0.005*****
	(1.30)	-(0.34)	**(1.92)**	**(2.38)**	(1.04)	**(3.02)**
Growth	**-0.006****	**-0.001****	-0.003	**-0.012****	**-0.007*****	0.001
	-(2.39)	**-(2.38)**	-(1.35)	**-(2.46)**	**-(2.82)**	(1.18)
BigN	0.019	-0.006	**0.024***	0.049	0.010	-0.004
	(1.14)	-(1.31)	**(1.71)**	(1.54)	(0.55)	-(0.92)
Lev	**0.181*****	-0.005	**0.206*****	**0.426*****	**0.177****	**-0.027***
	(3.18)	-(0.31)	**(4.38)**	**(4.07)**	**(2.55)**	**-(1.85)**
Age	**0.059*****	**0.012*****	**0.063*****	**0.128*****	**0.070*****	**0.007****
	(4.82)	**(3.28)**	**(6.63)**	**(5.83)**	**(4.84)**	**(2.42)**
List	0.060	**0.016***	0.056	0.103	0.075	0.004
	(1.45)	**(1.77)**	(1.64)	(1.36)	(1.56)	(0.54)
R&DI	-0.081	0.003	**-0.521*****	**-0.666*****	-0.078	**-0.049***
	-(0.92)	(0.11)	**-(4.29)**	**-(2.89)**	-(0.71)	**-(1.70)**
Adj_ROA	**-1.054*****	**-0.411*****	**-0.629*****	**-1.691*****	**-1.465*****	-0.030
	-(8.57)	**-(10.12)**	**-(6.42)**	**-(7.49)**	**-(9.45)**	-(0.91)
CG_Score	-0.001	**-0.001*****	-0.002	-0.004	-0.002	**-0.001****
	-(0.76)	**-(3.15)**	-(1.20)	-(1.31)	-(1.27)	**-(2.46)**
Ind.Sens	0.016	0.0000	0.013	0.050	0.016	0.007
	(0.94)	-(0.01)	(0.82)	(1.49)	(0.76)	(1.13)
_cons	-0.346	0.007	-0.374	-0.813	-0.338	-0.041
	-(3.74)	(0.27)	-(4.49)	-(4.44)	-(3.21)	-(1.86)
N (firm-years)	936	1074	954	830	935	939
R-Squared	0.158	0.219	0.174	0.185	0.202	0.032
Year Effect	Included	Included	Included	Included	Included	Included

Notes: *, **, and *** represent significance at 10%, 5%, and 1% levels. This table presents the regression analysis of five proxies of REM in addition to AEM proxy on CSR reporting quality over the study period 2009-2017. All variables are as defined in Appendix A.

4.6.2.2 The Relation between CSR Quality and Earnings Quality Post the New Regulation

Table 4.7 presents OLS regression analysis results using proxies of REM and AEM to measure the relationship between mandatory CSR reporting quality (after the new regulation) and both REM and AEM.

For the regression of *Ab_Prod*, *Ab_CFO*, *REM1*, and *REM2*, the results of the interaction term of *Reg*CSR_Score* provide evidence of negative coefficients -0.003, -0.001, -0.004, and -0.004, respectively, at the 1% level (*t* = -2.26, -3.42, -1.69, and -2.74 respectively). This result reveals that mandatory adoption of CSR reporting by the UK FTSE All-share firms are associated with less production and cash flow manipulation, but do not have a relation to

discretionary expenses. Hence, mandatory adoption of CSR reporting has a great impact on decreasing REM practices of overproducing of inventory (*Ab_Prod*) and sales manipulation (*Ab-CFO*) in firms, which is consistent with the second hypothesis of this study.

The relationship, however, could be clarified in line with the agency (opportunistic perspective) and impression theories by indicating, firstly, that managers who manipulate earnings through REM activities (overproducing inventory and inflating cash flow) become less interested in using CSR reporting as a tool to cover their opportunistic behaviour after mandated CSR reporting. Secondly, managers lose the chance to impress the stockholders in terms of their earnings performance using CSR reporting after being mandated. The possible explanation for this is that CSR reporting is transferred from being an additional voluntary task to distinguish managers from other competitors who do not report CSR voluntarily, to a mandatory task that all firms' managers are required to attend. These results are consistent with the prior literature (e.g., Hong and Andersen, 2011; Kim et al., 2012).

Turning to the impact of mandatory adoption of CSR reporting on AEM, results show an insignificant coefficient of *Ab_Acc* for the interaction term *Reg*CSR_Score* indicating that firms are not using AEM to enhance their earnings performance; hence, the mandatory adoption of CSR reporting does not affect this variable.

Table 4.7

Regression of the Quality of CSR Reporting Post the New Regulation on Real Earnings Management

	Ab_Prod	**Ab_CFO**	**Ab_Disc**	**REM1**	**REM2**	**Ab_Acc**
	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)
CSR_Score	0.001	**0.001*** **	0.001	0.001	0.002	0.0002
	(0.61)	**(4.14)**	(0.63)	(0.54)	(1.42)	(0.58)
Reg	**0.098** **	**0.041*** **	0.051	0.137	**0.133**	0.016
	(2.26)	**(3.06)**	(1.38)	(1.65)	**(2.64)**	(1.31)
Reg*CSR_Score	**-0.003** **	**-0.001*** **	-0.001	**-0.004* **	**-0.004*** **	-0.001
	-(2.26)	**-(3.42)**	-(1.32)	**-(1.69)**	**-(2.74)**	-(1.54)
Size	0.007	-0.001	**0.010* **	**0.028** **	0.006	**0.005*** **
	(1.14)	-(0.53)	**(1.79)**	**(2.24)**	(0.85)	**(2.90)**
Growth	**-0.006** **	**-0.001** **	-0.003	**-0.012** **	**-0.007*** **	0.001
	-(2.40)	**-(2.32)**	-(1.35)	**-(2.46)**	**-(2.82)**	(1.21)
BigN	0.017	-0.006	0.024	0.047	0.008	-0.004
	(1.03)	-(1.38)	(1.65)	(1.47)	(0.43)	-(0.94)
Lev	**0.179*** **	-0.005	**0.206*** **	**0.421*** **	**0.176** **	**-0.027* **
	(3.12)	-(0.26)	**(4.36)**	**(4.00)**	**(2.50)**	**-(1.85)**
Age	**0.062*** **	**0.013*** **	**0.064*** **	**0.131*** **	**0.073*** **	**0.007** **
	(5.12)	**(3.46)**	**(6.79)**	**(6.02)**	**(5.12)**	**(2.42)**

List	0.062	**0.017***	0.057	0.105	0.077	0.004
	(1.50)	**(1.83)**	(1.68)	(1.40)	(1.63)	(0.54)
R&DI	-0.084	0.003	**-0.523*****	**-0.670*****	-0.082	**-0.049***
	-(0.96)	(0.10)	**-(4.28)**	**-(2.88)**	-(0.74)	**-(1.69)**
Adj_ROA	**-1.052*****	**-0.411*****	**-0.629*****	**-1.690*****	**-1.464*****	-0.030
	-(8.50)	**-(10.10)**	**-(6.37)**	**-(7.44)**	**-(9.37)**	-(0.92)
CG	-0.001	**-0.001*****	-0.001	-0.004	-0.002	**-0.001****
	-(0.47)	**-(2.91)**	-(0.95)	-(1.11)	-(0.99)	**-(2.32)**
Ind.Sens	0.017	0.0001	0.013	0.050	0.017	0.007
	(0.98)	(0.02)	(0.82)	(1.49)	(0.81)	(1.14)
_cons	-0.402	-0.010	-0.402	-0.884	-0.409	-0.047
	-(4.1)	-(0.39)	-(4.68)	-(4.64)	-(3.7)	-(2.08)
N (firm-years)	936	1074	954	830	935	939
R-Squared	0.161	0.227	0.175	0.187	0.207	0.035
Year Effect	Included	Included	Included	Included	Included	Included

Notes: *, **, and *** represent significance at 10%, 5%, and 1% levels. This table presents the regression analysis of five proxies of REM in addition to AEM proxy on mandatory CSR reporting over the study period 2009-2017. All variables are as defined in Appendix A.

4.6.3 Endogeneity Concerns and Additional Analyses

4.6.3.1 Endogeneity Concerns

In general, endogeneity arises primarily from simultaneity (Larcker and Rusticus, 2010), which happens when the independent variable is simultaneously determined by the dependent variable (Wooldridge, 2002). Accordingly, as some studies argued it might be that CSR reporting quality and EM are simultaneously determined (Francis et al. 2008). Following the literature, to check the possible impact of endogeneity, I conduct the lagged approach (e.g., Christensen; Dhaliwal, 2011) to tackle the endogenous association between CSR reporting quality and EM. I repeat the main analysis in section 4.6.2 table 4.6 and 4.7 by estimating lagged values of independent variables. In general, the primary findings of the OLS are robust after considering the endogeneity and consistent with the results from tables 4.6 and 4.7 as tables 4.8 and 4.9 report.

Table 4.8

Regression of the Quality of CSR Reporting on Real Earnings Management: Controlling for Endogeneity

	Ab_Prod	**Ab_CFO**	**Ab_Disc**	**REM1**	**REM2**	**Ab_Acc**
	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)
CSR_Score	0.000	0.001**	0.000	0.001	0.001	0.000
	(0.55)	**(2.20)**	-(0.02)	(0.41)	(1.06)	-(0.44)
Size	0.007	0.001	0.014**	0.030**	0.008	0.005***
	(1.19)	(0.66)	**(2.52)**	**(2.56)**	(1.19)	**(3.03)**
Growth	-0.005***	-0.002***	-0.004**	-0.010**	-0.007***	0.000
	-(2.64)	**-(2.98)**	**-(2.00)**	**-(2.40)**	**-(3.18)**	-(0.31)
BigN	0.017	-0.009	0.026	0.041	0.009	-0.002
	(1.18)	**-(2.01)**	**(1.74)**	(1.43)	(0.51)	-(0.37)
Lev	0.152***	-0.013	0.222***	0.400***	0.140**	-0.007
	(2.89)	-(0.70)	**(4.59)**	**(3.97)**	**(2.21)**	-(0.53)
Age	0.063***	0.012***	0.061***	0.127***	0.074***	0.009***
	(5.90)	**(2.92)**	**(6.12)**	**(6.32)**	**(5.72)**	**(2.68)**
List	0.043	0.019**	0.043	0.072	0.057	0.001
	(1.11)	**(2.00)**	(1.21)	(1.01)	(1.29)	(0.17)
R&DI	-0.083	-0.004	-0.463***	-0.605***	-0.087	-0.067**
	-(1.05)	-(0.13)	**-(3.91)**	**-(2.99)**	-(0.88)	**-(2.53)**
Adj_ROA	-0.956***	-0.412***	-0.654***	-1.660***	-1.369***	0.015
	-(9.16)	**-(10.12)**	**-(6.91)**	**-(8.48)**	**-(10.53)**	(0.42)
CG_Score	-0.001	-0.001***	-0.001	-0.003	-0.002	-0.001**
	-(0.65)	**-(3.26)**	-(0.79)	-(1.17)	-(1.37)	**-(2.15)**
Ind.Sens	0.009	-0.001	0.007	0.038	0.008	0.003
	(0.59)	-(0.09)	(0.44)	(1.21)	(0.43)	(0.45)
_cons	-0.354***	-0.002	-0.430***	-0.852***	-0.353***	-0.049**
	-(4.14)	-(0.06)	**-(5.04)**	**-(4.97)**	**-(3.57)**	**-(2.20)**
N (firm-years)	936	1074	954	830	935	939
R-Squared	0.165	0.229	0.192	0.194	0.211	0.051
Year Effect	Included	Included	Included	Included	Included	Included

Notes: *, **, and *** represent significance at 10%, 5%, and 1% levels. This table presents the regression analysis of five proxies of REM in addition to AEM proxy on CSR reporting quality over the study period 2009-2017 taking into account potential endogeneity problems. The number of observations include missing variables due to lagging the independent variables. All variables are as defined in Appendix A.

Table 4.9

Regression of the Quality of CSR Reporting Post the New Regulation on Real Earnings Management: Controlling for Endogeneity

	Ab_Prod	**Ab_CFO**	**Ab_Disc**	**REM1**	**REM2**	**Ab_Acc**
	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)
CSR_Score	0.001	0.001***	0.000	0.002	0.002*	0.000
	(1.34)	**(2.93)**	(0.27)	(1.02)	**(1.92)**	-(0.74)
Reg	0.087**	0.037***	0.050	0.136*	0.122**	-0.007
	(2.09)	**(2.71)**	(1.30)	**(1.69)**	**(2.55)**	-(0.56)
Reg*CSR_Score	-0.003**	-0.001**	-0.001	-0.004*	-0.004**	0.000
	-(2.22)	**-(2.66)**	-(1.14)	**-(1.75)**	**-(2.61)**	(0.68)
Size	0.006	0.001	0.014**	0.028**	0.007	0.005***
	(1.03)	(0.46)	**(2.38)**	**(2.38)**	(1.00)	**(3.05)**
Growth	-0.005**	-0.002***	-0.004**	-0.010**	-0.007***	0.000
	-(2.66)	**-(2.98)**	**-(2.02)**	**-(2.42)**	**-(3.21)**	-(0.31)
BigN	0.016	-0.009***	0.024*	0.039	0.007	-0.002
	(1.08)	**-(2.15)**	**(1.69)**	(1.36)	(0.39)	-(0.36)
Lev	0.153**	-0.012	0.221***	0.399***	0.142**	-0.008
	(2.90)	-(0.67)	**(4.57)**	**(3.95)**	**(2.22)**	-(0.54)
Age	0.065***	0.013***	0.063***	0.130***	0.077***	0.009***
	(6.03)	**(3.16)**	**(6.30)**	**(6.44)**	**(5.92)**	**(2.69)**
List	0.044	0.019**	0.044	0.074	0.059	0.001
	(1.14)	**(2.06)**	(1.25)	(1.04)	(1.34)	(0.16)
R&DI	-0.085	-0.005	-0.465***	-0.609***	-0.090	-0.067**
	-(1.10)	-(0.16)	**-(3.92)**	**-(3.01)**	-(0.93)	**-(2.55)**
Adj_ROA	-0.955***	-0.412***	-0.654***	-1.660***	-1.368***	0.015
	-(9.14)	**-(10.11)**	**-(6.90)**	**-(8.47)**	**-(10.51)**	(0.43)
CG	-0.001	-0.001***	-0.001	-0.003	-0.002	-0.001**
	-(0.41)	**-(2.89)**	-(0.52)	-(0.94)	-(1.07)	**-(2.14)**
Ind.Sens	0.010	0.000	0.008	0.039	0.009	0.003
	(0.62)	-(0.04)	(0.47)	(1.23)	(0.47)	(0.45)
_cons	-0.394***	-0.019	-0.459***	-0.913***	-0.410***	-0.047**
	-(4.40)	-(0.74)	**-(5.23)**	**-(5.15)**	**-(3.98)**	**-(2.10)**
N (firm-years)	936	1074	954	830	935	939
R-Squared	0.179	0.255	0.186	0.192	0.219	0.064
Year Effect	Included	Included	Included	Included	Included	Included

Notes: *, **, and *** represent significance at 10%, 5%, and 1% levels. This table presents the regression analysis of five proxies of REM in addition to AEM proxy on mandatory CSR reporting over the study period 2009-2017 taking into account potential endogeneity problems. The number of observations include missing variables due to lagging the independent variables. All variables are as defined in Appendix A.

4.6.3.2 Sub-Sample Tests on High and Low CSR Reporting Quality

To validate the main regression results and check whether these would hold after using alternative dependent variables, the following test is conducted. In this study, CSR reporting net quality score is replaced with high and low CSR reporting scores as alternative

dependent variables. Following Schleicher et al. (2007), the main sample is split into two sub-samples – high CSR reporting score and low CSR reporting score – that are measured based on the upper and lower quartiles. High CSR takes the two upper quartiles, and low CSR takes the lower two quartiles of the main sample.

Table 4.10 presents the results from a cross-sectional data regression of the quality of high and low CSR reporting on real earnings management covering all independent and control variables used in the original model. This study uses OLS regression to run the specified models. The results of the first and second models present positive coefficients 0.001 significant at the 5% and 10% levels (t = 2.5 and 1.7, respectively) for the regression of *Ab_CFO*, indicating that both high- and low-quality CSR reporting firms are more likely to engage in REM practices through inflating cash flow. Consistent with Prior et al. (2008) and Choi et al. (2013), this finding evinces that managers who manipulate earnings through REM activities are more interested in reporting CSR either in a high or low-quality form as a sugar cover for their opportunistic behaviour consequences. Thus, this practice is considered as a chance for the managers to impress the stockholders with their performance or to cover their poor performance, in line with opportunistic and impression theories.

Considering AEM, no evidence is found about a relation between AEM and high or low CSR reporting quality, indicating that firms prefer REM activities to enhance their earnings performance rather than AEM activities.

Table 4.11 provide evidence about the impact of adopting the new regulation in high CSR reporting quality (CSR score) firms on REM practices in model 1. According to the interaction term (*Reg*CSR_Score*), the regressions of *Ab_Prod*, *Ab_CFO*, and *REM2* present negative coefficients of 0.004, 0.001, and 0.006, respectively, that are statistically significant at the 1% level (t = -2.37, 2.92, and 2.77). These findings indicate that firms that practice REM activities through overproducing inventory and inflating cash flow lose their interest in employing CSR reporting to cover the latter types of manipulation, particularly because mandating CSR reporting lost managers the competitive advantage of voluntarily reporting CSR. This, however, supports the original sample regression results which are consistent with the study's second hypothesis, theories of opportunistic and impression, and prior literature (e.g., Hong and Andersen, 2011; Kim et al., 2012).

Similarly, in low-quality CSR reporting presented in model 2, the regression result of *Ab_CFO* for the interaction term *Reg*CSR_Score* provides evidence of a negative coefficient of -0.005 at the 1% level (*t* = -2.85). This result indicates that mandatory adoption of CSR reporting has a great impact on decreasing REM practices of sales manipulation (*Ab-CFO*) in firms producing low-quality CSR reports. However, it is notable that the negative coefficient 0.005 of *Ab_CFO* is larger than the negative coefficient 0.001 of the same variable in the high CSR reporting results, indicating that mandating CSR reporting has a greater effect on restricting REM practice (through sales) in firms that report low CSR quality.

Turning to the impact of mandatory adoption of CSR reporting on AEM, similar to previous results, regression shows an insignificant coefficient of *Ab_Acc* for the interaction term *Reg*CSR_Score* indicating that firms are not using AEM to enhance their earnings performance; hence, the mandatory adoption of CSR reporting does not affect this variable.

Table 4.10

Regression of the Quality of High/Low CSR Reporting on Real Earnings Management

	Model-1 High CSR						**Model-2 Low CSR**					
	Ab_Prod	**Ab_CFO**	**Ab_Disc**	**REM1**	**REM2**	**Ab_Acc**	**Ab_Prod**	**Ab_CFO**	**Ab_Disc**	**REM1**	**REM2**	**Ab_Acc**
	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)
CSR_Score	-0.0003	**0.001****	0.001	0.0002	0.0005	0.000	0.000	**0.001***	0.002	0.002	0.001	0.001
	-(0.21)	**(2.50)**	(1.10)	(0.08)	(0.32)	(0.00)	(0.12)	**(1.70)**	(0.70)	(0.37)	(0.34)	(0.99)
Size	0.003	-0.002	0.010	0.026	0.002	0.003	0.019	0.002	**0.018***	**0.044****	0.019	**0.007****
	(0.44)	-(0.87)	(1.64)	(1.89)	(0.27)	(1.45)	(1.55)	(0.56)	**(1.88)**	**(2.00)**	(1.40)	**(2.43)**
Growth	**-0.007*****	**-0.002*****	-0.003	**-0.015****	**-0.010*****	0.001	-0.002	-0.001	-0.001	-0.006	-0.002	0.000
	-(2.96)	**-(3.21)**	-(1.22)	**-(2.62)**	**-(3.78)**	(1.29)	-(0.38)	-(0.71)	-(0.31)	-(0.69)	-(0.48)	(0.32)
BigN	0.006	**-0.013****	**0.033***	0.039	-0.012	**-0.012***	0.032	0.001	0.016	0.052	0.032	0.003
	(0.30)	**-(2.39)**	**(1.98)**	(1.06)	-(0.52)	**-(1.98)**	(1.20)	(0.08)	(0.69)	(1.03)	(1.08)	(0.54)
Leverage	0.116	0.025	**0.141****	**0.340****	**0.160***	-0.022	**0.224*****	-0.019	**0.232*****	**0.482*****	**0.203****	**-0.034***
	(1.55)	(1.03)	**(2.07)**	**(2.26)**	**(1.71)**	-(0.82)	**(2.83)**	-(0.90)	**(3.62)**	**(3.36)**	**(2.22)**	**-(1.97)**
Age	**0.046*****	**0.012*****	**0.066*****	**0.123*****	**0.057*****	**0.011****	**0.071*****	**0.013****	**0.065*****	**0.136*****	**0.083*****	0.006
	(3.26)	**(2.60)**	**(5.90)**	**(4.82)**	**(3.34)**	**(2.29)**	**(3.64)**	**(2.44)**	**(4.41)**	**(4.02)**	**(3.72)**	(1.41)
List	**0.323*****	**0.050****	**0.281*****	**0.551*****	**0.370*****	0.006	-0.028	0.006	-0.026	-0.058	-0.026	0.006
	(2.92)	**(2.30)**	**(2.82)**	**(2.65)**	**(2.89)**	(0.34)	-(0.73)	(0.54)	-(0.88)	-(0.88)	-(0.63)	(0.63)
R&DI	**-0.549****	**-0.147****	**-1.181*****	**-1.885*****	**-0.669****	-0.048	-0.013	0.010	**-0.437**	**-0.518****	-0.011	-0.048
	-(2.29)	**-(2.03)**	**-(7.89)**	**-(6.08)**	**-(2.36)**	-(0.69)	-(0.14)	(0.34)	**-(3.62)**	**-(2.29)**	-(0.10)	-(1.50)
Adj_ROA	**-0.754*****	**-0.270*****	**-0.466*****	**-1.151*****	**-1.010*****	-0.008	**-1.199*****	**-0.500*****	**-0.662*****	**-1.891*****	**-1.708*****	-0.045
	-(5.22)	**-(5.25)**	**-(4.43)**	**-(4.56)**	**-(5.51)**	-(0.19)	**-(6.69)**	**-(8.74)**	**-(4.58)**	**-(5.86)**	**-(7.76)**	-(0.9)
CG_Score	0.000	**-0.001****	-0.002	-0.003	-0.001	0.000	-0.001	**-0.001***	0.000	-0.002	-0.002	**-0.001****
	-(0.03)	**-(2.55)**	-(1.56)	-(0.99)	-(0.72)	-(0.77)	-(0.37)	**-(1.85)**	(0.11)	-(0.42)	-(0.58)	**-(2.32)**
Ind.Sens	-0.005	0.000	0.015	0.034	-0.007	0.006	0.011	-0.005	-0.016	0.012	0.007	0.010
	-(0.26)	-(0.03)	(0.93)	(0.90)	-(0.26)	(0.86)	(0.43)	-(0.46)	-(0.60)	(0.22)	(0.23)	(0.92)
_cons	-0.514	-0.011	-0.569	-1.194	-0.521	-0.059	-0.496	-0.029	-0.537	-1.069	-0.516	-0.058
	-(3.60)	-(0.33)	-(4.19)	-(4.21)	-(3.14)	-(1.82)	-(2.83)	-(0.56)	-(3.44)	-(3.22)	-(2.56)	-(1.28)
N (firm-years)	458	527	455	394	458	458	478	547	499	436	477	481
R-Squared	0.253	0.250	0.278	0.302	0.289	0.037	0.1489	0.2357	0.1506	0.1591	0.1992	0.0486
Year Effect	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included

Notes: *, **, and *** represent significance at 10%, 5%, and 1% levels, respectively. All variables are as defined in Appendix A. The alternative models are as follow:

Model-1: $EM_{i,t} = \alpha_0 + \beta_1 \text{High CSRD_Score}_{i,t} + \beta_2 \text{Size}_{i,t-1} + \beta_3 \text{Growth}_{i,t-1} + \beta_4 \text{BigN}_{i,t} + \beta_5 \text{Leverage}_{i,t-1} + \beta_6 \text{Age}_{i,t} + \beta_7 \text{Listing}_{i,t} + \beta_8 \text{R\&DI}_t + \beta_9 \text{Adj_ROA}_{i,t-1} + \beta_{10} \text{CG}_{i,t} + \beta_{11} \text{Ind.Sens} + \Sigma \text{Year} + \varepsilon_{i,t}$

Model-2: $EM_{i,t} = \alpha_0 + \beta_1 \text{Low CSRD_Score}_{i,t} + \beta_2 \text{Size}_{i,t-1} + \beta_3 \text{Growth}_{i,t-1} + \beta_4 \text{BigN}_{i,t} + \beta_5 \text{Leverage}_{i,t-1} + \beta_6 \text{Age}_{i,t} + \beta_7 \text{Listing}_{i,t} + \beta_8 \text{R\&DI}_t + \beta_9 \text{Adj_ROA}_{i,t-1} + \beta_{10} \text{CG}_{i,t} + \beta_{11} \text{Ind.Sens} + \Sigma \text{Year} + \varepsilon_{i,t}$

Table 4.11

Regression of the Quality of High/Low CSR Reporting on Real Earnings Management Post New Regulation

	Model-1 High CSR						**Model-2 Low CSR**					
	Ab_Prod	**Ab_CFO**	**Ab_Disc**	**REM1**	**REM2**	**Ab_Acc**	**Ab_Prod**	**Ab_CFO**	**Ab_Disc**	**REM1**	**REM2**	**Ab_Acc**
	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)	Coef. (*t*-Test)
CSR_Score	0.002	**0.002*****	0.002	0.003	**0.003***	0.000	-0.001	**0.003****	-0.001	-0.002	0.002	**0.002***
	(1.17)	**(3.60)**	(1.40)	(0.95)	**(1.87)**	(1.04)	-(0.11)	**(2.44)**	-(0.23)	-(0.20)	(0.42)	**(1.73)**
Reg	**0.162****	**0.053****	0.055	0.173	**0.217****	0.026	0.078	**0.116*****	-0.052	-0.014	0.193	0.050
	(2.22)	**(2.58)**	(0.87)	(1.24)	**(2.55)**	(1.26)	(0.61)	**(2.87)**	-(0.50)	-(0.06)	(1.29)	(1.23)
Reg*CSR_Score	**-0.004****	**-0.001*****	-0.002	-0.005	**-0.006*****	-0.001	-0.002	**-0.005*****	0.003	0.003	-0.007	-0.002
	-(2.37)	**-(2.92)**	-(1.03)	-(1.46)	**-(2.77)**	-(1.35)	-(0.33)	**-(2.85)**	(0.7)	(0.27)	-(1.03)	-(1.42)
Size	0.003	-0.002	0.010	**0.025***	0.002	0.003	0.017	0.001	**0.018***	**0.042***	0.017	**0.007****
	(0.42)	-(0.87)	(1.60)	**(1.81)**	(0.24)	(1.44)	(1.44)	(0.35)	**(1.83)**	**(1.93)**	(1.25)	**(2.35)**
Growth	**-0.007*****	**-0.002*****	-0.003	**-0.015****	**-0.010*****	0.001	-0.002	-0.001	-0.001	-0.006	-0.003	0.000
	-(2.90)	**-(3.13)**	-(1.20)	**-(2.56)**	**-(3.70)**	(1.32)	-(0.42)	-(0.90)	-(0.29)	-(0.70)	-(0.56)	(0.23)
BigN	0.007	**-0.012****	**0.034****	0.040	-0.010	**-0.011***	0.028	-0.002	0.015	0.048	0.026	0.003
	(0.36)	**-(2.21)**	**(2.00)**	(1.08)	-(0.45)	**-(1.93)**	(1.03)	-(0.25)	(0.64)	(0.94)	(0.84)	(0.42)
Leverage	0.109	0.025	**0.138****	**0.331****	0.153	-0.023	**0.225*****	-0.016	**0.231*****	**0.481*****	**0.206****	**-0.033***
	(1.45)	(1.02)	**(2.02)**	**(2.18)**	(1.61)	-(0.84)	**(2.81)**	-(0.76)	**(3.61)**	**(3.34)**	**(2.23)**	**-(1.90)**
Age	**0.043*****	**0.010****	**0.064*****	**0.118*****	**0.052*****	**0.010****	**0.077*****	**0.016*****	**0.066*****	**0.142*****	**0.091*****	0.006
	(3.00)	**(2.30)**	**(5.63)**	**(4.52)**	**(3.03)**	**(2.09)**	**(3.99)**	**(2.94)**	**(4.56)**	**(4.24)**	**(4.14)**	(1.38)
List	**0.326*****	**0.049****	**0.281*****	**0.552****	**0.373*****	0.006	-0.024	0.006	-0.024	-0.053	-0.023	0.005
	(3.03)	**(2.38)**	**(2.84)**	**(2.68)**	**(3.01)**	(0.36)	-(0.66)	(0.62)	-(0.82)	-(0.8)	-(0.54)	(0.57)
R&DI	**-0.561**	**-0.151****	**-1.190*****	**-1.910*****	**-0.684****	-0.050	-0.021	0.008	**-0.441*****	**-0.528****	-0.021	-0.048
	-(2.28)**	**-(2.05)**	**-(7.78)**	**-(5.99)**	**-(2.34)**	-(0.72)	-(0.23)	(0.29)	**-(3.64)**	**-(2.32)**	-(0.19)	-(1.49)
Adj_ROA	**-0.752*****	**-0.271*****	**-0.468*****	**-1.153*****	**-1.009*****	-0.008	**-1.193*****	**-0.497*****	**-0.659*****	**-1.882*****	**-1.702*****	-0.046
	-(5.20)	**-(5.30)**	**-(4.42)**	**-(4.54)**	**-(5.50)**	-(0.19)	**-(6.56)**	**-(8.64)**	**-(4.55)**	**-(5.77)**	**-(7.61)**	-(0.91)
CG_Score	0.000	**-0.001*****	-0.002	-0.004	-0.002	0.000	0.000	-0.001	0.000	-0.002	-0.001	**-0.001***
	-(0.09)	**-(2.79)**	-(1.59)	-(1.06)	-(0.85)	-(0.83)	-(0.11)	-(1.11)	(0.12)	-(0.32)	-(0.18)	**-(1.97)**
Ind.Sens	-0.009	-0.001	0.013	0.028	-0.011	0.006	0.013	-0.005	-0.015	0.014	0.009	0.010
	-(0.43)	-(0.18)	(0.79)	(0.73)	-(0.45)	(0.78)	(0.48)	-(0.44)	-(0.56)	(0.27)	(0.28)	(0.91)
_cons	-0.578	-0.024	-0.581	-1.241	-0.602	-0.068	-0.527	-0.087	-0.498	-1.036	-0.609	-0.086
	-(4.11)	-(0.7)	-(4.33)	-(4.45)	-(3.72)	-(2.13)	-(2.89)	-(1.59)	-(3.08)	-(3.00)	-(2.91)	-(1.78)
N (firm-years)	458	527	455	394	458	458	478	547	499	436	477	481
R-Squared	0.260	0.263	0.280	0.305	0.299	0.040	0.152	0.249	0.153	0.161	0.203	0.056
Year Effect	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included

This table continue in the next page

Notes: *, **, and *** represent significance at 10%, 5%, and 1% levels, respectively. All variables are as defined in Appendix A. The alternative models are as follow:

Model-1: $EM_{i,t} = \alpha_0 + \beta_1\, High\ CSRD_Score_{i,t} + Reg + \beta_2 (High\ CSRD_Score_{i,t} * Reg) + \beta_3\, Size_{i,t-1} + \beta_4\, Growth_{i,t-1} + \beta_5\, BigN_{i,t} + \beta_6\, Leverage_{i,t-1} + \beta_7\, Age_{i,t} + \beta_8\, Listing_{i,t} + \beta_9\, R\&DI_{i,t} + \beta_{10}\, Adj_ROA_{i,t-1} + \beta_{11}\, CG_{i,t} + \beta_{12}\, Ind.Sens + \Sigma Year + \varepsilon_{i,t}$

Model-2: $EM_{i,t} = \alpha_0 + \beta_1\, Low\ CSRD_Score_{i,t} + Reg + \beta_2 (Low\ CSRD_Score_{i,t} * Reg) + \beta_3\, Size_{i,t-1} + \beta_4\, Growth_{i,t-1} + \beta_5\, BigN_{i,t} + \beta_6\, Leverage_{i,t-1} + \beta_7\, Age_{i,t} + \beta_8\, Listing_{i,t} + \beta_9\, R\&DI_{i,t} + \beta_{10}\, Adj_ROA_{i,t-1} + \beta_{11}\, CG_{i,t} + \beta_{12}\, Ind.Sens + \Sigma Year + \varepsilon_{i,t}$

4.7 Summary and Conclusion

Following the expectation that adopting mandatory CSR reporting regulation leads to improvements in accounting reporting quality, this study examines whether mandatory CSR reporting leads to a reduction of earnings management (EM) practices for UK firms by considering the most commonly used forms of EM – i.e. REM and AEM. The findings from this research generate some observations from the empirical results of the employed OLS regression.

First, the findings provide evidence about the existence of REM practice, before mandating CSR reporting specifically through sales manipulation, with no presence of AEM practice. In turn, these findings prove that managers who manipulate earnings through REM activities are more interested in reporting CSR as a sugar cover for their opportunistic behaviour. This evidence endorses the underlined directional trend by Prior et al. (2008) and Choi et al. (2013) in addition to opportunistic and impression theories. Accordingly, these findings indicate that some CSR practices might be abused and employed as a mechanism to mask other harmful practices, which reflects negatively on the accuracy of stakeholders' decisions, and the quality of the financial reporting.

Secondly, the findings manifest restrictions on REM practices after mandating CSR reporting, specifically REM practices of overproducing of inventory and sales-boosting, with no presence of AEM practice. However, mandatory CSR reporting lost managers their competitive advantage of reporting CSR voluntarily, which in turn caused them to lose interest in utilising CSR reporting to cover the latter used types of manipulation. This indication confirms the directional trend, which is emphasised by Hong and Andersen (2011) and Kim et al. (2012). Consequently, this type of regulation would help avoid the fake over-investment in CSR practices which reflects positively on the stakeholders' decisions and the financial reporting usefulness.

Third, with regards to the influence of adopting the new regulation on REM practices in high quality CSR reporting firms compared to low quality CSR reporting firms, the conclusion reached by this study's results is consistent with impression and opportunist theories, implying that mandatory regulation restricts providers of both high and low CSR reporting quality from practising REM activities. Specifically, mandating CSR reporting has a greater effect on restricting REM practice (through sales) in firms that report low CSR quality.

Generally, the study findings provide insights into regulation setters and policymakers to enhance the new regulation, which in turn enhances CSR performance and quality in general. Also, it sends a red flag to policymakers that some CSR practices might be abused and employed as a mechanism to mask other harmful practices which is useful to differentiate accurate and reliable information from less transparent reported information. Moreover, this regulation would increase the harmony in the financial reporting domestically and across countries and, in turn, increase the possibility of more equitable comparability for the firm's performance and their real impact on the community.

The thesis findings, however, certainly does not encourage firms to decrease their investments in CSR activities or enhance their reporting quality but it does investigate the real potential for negative impact behind these activities. In so doing, it might clarify to those opportunistic managers the damage which they would cause to the firm, and accordingly to the stakeholders, and consequently to the community because of their actions. However, the empirical results provided in this thesis open up an avenue for future research to further investigate the costs related to adopting this regulation balanced against the benefits accrued of forcing it.[28]

[28] The study limitation discussed in chapter six section 6.2

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Appendix

APPENDIX A Variables Definitions		
Variable	Definition	Source
CSR_Score $_{i,t}$	Indicates corporate social responsibility disclosure net score at the end of the year.	*Bloomberg* database
Reg	Indicates new Regulation, Dummy variable equal zero if the year before 2013 and one otherwise.	
Size $_{i,t-1}$	Indicates firm size; the natural logarithm of the market value of equity of firm i, measured at the beginning of year t.	*DataStream*
Growth $_{i,t-1}$	Indicates an opportunity of growth; the ratio of MTB measured at the beginning of the year.	*DataStream*
BigN $_{i,t}$	Is an indicator variable equal's one if the firm audited by one of the Big4 auditing firms and zero otherwise.	
Lev $_{i,t-1}$	Is the lagged of total debt (WC03255) scaled by lagged total assets (WC02999).	*DataStream*
Age $_{i,t}$	Indicates firm age, measured as the natural logarithm of the number of the firms' listing year (BDATE) plus one.	*DataStream*
Listing $_{i,t}$	Is an indicator variable equal to one when the firm is listed in one or more international markets, and zero otherwise.	*DataStream*, London Stock Exchange Market
R&DI $_{i,t}$	Is research and development investments intensity, calculated as the R&D expenses (WC01201) scaled by the sales revenue, for the current year.	*DataStream*
Adj_ROA $_{i,t-1}$	Is the net income before extraordinary items scaled by lagged total assets minus median ROA for the same year and industry.	*DataStream*
CG_Score $_{i,t}$	Is corporate governance net score at the end of the year.	*Bloomberg* database
Ind.Sens	Indicates the sensitivity of the industry which a firm is classified under. Sensitive industries are: "mining, oil and gas, chemicals, construction and building materials, forestry and paper, steel and other metals, electricity, gas distribution and water".	*DataStream*

	All the rest of the industries are considered as less sensitive.	
EM	Is earnings management proxies for both real and accrual proxies.	*DataStream*
AEM	Is accrual earnings management; calculated using the modified Jones models.	*DataStream*
REM	Is real earnings management; calculated using five measures developed by Roychowdhury's (2006) models.	*DataStream*

CHAPTER FIVE

The Impact of CSR-related Regulation on the Firm Subsequent Performance

Abstract

I investigate the influence of mandating corporate social responsibility reporting on subsequent financial performance through accounting-based measures and market-based measures. I provide evidence about the negative impact of reporting CSR voluntarily on the firm's future performance due to the increased spending on and costs related to such activities. On the contrary, mandating CSR reporting enhances firms' future performance by signalling to the market about the firm's positive stance towards sustainability issues in the UK. In an additional test, I find that the impact of mandating CSR reporting appears clearly in the two-year-ahead and three-years-ahead.

Keywords: Mandatory Regulation, Mandatory CSR, Future Performance, Market-Based Performance, Accounting-Based Performance.

5.1 Introduction

The increasing awareness of environmental and social practices among public users of annual reports raises the pressure on firms to report more CSR information using different channels. For instance, they communicate their CSR activities to stakeholders using CSR reports (either as a part of the annual report or as standalone reports), their formal websites, the press, and CSR advertising (Gray et al., 1995; 2006). Accordingly, this would reinforce the firm's' image among stakeholders and the community and ensure they have good knowledge about such appropriate practices (Deegan, 2002). However, they allocate financial resources to reveal such types of information to public users (Jamali, 2008; Wang and Li, 2015). Therefore, it is necessary for a firm to be aware of and have a good understanding of CSR activities to gain the related benefits of such practices (Du et al., 2010).

Privileges of CSR reporting could be presented from two perspectives. On the one hand, it is

found that the firm that enhances its practices toward social and environmental protection not only legitimises itself but also serves the society in a good manner, which protects it against risk and enhances its reputation. The firm also reinforces the perspectives of public and end users, eventually building a valuable brand name in the market (Branco et al., 2006; Porter and Kramer, 2011, 2006). These practices represent a communication channel with shareholders about the firm value, where firms with high CSR activities would gain a more positive investors' assessment of their firms' future value.

On the other hand, CSR practices might be used in an opportunistic way when managers provide good aspects of business practices and exclude the bad, or when they exaggerate the positiveness of their practices or even report the bad sides in a good or complex way misleading the readers' assessment about the firm's riskiness and future value (Verrecchia, 1983). Due to this argument, CSR activities and their impact on firms' performance have been studied extensively in the literature, but the variations in the findings about the Environmental, Social and Governmental (ESG) effect on the future performance of the firm are still unclear, specifically when a new regulation mandates such type of reporting rather than the reporting being voluntary. In other words, this regulation might have a positive outcome by improving the firm's CSR performance, which is considered as a motivation, or it might have a negative outcome by the firm having to use extra costs to compete and distinguish itself from the rest of its competitors (Ioannou and Serafeim, 2017). Therefore, this study discusses the influence of CSR reporting practice on firms' subsequent performance in the context of mandatory CSR reporting in the UK. Two common indicators are used to capture this effect; these are the market-based indicator (Tobin's Q) for detecting the financial benefits of CSR reporting (Hillman and Keim, 2001), and accounting-based measures (ROA) to indicate the internal decision-making proficiencies and managerial performance (Orlitzky et al., 2003)

This study focuses on the UK environment as one of the few regions to have forced through a regulation requiring reporting of CSR (such as China, South Africa, Malaysia and Denmark). Moreover, depending on the country-specific context, the use of CSR reporting might vary between different environments and regions (e.g., Cahan et al., 2016); thus, the findings of this study may suggest a new important institutional environment.

Prior literature evinces the impact of CSR reporting on the future performance of firms but, as mentioned before, the results are mixed, and vary. For instance, it is found that one of the related benefits of CSR reporting on firms' performance is to boost sales, enhance operational efficiency and mitigate litigation risk. It would also enhance the analysts' anticipation of the firm's positive performance (Dhaliwal et al., 2012). Another incentive for enhancing CSR reporting is protecting the firm's value against high-profile misconduct. Accordingly, they avoid and legitimate themselves against any penalties resulting from misconduct events (Christensen, 2016). However, reporting CSR practices would have a positive impact on the market-based financial performance; this long-term development impact is related to the main interest of the firm that positively signals the market and legitimises its self (Liu and Zhang, 2017; Nekhili et al., 2017). Furthermore, in the context of mandatory CSR reporting, increases in the firms' CSR reporting post the new regulations are documented, in parallel with the enhancement of the future performance of those firms (Ioannou and Serafeim, 2017).

Conversely, some evidence documents disadvantage and the negative impact of reporting CSR on the firms' performance. For instance, the market might under-price firms in a sensitive industry after reporting CSR, or regulations may penalise them if they do not disclose their environmental impact for the market (Matsumura et al., 2014), this explaining that stakeholders may not act positively to achieve better CSR performance (Zhao and Muller, 2016). Moreover, in the context of mandating CSR reporting, a negative impact of enforcing this regulation is reported on the firms' performance, in addition to negative stock market reaction (Chen et al., 2018). These relate to the higher associated costs that firms will carry to apply this regulation (Grewal et al., 2018).

Latter findings direct researchers' attention to the important impact of CSR reporting on the firms' performance in addition to considering the effect of the new regulation on enhancing firms' subsequent performance based on accounting and market measures. These two primary aspects are the main aims of this research.

To investigate the discussed main aims, this study collects a sample consisting of 402 FTSE All-share firms listed on the London Stock Exchange (LSE), which includes the Main Market during the period 2009-2017. From this sample, data are collected for both the periods

before and after the adoption of the mandatory CSR reporting regulation. Hence, ordinary least squares (OLS) analysis is conducted to estimate the impact of mandating CSR reporting regulation on a firm's future performance.

While the prior empirical results are limited in the context of mandatory CSR reporting, the research findings enrich the literature through three points. Firstly, the study provides evidence that CSR practices and projects would temporarily harm firm's profitability due to the increased spending on and costs related to such activities, which is consistent with Liu and Zhang (2017) and Chen et al. (2018) neoclassical economic and agency theories. Secondly, in line with Ioannou and Serafeim (2017), and stakeholder and signalling theories, mandating CSR reporting enhance firms' future performance by signalling to the market about the firm's positiveness toward sustainability issues. Thirdly, the new regulation improves a firm's future performance, specifically, mandating CSR reporting effects appears clearly in the two-years- and three-years - ahead performance through both market- and accounting-based indicators, which support later discussion of the multivariate findings of this study.

The thesis offers a number of contributions to the accounting literature. First, it is a response to Christensen's (2016, p.138) call for papers, that "… future research could also examine how mandatory CSR reporting affects firms" to complement the literature that evinces the impact of voluntary CSR reporting. These findings add to a growing body of literature that studies the consequences of mandating CSR reporting. One such research stream focused on firm value and market responses to disclosure (Grewal et al., 2015; Chen et al., 2018), whereas another focuses on disclosure activities and environmental impacts (Hung et al., 2015; Ioannou and Serefeim, 2017). This study provides a new research insight by examining the impact of mandating CSR reporting on the subsequent financial performance.

However, to date, only limited literature focuses on mandatory CSR reporting because only a few regions mandate this reporting type specifically in the context of the UK environment, almost no evidence is found regarding adopting the new regulation in the UK. Consequently, this narrows the understanding of the impact of these regulations on the quality of CSR reporting in general, and specifically in the UK environment which has different institutional

characteristics and capital market aspects than other environments that mandate CSR reporting. Also, UK institutional investors collect private social information to assist them with investment decision-making, thus, CSR reporting considers as value-relevant to them (Solomon, 2006).

Particularly, the Act 2006 (regulation 2013) requirements different than other countries that mandate CSR reporting. For instance, in China, the Shenzhen Stock Exchange and Shanghai Stock Exchange require ESG disclosure for some specifically listed firms such as cross-listed firms and financial industry firms compared to LSE which mandates CSR reporting for all listed firms in the main market. Also, the required information to be disclosed vary from region to another between requiring ESG reporting, or CSR reporting (which includes environmental and social information according to Act 2006 (regulation 2013)). Accordingly, this study contributes to the literature by investigating the consequences of adopting the regulation of CSR reporting and the intentions behind the CSR practices in a firm, and how its influences the subsequent financial performance of the firms, which improves stakeholder's decisions towards these firms in the UK environment and shrinks the lack of research in different environments which limits our understanding of the consequences of this regulation on the firms.

Moreover, it is not clear how such regulation would affect the firms' subsequent performance. On the one hand, this regulation might increase firms' reporting transparency, enhance their environmental and social roles, and making them more loyal to sustainability issues. On the other hand, it might produce a negative effect from the externalities, where the firm would incur new costs, or face more pressure than usual to increase CSR performance to be able to compete with other firms. Specifically, this would harm the original sustainable firms with superior CSR performance. To conclude, such regulations have both benefits and costs, but if the costs offset the potential benefits, this might harm the shareholder's interest (Ioannou and Serafeim, 2017). Thus, this study contributes and expands the literature by adding new evidence about the impact of mandating CSR reporting on the firms' financial performance. This evidence is important where firms with high CSR attract a more positive investors' assessment of their firms' future value.

Concluding, this research contributes to the literature in various ways. First, it provides insights and feedback for regulation setters and policy-makers (who adopt this new regulation or who are willing to do so) about the effect of the new regulation on firms, Second, it extends the literature on the potential benefits of enforcing these regulations, and to what extent these regulations affect the firm's subsequent performance. Finally, it contributes to the shareholders and stakeholders regarding firms' performance and the impact of such new regulations on their interests.

The remainder of this chapter is organised as follows. Section 5.2 presents related literature about CSR reporting and firm performance relationship, first emphasising the voluntary type of CSR reporting then demonstrating the mandatory CSR reporting in the UK and concluding with developing the related hypotheses of this study. Section 5.3 discusses the research approach. Section 5.4 emphasises the data sources and sample selection. Section 5.5 presents the research methods and describes the followed methodology. Section 5.6 presents the results and analysis of this study's hypotheses, while Section 5.7 summarises and concludes the main issues discussed herein, in addition to stating the study contribution and implication policies.

5.2 Literature Review and Hypotheses Development

5.2.1 Corporate Social Responsibility Reporting Quality and Subsequent Performance

The initial aim of comprehensive reporting of CSR by firms is to protect investors' interests in the first place, then to enhance the communication channels between firms and society, and to enhance firms' transparency by avoiding the information asymmetry (Reverte, 2009). Such comprehensive reporting allows for a more effective assessment of a firm's financial status, and risk evaluation by the investor to make a fair judgment about this firm, which improves the transparency and efficiency of the capital markets (Harjoto and Jo, 2015). Consequently, practising CSR is considered an action related to the long-term improvement of a firm's interests (Liu and Zhang, 2017).

Several empirical studies examine the relation between CSR and firm's financial performance through various (positive and negative) theoretical perspectives. From a negative perspective, economic theory-neoclassical suggests that CSR practices add

unnecessarily additional costs to a firm, which is a disadvantage against the competitors (Friedman, 1970; McWilliams and Siegel, 1997; Jensen, 2002). Another theoretical perspective supported by the agency theory argues that financial resources spent on CSR practices would produce managerial benefits instead of financially benefiting the shareholders of the firm (Brammer and Millington, 2008). In particular, a few studies assert that enhancing CSR practices would not improve the customer purchase behaviour when the customers recognise that the firm intends to increase their profits rather than act in the stakeholders' interests (Peloza and Zhang, 2011). Furthermore, employees' satisfaction might not be enhanced when better CSR practices are employed in a firm due to some other factors such as treating employees unfairly (Rupp et al., 2013). Accordingly, the firm 's performance will not be enhanced.

Conversely, another stream of studies, supported by the stakeholder theory perspective, such as Waddock and Graves (1997), evince that CSR reporting quality has a positive impact on the firm in that it would attract more qualified employees (Greening and Turban, 2000), attract more socially responsible customers (Sen and Bhattacharya, 2001), and gain more social legitimacy (Hawn et al., 2011). Thus, more socially responsible investors are attracted (Kapstein, 2001), which ultimately affects the firm's financial performance.

In particular, stakeholder theory can manifest the positive impact of CSR reporting on the capital market. As Clarkson (1995, cited by Nekhili et al., 2017, p.43) argues, this theory emphasises that "*a firm can be viewed as a set of interdependent relationships among stakeholders, which comprise not only shareholders but all groups or individuals who can affect or be affected by the company's activities*". This perspective asserts that stakeholders' satisfaction is the main factor of firm success; accordingly, CSR is a key factor to gain stakeholders' satisfaction and support. On the other hand, such type of extensive reporting would provide critical information that meets shareholders' demand and affects the firm's future profits and cash flows, which in turn could reduce the information asymmetry and agency problem between managers and shareholders (Dhaliwal et al., 2011).

Prior literature has examined the relation between CSR reporting and a firm's financial performance. Various measurements of financial performance are used such as accounting or market measures which produce inconsistent results that vary between positive (e.g., Porter and van der Linde, 1995; Heal, 2005; Siregar and Bachtiar, 2010; Plumlee et al., 2015;

Ioannou and Serafeim, 2017; Liu and Zhang, 2017) and negative (e.g., Jones et al., 2007; Zhao and Muller, 2016; Chen et al., 2018) under voluntary and mandatory reporting practices.

5.2.1.1 Voluntary Corporate Social Responsibility Reporting

Regarding voluntary CSR reporting, Porter and van der Linde (1995) suggest that CSR practices would improve the firm's relationship with its creditors, investors and regulators which reflects positively on the firm's financial performance. Their evidence relies on the notion that CSR practices would motivate productivity in a firm, which affects the firm's competitive situation due to the good management of resources. Reduced resource inefficiencies would decrease costs in the firm, and thus enhance the firm's financial performance. Consistent with that, Heal (2005) finds that CSR is important for the long-term profitability of the firm by affecting the firm strategy and risk management. Relatedly, the CSR impact needs time to be observed in the firm's performance, which supports this study to consider the current CSR impact on the subsequent firm performance in the regression model. Siregar and Bachtiar (2010) investigate the Indonesian stock market firms to provide evidence about the impact of CSR on future performance, and they document a positive impact of CSR on the firm's future performance measured using return on equity ratio. These results are considered as a motivation for firms to report more about their CSR activities to the public.

Dhaliwal (2011)'s study is one of the significant papers in the literature which provides evidence from the United States (US) about the benefits related to CSR reporting initiation – specifically, cost of equity capital. The authors argue that firms would experience a decrease in the cost of capital following the year of initiating CSR reports that presents an extensive CSR performance. In addition, firms, which experience an increase in the cost of capital in the last year, would initiate superior CSR performance in the current year, therefore enhancing the firm's future value. In their following study, Dhaliwal et al. (2012) further evince the usefulness of CSR reporting for shareholders where it enhances the firm's value through reducing the cost of capital, increasing sales, enhancing operational efficiency, and mitigating against litigation risk, among others. They also find that issuing a standalone CSR report enhances the analysts' anticipation of the firm's performance.

Cheng et al. (2014) examine the impact of the superior CSR performance on reducing agency cost and reducing information asymmetry by improving stakeholders' engagement. They find that firms with higher performance of environmental, social, and governmental (ESG) disclosure get better access to finance, and, in particular, capital constraints are reduced. Furthermore, Lys et al. (2015) document similar results regarding the positive relationship between CSR and future performance of a firm but, unlike most of the literature, they explain these results from a different perspective (causality behind this relation); they state that "*causality does not necessarily go from CSR expenditures to financial performance. Rather, we posit that a firm may undertake a CSR initiative because the firm expects strong future financial performance*" (Lys et al., 2015, p.56). This argument is built on the signalling value perspective, which attributes the positive relation to the signalling value of CSR expenditures (using CSR as a signalling instrument) instead of being a positive return on these expenses. In other words, they argue that firms are more likely to spend financial resources on CSR activities to communicate a positive private vision of managers about the future financial performance of the firm to stakeholders.

Similarly, Plumlee et al. (2015) find evidence among US firms for the association between the quality of the environmental disclosure (as one type of CSR reporting) and firm value (cash flow) and cost of capital. They find that reporting quality engages in a positive relationship with firm value. Regarding the cost of capital, they document both positive and negative relations with the environmental disclosure, which depends on the other specific factors of type and nature of the disclosure.

Cahan et al. (2016) conduct a cross-country study to investigate the variation in the relationship between CSR reporting and firm value, providing evidence about the positive impact of CSR reporting on market valuation of the firm. Further, Christensen (2016) presents firm value protection of misconduct as another incentive for practising CSR activities and reporting related extensive, transparent information. Firms would also voluntarily report CSR information to avoid and legitimate themselves against any penalties resulting from misconduct events. He points out that firms are less likely to face a high-profile misconduct case if they report about their CSR practices, clarifying that CSR reporting would enhance their 'reporting and compliance system'. However, he argues that firms that

face misconduct events and report CSR would experience a better reaction than firms, which do not report their CSR performance transparently.

Boubakri et al. (2016) support the positive perspective of CSR performance impact on the firm valuation by investors. They emphasise that cross-listed firms perform better CSR and consequently significantly enhance investors' evaluation of the firm. In line with that, Kiessling et al. (2016) investigate the relationship between CSR practices and firm value utilising a Sweden CSR index that includes the top 100 firms traded on the NASDAQ-OMX Stock Exchange. They document a positive association; "*As CSR is a customer focused tactic, firms with strong CSR are awarded for their efforts by a higher performance from customers*" (Kiessling et al., 2016, p.278).

Further, Nekhili et al. (2017) present similar evidence regarding the positive relationship between CSR reporting and market-based financial performance relating to some specific factors of the ownership structure of the firm. Another study of Liu and Zhang (2017) investigates the Chinese market regarding the impact of CSR reporting on firm performance and finds that "*social responsibility information relates to the long-term development of enterprises*" (Liu and Zhang, 2017, p.1075), inferring that the main aim of the firm in reporting CSR information is to signal the market positively and legitimise itself.

On the other hand, some studies find a negative relationship between voluntary CSR reporting and firms' performance. For example, Richardson and Welker (2001) observe that enhancing CSR activities of a firm increases the cost of capital of firms. Jones et al. (2007) also document a negative association between CSR reporting and firm value. In a more recent study, Matsumura et al. (2014) focus on CSR reporting in the case of carbon emissions. Their evidence indicates that managers balance between benefits and costs of reporting about the carbon emissions; in particular, they find that markets underprice firms with high emission, and regulations penalise them if they do not report their environmental impact for the market. Thus, a negative relationship is found between CSR reporting and market value of the firm.

Additionally, in their replication of Waddock and Graves' (1997) study, Zhao and Muller (2016) revisited the relationship between prior CSR reporting and its impact on the subsequent firm financial performance. Based on a longer period and larger sample size,

they evince that CSR reporting does not have a positive impact on a firm's financial performance, explaining that stakeholders may not react positively to better CSR performance.

5.2.1.2 Mandatory Corporate Social Responsibility Reporting

In contrast to the generous voluntary CSR reporting literature, only limited research to date has investigated mandatory CSR reporting. Due to the fact that only limited countries have mandated CSR reporting to the present time, and for those that do, the regulation is not very clear about the exact required information and the form of the reporting that firms need to apply. For instance, Ioannou and Serafeim (2017) examine the impact of mandatory CSR regulation across four countries (South Africa, Malaysia, China, and Denmark). One remarkable point the study documents is that some of these regulations rely on the 'apply or explain' rule and this regulation does not offer accurate guidance about the required reporting information and its form. However, the study documents an increase in the firms' CSR reporting post the new regulations, in parallel with enhancement of the financial performance of these firms, as well as an increase in adopting GRI as guidance for CSR reporting.

Another study that investigates the mandatory adoption of CSR reporting is that of Fiechter et al. (2017) who examine the impact of mandating CSR reporting by the European Union (EU) in 2014, providing evidence of expenditure on CSR being increased after this regulation. However, they find that this increase in expenditure is related to predicting unfavourable stakeholder reactions around the mandatory reporting of CSR performance.

Conversely, based on a Chinese sample, Chen et al. (2018) document an improvement in the spending associated with CSR practices (specifically environmental protection spending). Also, they observe a decrease in the firm's profitability after enforcing the new regulation, in addition to a negative stock market response to the mandated regulations. In line with that, Grewal et al. (2018) conduct an event study to capture the market reaction following the announcement of the new regulation enforcement in EU stock exchange-listed firms. They record a negative market reaction (on average) to the mentioned regulation and relate this to the higher associated costs that firms will incur to apply this regulation.

5.2.1.3 Hypotheses Development

In the context of the discussed literature, inconsistent findings are documented under the impact of both voluntary and mandatory CSR reporting on the firms' performance. This variance could be related to the notion of costs and benefits of such type of information disclosure. The mandated CSR reporting is more complicated where both stakeholders and shareholders are scrutinising firms' CSR performance, and it has both benefits and costs for society, investors, and the firm itself.

This regulation has a number of benefits. It would enhance firms' operational efficiency through forcing them to decrease carbon emissions and energy consumption, enhance employee recruitment, and motivate the firm to invest more in safety procedures; this, in turn, enhances stakeholders' interests. Another benefit of increasing the availability of such information enhances investors' assessment of firm future performance and risk status, or it might lead to reducing the cost of capital (Easley and O'Hara, 2004). Additionally, as Grewal et al. (2018, p.9) state, "*better information can improve the ability of investors to monitor firms on dimensions potentially having cash flow implications (e.g., environmental performance); this, too, would generate a positive stock price reaction.*" Accordingly, firms would benefit from this regulation likewise by signalling to the market about the firm's positiveness toward sustainability issues.

Conversely, CSR reporting new regulation would negatively affect the firm's value if the expected costs exceed the anticipated benefits; in turn, this would lead the investors to respond negatively to this regulation. One example of cost comprises the preparation of this information (for instance, gathering environmental data imposes a new cost for environmental management systems). Another potential cost is dissemination; for instance, forcing firms to disclose proprietary sensitive information could harm their competitiveness specifically if this disclosure communicates competitive strategies to be used by other firms, in addition to the assurance of CSR information cost.

Moreover, forcing firms to extend their CSR reporting would allow external parties such as civil society, regulators and government to pressure firms to invest their money in some new projects such as purchasing new expensive machines that cause less harm to the environment, enhance the employability conditions, or to direct their financial sources to unprofitable projects for shareholders. These combined would transfer the wealth from

shareholders to other non-shareholding stakeholders; which in turn generates a negative response to this regulation.

Overall, the new regulation that mandates CSR reporting would generate both benefits and costs. Due to that, it would be difficult to predict this relationship; therefore, this study developed the following hypotheses:

Hypothesis 1: *There is an impact of CSR reporting quality on the firms' subsequent financial performance.*

Hypothesis 2: *The impact of CSR reporting quality on the firms' subsequent financial performance will be stronger after the new reporting regulation of Act 2006 (Regulations of 2013).*

Table 5.1

Key Articles on the Relationship of CSR Reporting and Firm Performance

Author, Date, Country, & Journal Rank	Research Objective	Theory	Data Source	Internal Variables (Predict)(Finding)
Chen et al. (2018) China ******(*)**	Examine how mandatory disclosure of corporate social responsibility (CSR) impacts firm performance and social externalities.	Stakeholder theory	GTA Regional Economy database (2006-2011)	-ROA / ROE (-) -CSR (-) -Firm size (+) -Cash flow (+) -State Ownership (0) <u>*Alternatives for REA*</u>*:* *-Operating Expenses (+)* *-Impairments loss (+)* *-Non-operating income (0)* *-Non-operating expenses (0)* *-Investment (-)* *-Tobin's Q (-)*
Fiechter et al (2018) E.U **SSRN**	Examine firms' investment decisions in anticipation of stakeholder reactions to mandated disclosures.	Not stated	ASSET4 (2011-2015)	-Ln(Total assets) (+) -Ln(financial analyst) (+) - Firm leverage (0) -Cash flow (0) -Assets to sales ratio (+) -PP&E (+) -Market value (-) -ROA (0) -CG (+)
Grewal et al. (2018) E.U ******(*)**	Examine the equity market reaction to mandating ESG disclosure.	-Voluntary disclosure theory -Legitimacy theory (but not mentioned directly)	*Bloomberg* database (2011– 2014)	-CAR (+) -CG (+) -Asset Manager (+) -Asset Owner (+) -MTB ratio(+)
Nekhili et al., (2017) France	Examine the relationship between corporate social responsibility	Stakeholder theory	Longitudinal archival data (2001-2011)	-Tobin's q (+) -CSR (+) -Family firms (0) -Ownership structure (-)

***	reporting and firm market value.			-CG (-) -Firm size (-) -Firm leverage (-) -Research and development (0) -Beta (+)
Liu and Zhang (2017) China **	Examine the relationships between corporate governance, social responsibility information disclosure, and enterprise value.	Legitimacy theory (but not mentioned directly	CSMAR database (2008-2014)	-Tobin's Q. (+) -CG (+) -Firm leverage (-) -Firm size (-)
Ioannou and Serafeim (2017) China, Denmark, Malaysia, South Africa **Working Paper**	Examine the implications of regulations mandating the disclosure of ESG.	Signalling Theory	*Bloomberg* (2005-2012)	-ESG (+) -Size (-) -Leverage (+) -ROA (+) -Tobin's Q (+)
Zhao and Murrell (2016) US ****(*)	Examine the relationship between prior corporate social performance and subsequent corporate financial performance.	Stakeholder theory	KLD ratings (1991–2013)	-ROA (+) -ROE (0) -ROS (0) -Tobin's Q (0) -MTB (0) -MVA (0) -Firm leverage (-)
Christensen (2016) US ****	Examine whether CSR reporting actually help firms prevent high-profile misconduct from occurring.	Agency theory	The Global Reporting Initiative, CorporateRegister.com, the UN Global Compact, SocialFunds.com, Internet searches, and companies' Websites (1999-2010)	-Future misconduct (-) -Compensation (0) -Cost of Capital (0) -ROA (0) -Financial strength (+) - Firm size (+) -Tobin's (0) -Institutional ownership (0) -Research and development (+) -Firm Age (+)
Boubakri et al. (2016) US ****	Examine the impact of CSR and cross-listing on firm value.	Bonding theory	Hand collected (2002–2011)	-Cross-listing (0) -Lag CSR (0) -CSR*Cross listing (+) - Firm size (-) - Firm age (-) -Sales growth (+) -ROA (+) - Firm leverage (0) -Research and development (+) -Corporate Governance (0)
Cahan et al. (2016) Cross-country	Examine how the relation between CSR disclosures and firm value varies across	Not stated	2008 KPMG Survey (2008)	-Tobin's Q (+) -CSR (+) -Log Market Cap (+) -Stock turnover (-)

***	countries.			-ROA (+) -Capital expenditure (+) -Firm leverage (-) -Dividends (-) -Intangible assets (0) -Research and development (+) -Stock return over (0)
Kiessling et al. (2016) Sweden ***	Examine the relation between CSR disclosures and firm performance.	Market orientation theory	Sweden's CSR index (2011)	-Financial performance (+) -CSR (+) -Industry affiliation (+) -Firm size (0) -Customer categories (0) -Market intensity (0)
Lys et al. (2015) Russell 1000 ****(*)	Examine the causality relation between corporate social responsibility expenditures and firm performance.	Signalling theory	ASSET4 database (2002–2010)	-ROA (+) -Cash flow (+) -Sales (0) -CSR (+) - Other economic and institutional determinants of CSR expenditures
Plumlee et al. (2015) US ***	Examine the relationship between the quality of a firm's voluntary environmental disclosures and firm value.	Economics-based theories	Hand collected (2000–2005)	-Stock price (+) -Voluntary environmental disclosure (+) -Book value (+) -Abnormal earnings (+) -Net environmental performance (0) -Stand-alone CSR report (+)
Cheng at al., (2014) Public listed firms in ASSET4 Dataset ****	Examine whether superior performance on corporate social responsibility strategies leads to better access to finance.	-Stakeholder theory -Agency theory -Neoclassical economics	ASSET4 Dataset (2002-2009)	-Financial performance (-) -CSR (-) -Firm size (+)
Matsumura et al. (2014) US ****(*)	Examine the effect of carbon emissions on firm value.	-Natural-resource-based theory -Voluntary disclosure theory -Economic theory	-Hand collected from the CDP database (questionnaire) -KLD database (2006-2008)	-MVE ratio (-) -Carbon emissions (-) -Total assets (+) -Firm leverage (-) -Operating income (+)
Dhaliwal et al. (2012) US ****(*)	Examine the relationship between disclosure of nonfinancial information and analyst forecast accuracy.	Stakeholder theory	Corporate Register (1994–2007)	-Forecast accuracy (+) -CSR (+) -Firm size (0) -Loss (+) -Major stock exchanges (-) -Earnings per share (+) -Analysts following the firm (-) -Country-Level Variables -Firm-Level Variables
Dhaliwal et al.	Examine the benefit	Voluntary disclosure	-Corporate Social	-Cost of capital (-)

(2011) **US** ******(*)**	associated with the initiation of voluntary disclosure of corporate social responsibility activities.	theory	Responsibility Newswire - CorporateRegister.com -Internet searches -Company websites - KLD (1993-2007)	-CSR (-) -firm size (+) -Risk (+) -Firm leverage (-) -MTB ratio (-) -Ln-analysts EPS forecast (0)
Siregar and Bachtiar (2010) **Indonesia** *****	Examine the possible effect of CSR reporting on a firm's future performance.	Agency theory	Content analysis (2003)	-CSR (+) -ROE (+) -Market capitalization (+)
Heal (2005) ******	Analyse corporate social responsibility from economic and financial perspectives, and suggest how it is reflected in financial markets.	Literature review	Literature review	Literature review
Porter and van der Linde (1995) ********	Examine the relationship between well designed environmental regulations and firm performance.	Literature review	Literature review	Literature review

Notes: This table summarises the most significant studies that examine the relationship between CSR reporting and firm value. Signs identified as follow: significant positive relationship (+), significant negative relationship (-), insignificant relationship (0).

5.3 Research Approach

As discussed in chapter three section 3.3, this study adopts the inductive approach to extract the primary data of the financial performance of firms and CSR reporting net score in addition to the control variables. However, the deductive method is employed to collect the secondary data, which found in the prior literature, which discusses similar relationships. Moreover, this research uses the quantitative method to collect the required data to test the developed hypotheses.

5.4 Data and Sampling

The study sample consists of 402 FTSE All-share firms listed on the London Stock Exchange (LSE), which includes Main Market from 2009 to 2017. The period is chosen considering the comparison criteria in this study to be four years around the new regulation of mandating

CSR reporting in the UK in 2013. The sample is extended to 2017 for the requirement of measuring a firm's future financial performance.

Following prior literature (e.g., Reverte 2009; Sun et al., 2010; Chen et al., 2018), firms of financial institutions (banks, insurance, and investment) (SIC 6000-7000)[29] and utility industries (SIC 4400-5000) are excluded. Later literature confirms that these exclusions enhance the comparability of the results among the sample, where the mentioned sectors operate in highly regulated industries whose accounting rules differ from those in other industries. Thus, this treatment reduces the initial sample from 3390 observations to 1563 due to the missing observations. Moreover, following the literature, the sample variables are winsorised in both tails at the 1% level of distribution to avoid the influence of outliers (Boubakri et al., 2016; Zhao and Murrelle, 2016; Liu, 2017).

The study dataset is collected using the following sources: (1) financial data for all firms, and the control sample was obtained from the *DataStream* database; (2) *Bloomberg* database was used to extract the CSR reporting, and CG scores; and (3) firms are identified using the list of FTSE All-share on the London Stock Exchange website for UK firms during the period 2009-2017.

Table 5.2

Sample Selection Criteria for CSR Reporting and EM

Sample Selection Criteria	**Number of Firms**	**Number of Observations**
Firm-year observations have sufficient data from the *Bloomberg* database from 2009 to 2017 for CSR reporting score.	*402*	*3415*
Less:		
Missing data observations	51	857
Firms in the financial and utility industries	121	995
The full sample that the author uses to test the hypotheses	230	1563

This table presents the sample selection criteria used in the study.

[29] SIC code stands for Standard Industrial Classification. Each industry is defined as a division by its 2-digit SIC code.

5.5 Research Methodology and Methods

5.5.1 Independent Variables

5.5.1.1 Corporate Social Responsibility Reporting Quality

The *Bloomberg* database evaluates CSR reporting level on dimensions including environmental, social, and governmental (ESG) disclosure. Reporting net scores range from 0 to 100 reflecting the overall extensiveness of firms' reporting of each dimension rather a detailed score for each component in these dimensions.[30] *Bloomberg* adjusts the ESG score to be consistent with each industry, to ensure that each firm is assessed based on relevant data related to its specific industry and then weights each item in the score by its importance (Gutsche et al., 2017). The ESG *Bloomberg* score includes the following headings for the environmental dimension; CO2 emissions, energy consumption, water use, and total waste. The social dimension items are the number of employees, contract type and turnover, community service expenditure, and human rights. The last dimension is corporate governance (CG), which consists of information about board structure, board independence, board executives and diversity, board committees, audit committee, and compensation committee, among others (*Bloomberg* database).

With regards to the new regulations of mandating CSR reporting in the UK, it requires the firms to report about (i) the impact of firm's business on the environment, (ii) the company's employees, and (iii) social, community and human rights issues (Act 2006, s414 (7)). Hence, these regulations are required to include two dimensions of the main ESG score – environmental and social – to understand the effect of mandating CSR reporting quality on future performance. However, this study is controlling for CG quality, so this is excluded (to be used separately) from the total score to finish with only two ESG scores – environmental and social disclosure. To calculate a total score to measure CSR quality, this study takes the average of the summed total score of CSR to the total score of environment disclosure.

[30] Bloomberg provides a score (net score) for each dimension of ESG individually (which comes from evaluating set of related components for each dimension), and a total score for all three dimensions together, but it does not provide a score for each component included in these dimensions separately.

5.5.1.2 The New Regulations of Mandated Corporate Social Responsibility

This study investigates the effect of the new regulations Act 2006 (regulation 2013) which mandates the reporting of CSR on the subsequent performance of the firm. To measure the new regulations, a dummy variable will take the value one if the firm is located in the mandatory year's group and zero otherwise.

5.5.2 Dependent Variables

Numerous studies argue that the market-based indicator is more effective than accounting-based measures for detecting the financial benefits of CSR (Hillman and Keim, 2001), for two reasons. First, it reflects a forward-looking proxy as it is grounded on the market stock prices. Secondly, it reflects the stakeholders' perceptions, which enhances the assessments of CSR practices' value over the long term (Orlitzky et al., 2003). In particular, market-based indicators such as Tobin's Q are considered as reputable assessors of firms' performance (Surroca et al., 2010).

On the other hand, several studies prefer the accounting-based measures rather than the market-based indicators due to their sensitivity and ability to "reflect internal decision-making capabilities and managerial performance rather than external market responses to organizational actions" (Orlitzky et al. 2003, p.408).

Following the literature, this study relies on both the accounting performance measures (e.g., Waddock and Graves, 1997; Zhao and Murrell, 2016) and the market-based indicator (Zhao and Murrell, 2016; Nekhili et al., 2017; Liu and Zhang, 2017). Thus, two proxies are employed to measure the subsequent financial performance of the firm – namely, Return on Assets (ROA) and Tobin's Q. In terms of calculation, ROA is calculated as net income before interest and tax on the total assets (Waddock and Graves, 1997; Zhao and Murrell, 2016), and Tobin's Q is calculated as the market value of equity (MVE) and total debt (D) divided by total assets (TA) (Nekhili et al., 2017).

5.5.3 Empirical Models

The purpose of this study firstly is to capture the impact of CSR reporting quality on the firms' subsequent financial performance. Secondly, it aims to capture the impact of CSR reporting quality on the firms' subsequent financial performance after the new reporting

regulation of Act 2006 (Regulations of 2013) in FTSE All-share firms listed in LSE. To capture this impact, this study uses a basic set of OLS regression models as follow.

Firstly, to address the first hypothesis which suggests *'There is an impact of CSR reporting quality on the firms' subsequent financial performance',* the first model (5.1) examines the relation among the full sample period:

$$FP_{i,t+1} = \alpha_0 + \beta_1 CSR_Score_{i,t} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 Age_{i,t} + \beta_5 Listing_{i,t} + \beta_6 CG_{i,t} + \beta_7 Ind.Sens + \beta_8 FP_{i,t} + \Sigma Year + \varepsilon_{i,t} \quad \textbf{(5.1)}$$

Secondly, to assess the second hypothesis, which suggests *'The impact of CSR reporting quality on the firms' subsequent financial performance will be stronger after the new reporting regulation of Act 2006 (Regulations of 2013)',* the second model (5.2) examines the relation around the year of mandating CSR reporting (2013):

$$FP_{i,t+1} = \alpha_0 + \beta_1 CSR_Score_{i,t} + \beta_2 Reg_{i,t} + \beta_3 (\mathbf{CSR_Score_{i,t} * Reg_{i,t}}) + \beta_4 Size_{i,t} + \beta_5 Lev_{i,t} + \beta_6 Age_{i,t} + \beta_7 Listing_{i,t} + \beta_8 CG_{i,t} + \beta_9 Ind.Sens + \beta_{10} FP_{i,t} + \Sigma Year + \varepsilon_{i,t}, \quad \textbf{(5.2)}$$

where,

Variable	Definition	Measurement	Expected Sign
$FP_{i,t+1}$	Indicates the future financial performance of the firm.	1-ROA is the net income before interest and tax on the total assets. 2-Tobin's Q is the market value of equity (MVE_WC08001) and total debt divided by total assets.	?
$CSR_Score_{i,t}$	Indicates the CSR reporting score at the end of the year.	Disclosure net score ranges from 0 to 100.	+
$Reg_{i,t}$	Indicates the new regulation of Act 2006 (Regulation 2013).	A dummy variable equals zero if the year is before 2013 and one otherwise.	+
$Size_{i,t}$	Indicates the size of the firm.	The natural logarithm of the market value of equity (MVE_WC08001) of firm i, measured at the end of year t.	+
$Lev_{i,t}$	Indicates the leverage (debt) of the firm.	The total debt scaled by total assets at the end of year t.	?
$Age_{i,t}$	Indicates the firm's age.	The natural logarithm of the number of the firms' listing year (BDATE) plus one.	+
$Listing_{i,t}$	Indicates the cross-listing status of the firm.	An Indicator variable equal to one when a firm is listed in	+

		one or more international market and zero otherwise.	
$CG_{i,t}$	Indicates the corporate governance score at the end of year t.	Corporate governance net score ranges from 0 to 100.	+
Ind.Sens	Indicates the sensitivity of the industry under which a firm is classified.	Sensitive industries are: “mining, oil and gas, chemicals, construction and building materials, forestry and paper, steel and other metals, electricity, gas distribution and water”. All the rest of the industries are considered as less sensitive.	?

Notes: This table presents the variables' measures. More details about the signs prediction are in the hypotheses development section. For the data source see Appendix A.

5.5.4 Control Variables

Prior literature employed several control variables, which would affect studying the impact of applying a new regulation – that is, in this study, the new regulations of Act 2006 (Regulation 2013) – to mandate CSR reporting quality on the subsequent financial performance. This is to avoid a problem of correlated omitted variables. Therefore, this study includes the most commonly used control variables following some studies (e.g., Brammer and Pavelin, 2008; Chiu and Wang, 2015; Zhao and Murrell, 2016; Nekhili et al., 2017):

Size ($LnMVE_{I,t}$): McWilliams and Siegel (2000) and Prior et al. (2008) argue that CSR disclosure and size of firm are associated, considering the firm size as a widely used control for CSR disclosure. Particularly in that large firms can meet the cost of providing CSR information for the stakeholders in their annual reports, which is not the case with the smaller firms (Firth, 1979). However, the sign of this association across most of the literature indicates a positive relation (Reverte, 2009; Boubakri et al., 2016; Cahan et al., 2016). Firm size proxy is included in the regression model as the control variable and is defined as the natural logarithm of the market value of equity (MVE_WC08001**)** of firm i measured at the end of year t.

Leverage ($Lev_{i,t}$): Brammer and Pavelin (2008), Branco and Redrigues (2008) and Reverte (2009) suggest that a low level of leverage in a firm confirms that creditor stakeholders will

apply a lower level of pressure to restrict managers' decisions over CSR disclosure practice, which are indirectly related to the financial success of the firm. This study controls for leverage ratio which is calculated as the total debt (WC03255) scaled by total assets (WC02999) measured at the end of year t.

Firm Age ($Age_{i,t}$): Firms' CSR practices could be affected by the different development levels of the firm's life cycle. Therefore, to control for such potential effects, this study follows the literature (Boubakri et al., 2016; Christensen, 2016) and control for the firm age impact measured as the natural logarithm of the number of the firm's listing year (BDATE) plus one.

Corporate Governance ($CG_{i,t}$): The impact of corporate governance (CG) on CSR reporting and practices in the firms has been extensively studied in the literature, providing evidence to support the idea that good CG strengthens the CSR practice in the firms (e.g., Jamali et al., 2008; Jo and Harjoto, 2011 ,2012; Flammer and Luo, 2017; Liu and Zhang, 2017). Hence, this study controls for the CG impact using a net score provided by the *Bloomberg* database. This net score scales the CG from 0 to 100 using measures under the following main headings: board structure; board independence; board and executive diversity; board committees; audit committee; compensation committee; nomination committee; board executive activities; shareholder's rights; annual general manager's voting results; and global initiative reporting.

International listing ($Listing_{i,t}$): According to Cooke (1989), Reverte (2009) and Chiu and Wang (2015), a firm will disclose more CSR information when it operates in foreign markets where it needs to consider two or more stock markets' reporting rules. Hence, under international listings, firms become more visible to the public and under higher pressure of stakeholders and analysts. Moreover, managers in listed firms are under more scrutiny from stakeholders; therefore, they seek to practice more CSR activities in order to impress stakeholders (Prior et al., 2008). Following Reverte (2009), this study controls for the international listing of firms by adding a dummy variable, 'Listing', equal to one if the firm is listed in one or more international markets and zero otherwise.

5.6 Results and Analysis

In this section, two sub-sections are presented. First, the univariate analysis results including industry and time distribution across the nine-year sample period are presented, followed by the descriptive statistics and correlation matrix of all variables included in the study.

The second sub-section is the multivariate analysis results covering OLS regression that tests the impact of mandating CSR reporting on future performance for the whole sample. For this point, the study relies on both the accounting performance measures (e.g., Waddock and Graves, 1997; Zhao and Murrell, 2016) and the market-based indicator (Zhao and Murrell, 2016; Liu and Zhang, 2017; Nekhili et al., 2017). Thus, two proxies are employed to measure the subsequent financial performance of the firm – namely, subsequent Return on Assets (ROA) and Tobin's Q.

This study demonstrates a dynamic analysis on two additional levels to include the effect of voluntary and mandatory adoption of reporting CSR in the UK over two lagged phases to capture the influence of CSR reporting on firm performance. Moreover, a further test is conducted based on the classification of CSR reporting quality separately as 'high' or 'low'.

5.6.1 Univariate Analysis

Table 5.3 reports the sample distribution. Panel A in Table 5.3 presents CSR reporting quality sample industry distribution across the period 2009-2017. Eight main industries are included in this study with a net number of 280 firms. The Manufacturing, Service and Retail industries are the most represented industries (38.13%, 20.03% and 15.48%, respectively). The Wholesale Trade industry and Transportation and Public Utilities industry both are the least represented industries (3.39% and 4.73%, respectively).

Panel B of Table 5.3 demonstrates the time distribution of the CSR reporting quality sample over the study period. However, an increase in the number of CSR reports was noted across 2009 to 2017 starting with 10.62% in 2009 increasing to 13.56% in 2016.

Table 5.3

Industry and Time Distribution for CSR Reporting Quality Sample during 2009-2017

Panel A: Industry Distribution			
Industry Type	Freq.	Per cent	Cum.
Mining	180	11.52	11.52
Construction	105	6.72	18.23
Manufacturing	596	38.13	56.37
Transportation & Public Utilities	74	4.73	61.1
Wholesale Trade	53	3.39	64.49
Retail Trade	242	15.48	79.97
Services	313	20.03	100
Total	1563	100	
Panel B: Time Distribution			
Year	Freq.	Per cent	Cum.
2009	166	10.62	10.62
2010	172	11	21.63
2011	179	11.45	33.08
2012	186	11.9	44.98
2013	208	13.31	58.29
2014	218	13.95	72.23
2015	222	14.2	86.44
2016	212	13.56	100
Total	1563	100	

Note: This table presents the frequency of CSR reporting firms by industry and year over the period 2009-2017 including the missing values.

Table 5.4 reports descriptive statistics for all incorporated variables in this study[31]. Two measures of subsequent performance are used – Tobin's Q and ROA. The mean (median) values of ROA and Tobin's Q are 6% and 1.55% (6% and 1.28%) respectively. However, the findings are consistent with the prior literature (e.g., Chen et al., 2017; Nekhili et al., 2017) implying that, on average, firms are generating a good profit and they are highly valued[32]. The average (median) of CSR reporting quality score is 29.61 (28) out of the full score of 100

[31] All variables are winsorized at the top and bottom 1% of their distribution.

[32] When the Tobin's Q ratio is between 0 and 1, it costs more to replace a firm's assets than the firm is worth. A Tobin's Q above 1 means that the firm is worth more than the cost of its assets. Because Tobin's premise is that firms should be worth what their assets are worth; anything above 1theoretically indicates that a company is overvalued. Moreover, ROAs over 5% are generally considered good.

for all of the sample firm-year observations, representing a relatively low CSR reporting quality of FTSE All-share firms listed in LSE.

For the control variables, results are consistent with the prior literature (e.g., Nekhili et al., 2017). For firms' size, the mean firm size score is 14.25 (equivalent to approximately £4,697 million market value of equity) with a median score of 14.032. About 96% of the sample firms on average are listed in one or more international markets (in addition to LSE), of which 18% of the sample firms are classified as sensitive industries. In average, the sample firms present 22% debt ratio. Also, the results indicate the average firm's age is about 31 years, and the firm's score of reporting CG is about 56 on average out of a full score of 100 which is considered higher than the CSR reporting score.

Table 5.4

Descriptive Statistics on Firm-level Variables

	Mean	Median	SD	Max	Min	N
Variables of Interest						
ROA	0.061	0.058	0.079	-0.292	0.336	1563
Tobin's Q	1.552	1.276	1.035	0.336	7.341	1562
Dependent Variable						
CSR_Score	29.608	28.000	11.511	11.000	65.000	1563
Control Variables						
Size	14.248	14.032	1.425	10.496	18.127	1563
Lev	0.222	0.214	0.171	0.000	1.014	1563
Age	3.266	3.367	0.687	0.693	3.989	1563
Age in years	31.748	29.000	16.885	2.000	54.000	1563
List	0.962	1.000	0.192	0.000	1.000	1563
CG_Score	56.338	55.000	7.035	39.000	77.000	1563
Ind.Sens	0.182	0.000	0.386	0.000	1.000	1563

Notes: This table presents sample descriptive statistics for all variables incorporate in this study over the period 2009-2017. All variables are winsorised at 1% of their distribution and are as defined in Appendix A.

Table 5.5 presents the correlation coefficients of the regressions among all variables covered in this study reflecting the multicollinearity test results, in addition to testing the variance inflation factor (VIF) which indicates the normal level. The analysis of the Pearson correlation matrix shows normal correlations between the ROA and Tobin's Q proxies and rest of the variables.

Table 5.5
Pairwise Pearson Correlation among all Variables

	1	2	3	4	5	6	7	8	9
(1) Tobin's Q	1								
(2) ROA	0.447*	1							
(3) CSR_Score	-0.109*	-0.095*	1						
(4) Size	0.105*	0.137*	**0.567***	1					
(5) Lev	-0.058*	-0.119*	0.077*	0.127*	1				
(6) Age	-0.181*	0.070*	0.199*	0.116*	-0.242*	1			
(7) List	0.097*	-0.011	0.083*	0.285*	0.021	-0.099*	1		
(8) CG_Score	-0.084*	-0.054*	**0.678***	**0.559***	0.052*	0.213*	0.102*	1	
(9) Ind.Sens	-0.225*	-0.165*	0.185*	0.079*	-0.108*	0.003	-0.038*	0.196*	1

Notes: * Represents significance at the 10% level.
This table presents the Pearson correlation matrix for all variables covered in this study. All variables are as defined in Appendix A.

5.6.2 Multivariate Analysis

In this section, the empirical analysis results of OLS regression are presented. First, the impact of CSR reporting quality on the firm's future profitability is explored for the whole sample. Second, Tobin's Q and ROA proxies are regressed on: a dummy variable indicating whether the period is pre- or post-new regulation of mandatory CSR reporting; an independent variable of CSR reporting net score; and the regulation and CSR net score interaction term. Thus, this study explores how CSR reporting quality influences the future performance of a firm.

Moreover, this study employed a series of sample tests to verify the regression results' reliability. Multicollinearity test is implemented and found to be normal in the context of this study. A Newey-West procedure[33] is used to ensure the model is free of auto-correlation and heteroscedasticity problems.

5.6.2.1 The Impact of CSR Reporting Quality on Firm's Subsequent Performance

Table 5.6 reports OLS regression analysis results using proxies of Tobin's Q and ROA. For the regression of ROA, the estimated coefficient for CSR reporting quality (*CSR_Score*) is negative 0.001 and significant at the 1% level (t = -2.78). A higher level of CSR reporting

[33] The Huber/White estimator is used to correct the auto-correlation and heteroscedasticity problems and generates similar results to the Newey-West procedure.

lowers the firm's future performance, in line with Liu and Zhang (2017), Chen et al. (2018), neoclassical economic theory, and agency theory. This evidence manifests through the idea that firms undertaking CSR practices consume resources and increase costs of the subsequent accounting period of a firm for one-year-ahead; accordingly, it is reasonable to assume that practising and reporting CSR would decrease firms' financial performance. However, firms undertaking CSR practices voluntary to distinguish themselves from other counterparties, they may pay the additional cost to practice and report about CSR looking for the long-term benefits such as enhancing their reputation, which consequently impacts firm financial performance. Even though they will earn losses on the short-term either the same year or the following one, it is found that CSR practices consequences are related to the long-term improvement of a firm (Liu and Zhang, 2017).

For the control variables, it is observed – consistent with Liu and Zhang (2017) and Christensen (2016) – that the coefficients on *CG_Score* and *Age* variables are positive and significant, suggesting that firms with good CG and that are more mature are more likely to have better future profitability.

On the contrary, the results indicate a negative and significant impact of *Size,* international listing *(List), and* industry sensitivity *(Ind.Sens)* variables on one or both of the profitability measures. These results imply that larger firms have lower future profitability (Boubakri et al., 2016; Ioannou and Serafeim 2017; Liu and Zhang 2017; Nekhili et al., 2017). Moreover, because managers in listed firms are under more scrutiny from stakeholders, they seek to practice more CSR activities to impress stakeholders (Prior et al., 2008) which consequently would decrease firms' subsequent financial performance in the short term.

Table 5.6

Regression of CSR Reporting Quality on Subsequent Performance

	Tobin's Q		**ROA**	
	Coef.	*t*-Test	Coef.	*t*-Test
CSR_Score	**-0.001**	**-(1.14)**	**-0.001*****	**-(2.78)**
Size	-0.025***	-(2.69)	0.004***	(2.57)
Lev	0.028	(0.35)	0.015	(1.12)
Age	0.031*	(1.74)	0.004	(1.66)
List	-0.043	-(0.83)	-0.016**	-(2.06)
CG_Score	0.004*	(1.69)	0.000	-(0.56)
Ind.Sens	-0.136***	-(5.18)	-0.011**	-(2.18)
Lag Tobin's Q/ROA	0.885***	(37.59)	0.617***	(15.96)
_cons	0.342***	(2.65)	-0.004	-(0.20)
N (firm-years)	1562		1563	
R-Squared	0.744		0.404	
Year Effect	Included		Included	

Notes: *, **, and *** represent significance at 10%, 5%, and 1% levels. This table presents the regression analysis of CSR reporting quality on future performance measured by Tobin's Q and ROA over the study period 2009-2017. All variables are as defined in Appendix A.
t-statistics are calculated using standard errors corrected for autocorrelation using the Newey-West procedure. They are reported in parentheses.

5.6.2.2 The Impact of Mandatory CSR Reporting Quality on Firm's Subsequent Performance

Table 5.7 presents the results of investigating the influence of mandating CSR reporting on the firm's future performance. For the regression of profitability proxies (Tobin's Q and ROA), the results of the interaction term of *Reg*CSR_Score* provide evidence of a positive coefficient 0.004 significant at the 5% level (t = -2.18). This result reveals that adopting the new regulation of mandating CSR reporting enhances firms' future performance.

Nevertheless, this could be explained in line with stakeholder and signalling theories, where mandating CSR reporting, as this thesis found in the first empirical, enhances CSR reporting quality, which increases stakeholders' satisfaction. Specifically, mandating CSR reporting would enhance investors' assessment of firm future performance (Grewal et al., 2018). Additionally, firms would obtain benefits from this regulation, likewise, by signalling to the market about the firm's positiveness toward sustainability issues.

Table 5.8 reports the mean t-test difference between pre- and post-new regulation adoption for the sample profitability measures (Tobin's Q and ROA). Panel A of Table 5.8 presents the means' differences of Tobin's Q; the mean for the first cluster (pre-adoption) is

about 27.35, the second cluster (post-adoption) is about 31.79. These results indicate that the average profitability increased after adopting the new regulation. Also, the difference between the two clusters is statistically significant at the 1% level which supports the study's second hypothesis.

Table 5.7

Regression of CSR Reporting Quality Post the New Regulation on Subsequent Performance

	Tobin's Q		ROA	
	Coef.	*t*-Test	Coef.	*t*-Test
CSR_Score	-0.002	-(1.42)	-0.001***	-(2.80)
Reg	-0.162***	-(2.68)	-0.015	-(1.65)
Reg*CSR_Score	**0.004****	**(2.18)**	**0.000**	**(1.08)**
Size	-0.024***	-(2.59)	0.004***	(2.70)
Lev	0.032	(0.40)	0.015	(1.13)
Age	0.023	(1.32)	0.004	(1.36)
List	-0.049	-(0.93)	-0.017**	-(2.12)
CG_Score	0.003	(1.24)	0.000	-(0.90)
Ind.Sens	-0.139***	-(5.20)	-0.012**	-(2.27)
Lag Tobin's Q/ROA	0.886***	(37.40)	0.616***	(15.84)
_cons	0.442***	(3.26)	0.007	(0.36)
N (firm-years)	1562		1563	
R-Squared	0.745		0.408	
Year Effect	Included		Included	

Notes: *, **, and *** represent significance at 10%, 5%, and 1% levels. This table presents the regression analysis of CSR reporting quality post the new regulation on future performance measured by Tobin's Q and ROA over the study period 2009-2017. All variables are as defined in Appendix A.

Table 5.8

Mean Difference between Subsequent Financial Performance before and after the New Regulation

Panel A

Tobin's Q	Observation frequency	Mean
Post-new regulation	839	31.794
Pre-new regulation	723	27.352
Combined (Pre and Post)	1562	
Difference		1.548
t-Test		**6.274*** **

Panel B

ROA	Observation frequency	Mean
Post-new regulation	827	0.054
Pre-new regulation	736	0.059
Combined (Pre and Post)	1563	
Difference		0.005
t-Test		-1.17

Notes: Difference = mean (post) - mean (pre).
*, **, and *** represent significance at 10%, 5%, and 1% levels. This table presents the mean difference (mean (post) - mean (pre)).

5.6.3 Endogeneity Concerns and Additional Analyses

5.6.3.1 Endogeneity Concerns

As discussed previously in chapter three section 3.6.3.1, the endogeneity could be caused when the independent variable is simultaneously determined by the dependent variable (Wooldridge, 2002), and as some studies argued it might be that CSR reporting quality and firm performance are simultaneously determined (Jo and Harjoto, 2012). Following the literature, to check the possible impact of endogeneity, I conduct the lagged approach (e.g., Christensen; Dhaliwal, 2011) to tackle the endogenous association between CSR reporting quality and firm performance. Jo and Harjoto (2012, p. 64) argue that "*While CSR engagement may lead to higher firm value, firms with higher firm value are more likely to engage in CSR activities because they have more resources. Such firms are also likely to be followed by more analysts because of better performance*". As table 5.9 and 5.10 report, this study repeat the main analysis in section 5.6 table 5.6 and 5.7 by estimating a lagged values of independent variables. The primary findings of the OLS are robust after considering the endogeneity.

Table 5.9

Regression of CSR Reporting Quality on Subsequent Performance: Controlling for Endogeneity

	Tobin's Q_{t+1}		**ROA_{t+1}**	
Lagged Independent Variables	Coef.	*t*-Test	Coef.	*t*-Test
CSR_Score	-0.002	-1.220	-0.001*	**-1.930**
Size	-0.049***	**-3.110**	0.001	0.460
Lev	0.065	0.480	0.031	1.670
Age	0.056*	**1.730**	0.009**	**2.170**
List	-0.095	-0.980	-0.022*	**-1.990**
CG_Score	0.008**	**2.040**	0.000	-0.120
Ind.Sens	-0.268***	**-6.000**	-0.018**	**-2.300**
Lag Tobin's Q/ROA	0.805***	**22.780**	0.526***	**11.260**
_cons	0.590**	**2.450**	0.022	0.780
N (firm-years)	1562		1563	
R-Squared	0.760		0.432	
Year Effect	Included		Included	

Notes: *, **, and *** represent significance at 10%, 5%, and 1% levels. This table presents the regression analysis of CSR reporting quality on future performance measured by Tobin's Q and ROA over the study period 2009-2017 considering potential endogeneity problem. All variables are as defined in Appendix A. The number of observation include missing variables of 214 due to lagging the independent variables.

Table 5.10

Regression of CSR Reporting Quality Post the New Regulation on Subsequent Performance: Controlling for Endogeneity

	Tobin's Q $_{t+1}$		**ROA $_{t+1}$**	
Lagged Independent Variables	Coef.	*t*-Test	Coef.	*t*-Test
CSR_Score	-0.002	-1.120	-0.001**	**-2.570**
Reg	-0.347***	**-3.510**	-0.030**	**-2.000**
Reg*CSR_Score	0.007**	**2.510**	0.001	**1.088**
Size	-0.049***	**-3.130**	0.001	0.560
Lev	0.078	0.590	0.031	**1.680**
Age	0.040	1.280	0.008*	**1.990**
List	-0.108	-1.120	-0.023**	**-2.050**
CG_Score	0.006	1.480	0.000	-0.290
Ind.Sens	-0.273***	**-6.000**	-0.018**	**-2.360**
Lag Tobin's Q/ROA	0.812***	**22.710**	0.527***	**11.390**
_cons	0.800***	**3.190**	0.033	1.180
N (firm-years)	1562		1563	
R-Squared	0.745		0.408	
Year Effect	Included		Included	

Notes: *, **, and *** represent significance at 10%, 5%, and 1% levels. This table presents the regression analysis of CSR reporting quality post the new regulation on future performance measured by Tobin's Q and ROA over the study period 2009-2017 considering potential endogeneity problem. All variables are as defined in Appendix A. The number of observations include missing variables of 214 due to lagging the independent variables.

5.6.3.2 Lagging CSR Reporting Quality Phases one and two.

In terms of assessing the robustness of the results, alternative models are used to re-run the analysis. In the following test, CSR reporting quality net score is lagged for two phases to capture the long-term effect of CSR reporting on firm's profitability.

Table 5.11 presents the regression of profitability (using two proxies of Tobin's Q and ROA) results for the *CSR_Score* variable. However, when voluntary CSR reporting quality net score lags by one phase, then ROA regression provides evidence of a negative coefficient 0.0004 significant at the 10% level (*t* = -1.93). This demonstrates that voluntary CSR reporting harms firms' future performance in the long term. This result could be interpreted similarly to the evidence first provided in Table 5.6, whereas undertaking CSR practices consumes resources and increases costs of the current accounting period of a firm. Accordingly, it is reasonable that practising and reporting CSR would decrease firms' subsequent financial performance in the long-term too. This result is consistent with neoclassical economic and agency theories.

Table 5.11

Regression of CSR Reporting Quality on Subsequent Performance (Lagging phases one and two)

	Tobin's Q		**ROA**	
	Lag CSR one phase	Lag CSR two phases	Lag CSR one phase	Lag CSR two phases
CSR_Score	**-0.001**	**-0.001**	**0.0004***	**0.0001**
	-(0.67)	**-(0.79)**	**-(1.93)**	**-(0.57)**
Size	-0.026***	-0.029***	0.003**	0.003
	-(2.75)	-(2.69)	(2.13)	(1.56)
Lev	-0.010	0.000	0.016	0.016
	-(0.12)	(0.01)	(1.22)	(1.10)
Age	0.014	0.009	0.006**	0.006**
	(0.73)	(0.41)	(2.05)	(2.10)
List	-0.076	-0.082	-0.018**	-0.019*
	-(1.36)	-(1.24)	-(2.11)	-(1.92)
CG_Score	0.005**	0.004	0.000	0.000
	(2.15)	(1.60)	-(0.44)	-(1.19)
Ind.Sens	-0.151***	-0.142***	-0.016***	-0.019***
	-(4.92)	-(4.35)	-(2.78)	-(2.86)
Lag Tobin's Q/ROA	0.886***	0.892***	0.620***	0.605***
	(33.74)	(30.24)	(14.22)	(12.86)
_cons	0.376***	0.490	-0.010	0.006
	(2.68)	(2.92)***	-(0.50)	(0.24)
R-Squared	0.737	0.726	0.393	0.366
Year Effect	Included	Included	Included	Included

Notes: *, **, and *** represent significance at 10%, 5%, and 1% levels. This table presents the regression analysis of CSR reporting quality on future performance measured by Tobin's Q and ROA subsequent for phases one and two. All variables are as defined in Appendix A. The number of observations include missing variables of 228, 447 respectively due to lagging the independent variables.

5.6.3.3 Lagging Mandatory CSR Reporting Quality Phases one and two.

Table 5.12 presents the analysis for the regression of profitability measured by Tobin's Q and ROA proxies. However, using Tobin's Q proxy, the results of the interaction term of lagging *Reg*CSR_Score* for the three phases provide strong evidence of positive coefficient 0.001 at the 1% level (t = 3.92). This result demonstrates that there is a long-term positive impact of mandatory CSR reporting on a firm's performance. Relatively, the latter impact is presented in the second phase of lagging CSR. Taken together, practising CSR is considered an action related to the long-term improvement of a firm's interest (Heal, 2005; Liu and Zhang, 2017).

Similarly, using the ROA measure of profitability, an incremental increase in the firm's profitability is found among the two lagged phases (two years and three years ahead of

financial performance, respectively) with positive coefficients 0.0004 and 0.001 significant at the 1% level (t = 2.44 and 3.10, respectively). Witnessing significant results among both phases could be related to the sensitivity and ability of the accounting-based measures such as ROA to reflect a firm's management performance and internal decision-making proficiencies (Orlitzky et al., 2003). However, this evidence supports the suggestion that mandating the adoption of CSR reporting by FTSE All-share firms listed in LSE enhances the firm's profitability over the long term, which is consistent with Liu et al. (2017) and with stakeholder and signalling theories employed in this study.

Table 5.12

Regression of Mandatory CSR Reporting Quality on Subsequent Performance (Lagging phases one and two)

	Tobin's Q		**ROA**	
	Lag CSR one phase	Lag CSR two phases	Lag CSR one phase	Lag CSR two phases
CSR_Score	0.000	-0.001	0.000**	0.000
	-(0.09)	-(0.41)	-(2.24)	-(1.11)
Reg	-0.058**	-0.144***	-0.012**	-0.006
	-(2.07)	-(5.31)	-(2.39)	-(1.57)
Reg*CSR_Score	**0.001**	**0.004*** **	**0.0004*** *	**0.001*** **
	(0.64)	**(3.92)**	**(2.44)**	**(3.10)**
Size	-0.027***	-0.030***	0.003**	0.003
	-(2.77)	-(2.85)	(2.16)	(1.53)
Lev	-0.007	0.011	0.016	0.015
	-(0.09)	(0.12)	(1.18)	(1.10)
Age	0.009	0.005	0.006*	0.007**
	(0.50)	(0.25)	(1.99)	(2.25)
List	-0.081	-0.089	-0.018**	-0.019*
	-(1.43)	-(1.36)	-(2.15)	-(1.91)
CG_Score	0.004	0.003	0.000	0.000
	(1.68)	(1.07)	-(0.63)	-(1.01)
Ind.Sens	-0.152***	-0.139***	-0.016***	-0.018***
	-(4.91)	-(4.25)	-(2.82)	-(2.84)
Lag Tobin's Q/ROA	0.888***	0.897***	0.622***	0.606***
	(33.48)	(30.28)	(14.26)	(13.02)
_cons	0.455***	0.639***	-0.003	0.006
	(3.12)	(3.72)	-(0.13)	(0.26)
R-Squared	0.737	0.728	0.399	0.380
Year Effect	Included	Included	Included	Included

Notes: *, **, and *** represent significance at 10%, 5%, and 1% levels. This table presents the regression analysis of CSR reporting quality post the new regulation on future performance measured by Tobin's Q and ROA lagged for one phase two phases. All variables are as defined in Appendix A. The number of observations include missing variables of 228, 447 respectively due to lagging the independent variables.

5.7 Summary and Conclusion

This study assesses the firm's subsequent performance response to mandated CSR reporting. Specifically, it examines the subsequent performance through two measures - the market-based indicator (Tobin's Q) for detecting the financial benefits of CSR reporting (Hillman and Keim, 2001), and the accounting-based measures (ROA) to "reflect internal decision-making capabilities and managerial performance" (Orlitzky et al., 2003, p.408). However, this study can make several observations from the empirical results of the used OLS regression.

First, the findings provide evidence to the body of literature about the negative influence of CSR reporting practices, before mandating CSR reporting, on the firm's future performance from the accounting-based perspective using ROA profitability measure, emphasising that engaging firms in CSR practices and projects would temporarily harm a firm's profitability due to the increased spending on and costs related to such activities. This evidence endorses the underlying directional trend emphasised by Liu and Zhang (2017) and Chen et al. (2018) in addition to economic-neoclassical and agency theories. This negative influence may lead the investors to respond negatively to these practices.

Second, the findings emphasise the enhancement of a firm's future performance after mandating CSR reporting. Specifically, this enhancement appears clearly through the market indicator of Tobin's Q, with no presence of impact on firms' profitability measured by ROA. However, firms would obtain benefits from this regulation, likewise, by signalling to the market about the firm's positiveness toward sustainability issues. This indication confirms the directional trend, which is emphasised, by Ioannou and Serafeim (2017) and stakeholder and signalling theories. This result is consistent with the idea that the new regulation requires firms to comply with reporting CSR, thus, investors' assessment of a firm's future performance and risk status will be enhanced when the firms comply with this regulation and avoid the risk of governmental penalties or society undervaluation in the case of not complying with reporting CSR. Unlike voluntary CSR, which consider as an extra cost from investors and stakeholders perspective.

Third, with regards to the influence of adopting the new regulation in the two-years- and three-years-ahead performance, the conclusion reached by this analysis is consistent with

both of multivariate findings of this study, and stakeholder and signalling theories, implying that mandatory regulation improves a firm's future performance. Specifically, the effect of mandating CSR reporting appears clearly through both market- and accounting-based indicators.

Generally, this study provides insights for regulation setters and policy-makers about the effect of the new regulation on firms, which in turn would increase firms' reporting quality, enhance their environmental and social roles, and be more in line with sustainability issues. Also, this study extends the literature on the potential benefits of enforcing these regulations; it assessed the extent to which these regulations affect the quality of CSR reporting, and in turn, affect the firm's subsequent performance. The findings also are important to the shareholders, where CSR firms attract a more positive investors' assessment of their firms' future value. Also, it is important to the stakeholders regarding firms' performance and the impact of such new regulations on their interests. However, the documented results reveal a promising future research topic to investigate; such as exploring each element of the environmental, social and governmental construct separately to understand each one's impact on the future performance of the firm regarding the new regulation.[34]

[34] The study limitation discussed in chapter six section 6.2.

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Appendix

APPENDIX A Variables Definitions		
Variable	Definition	Source
$FP_{i,t+1}$	Indicates the *future financial performance* of the firm measured by Tobin's Q and ROA ratio.	*DataStream*
$CSR_Score_{i,t}$	Corporate social responsibility reporting net score at the end of the year.	*Bloomberg* database
Reg	Indicates the *new regulation*, dummy variable equal to zero if the year is before 2013 and one otherwise.	
Reg*CSR_Score	Indicates the *interaction term* of new regulations and CSR reporting quality at the end of year t.	
$Size_{i,t}$	Indicates *firm size*; the natural logarithm of the market value of equity of firm i, measured at the end of year t.	*DataStream*
$Leverage_{i,t}$	Indicates the *debt ratio* measured by scaling total debt (WC03255) by total assets (WC02999) at the end of year t.	*DataStream*
$Age_{i,t}$	Indicates *firm age*, measured as the natural logarithm of the number of the firms' listing year (BDATE) plus 1.	*DataStream*
$Listing_{i,t}$	Indicates *firm listing status*, measured as indicator variable equal to one when the firm is listed in one or more international markets and zero otherwise.	*DataStream*, London Stock Exchange Market
$CG_Score_{i,t}$	Indicates *corporate governance* net score at the end of the year.	*Bloomberg* database
$Ind.Sens_{i,t}$	Indicates the *sensitivity of the industry* under which a firm is classified. Sensitive industries are: "mining, oil and gas, chemicals, construction and building materials, forestry and paper, steel and other metals, electricity, gas distribution and water". All the remaining industries are considered as less sensitive.	*DataStream*

CHAPTER SIX

Conclusion, Limitations, and Future Research

6.1 Conclusion

In this thesis, I examine the new regulation of Act 2006 (Regulation 2013) that mandates CSR reporting in the UK. More particularly, I provide a comprehensive overview of CSR related theories. Also, I examine (i) the impact of CSR-related regulation on CSR reporting quality; (ii) the impact of CSR-related regulation on earnings management practices; and (iii) the impact of CSR-related regulation on firms' subsequent performance.

All studies depend on a sample of 402 FTSE All-share firms listed on the Main Market of the London Stock Exchange from 2009 to 2017. Overall, although there is some evidence regarding the outcome of the adoption of the new regulation, there is none in the UK context. An important reason to study the case of the UK due to the major variance between the UK and other markets based on the different institutional characteristics and capital market aspects[35]. Therefore, the findings of this thesis are important and contribute to the accounting literature in this field.

Following, I summarise these studies that comprise the main body of this thesis, in addition to possible limitations and fruitful future research directions.

Firstly, the thesis investigates the influence of mandating CSR reporting on the quality of CSR reporting. Firms employ CSR reporting as a strategic investment to benefit from presenting their ethical practices to stakeholders and society to legitimise themselves, in addition to enhancing the firm's image and reputation (Branco and Rodrigues, 2006). Several researchers have suggested exploring mandatory CSR reporting, and how other firms' characteristics influence these regulations (e.g., Christensen, 2006). Consistent with Ioannou and Serafeim's (2017) work, this study demonstrates that the new regulation enhances CSR reporting quality.

[35] The differences between the UK environment and other environments that mandates CSR are discussed in details in the first chapter section 1.6.

Moreover, the presence of the firm characteristics of CG, firm age, firm size, firm debt ratio, listing firm in multi-international markets, and the sensitivity of the industry that the firm is classified under, plays a significant role in the association between the new regulations of CSR reporting and CSR reporting quality. Specifically, it could strengthen the impact of adopting this new regulation on the quality of CSR reporting.

A second point arises from testing the sample separately as high- and low-CSR reporting quality in the context of the new regulation. Adopting the new regulation enhances the low quality of CSR reports, specifically for older firms, highly leveraged and listed in multinational markets firms. Conversely, the regulation does not influence producers of high-quality CSR reporting directly, except for the large firms where it is a motivation for them to increase their reporting quality to an extreme level. Similarly, it is found that multinational listed firms boost their high CSR reporting quality after the mandatory regulation.

Secondly, in this thesis, literature documents that firms are practising CSR activities react differently in earnings management behaviour than other firms do (e.g., Kim et al., 2012; Dhaliwal et al., 2012). In light of this, this study examines the influence of mandatory CSR reporting on earnings management practices, and whether it would lead to a reduction of earnings management practices for the UK firms by considering the most commonly used forms of EM – i.e. REM and AEM.

Consistent with Prior et al. (2008) and Kim et al. (2012), this study proves that managers are more interested in reporting CSR voluntarily as a sugar cover for their opportunistic behaviour towards earnings management. Conversely, mandatory CSR reporting deprived managers of their competitive advantage of reporting CSR voluntarily, which in turn caused them to lose interest in utilising CSR reporting to cover their earnings manipulation.

A further important point results from testing the sample separately as high and low CSR reporting quality in the context of the new regulation. This indicates that new regulation constrains providers of both high and low CSR reporting quality from manipulating earnings through real earnings management activities. Specifically, mandating CSR reporting has a stronger impact on firms that report low CSR quality.

Thirdly, the thesis presents the expected advantages of forcing the new regulation, which improves the firm's CSR performance through influences investors' assessment about the firm's future value (Kapstein, 2001; Boubakri et al., 2016). Conversely, it might have a negative outcome from the firm having to use extra costs to compete and distinguish itself from the rest of its competitors (Ioannou and Serafeim, 2017). Therefore, this study examines the influence of CSR reporting practice on firms' subsequent performance in the context of mandatory CSR reporting in the UK. Two common indicators are employed to examine this impact; these are the market-based indicator (Tobin's Q) for detecting the financial benefits of CSR reporting (Hillman and Keim, 2001), and accounting-based measures (ROA) to indicate the internal decision-making proficiencies and managerial performance (Orlitzky et al., 2003). This study demonstrates that engaging firms in voluntary CSR activities would temporarily harm a firm's profitability (from the accounting-based perspective) due to the increased spending on and costs related to such activities. This finding is in line with Liu and Zhang (2017) and Chen et al. (2018).

On the other hand, after mandating CSR reporting, an improvement in a firm's future performance is positively reflected through the market indicator - specifically in the long term – which could be related to the benefits accrued from signalling the market about the firm's positivity toward sustainability issues. In addition, the first empirical of this thesis indicates that the new regulation enhances the quality of CSR reporting, which consequently influence the financial performance of the firms.

Table 6.1

Summary of this Thesis Results

Study	Research Questions	Theory	Full Sample Variables Used and (Finding)	High-CSR Sample Variables Used and (Finding)	Low-CSR Sample Variables Used and (Finding)
The impact of regulation on CSR reporting quality	Does CSR-related regulation affect the quality of CSR reporting in the UK FTSE All-share non-financial firms?	Legitimacy theory	Regulation (+) Interaction terms: Regulation*CG (+) Regulation*Listing (+) Regulation*Sens.Ind (+) Regulation*Size (0) Regulation*Age (0) Regulation*Leverage (0) Regulation*Profitability (0) Regulation*Big4 (0)	Regulation (0) Interaction terms: Regulation*CG (0) Regulation*Listing (+) Regulation*Sens.Ind (0) Regulation*Size (0) Regulation*Age (0) Regulation*Leverage (0) Regulation*Profitability (0) Regulation*Big4 (0)	Regulation (+) Interaction terms: Regulation*CG (0) Regulation*Listing (+) Regulation*Sens.Ind (0) Regulation*Size (0) Regulation*Age (+) Regulation*Leverage (+) Regulation*Profitability (0) Regulation*Big4 (0)
The impact of CSR-related regulation on earnings quality through real and accrual earnings management proxies	Does CSR-related regulation affect earnings management behaviour in the UK FTSE All-share non-financial firms?	-Agency theory -Impression theory	Voluntary CSR: Ab_CFO (+) Ab_Prod (0) Ab_Disc (0) REM1 (0) REM2 (0) Mandatory CSR: Ab_CFO (-) Ab_Prod (-) Ab_Disc (0) REM1 (0) REM2 (-)	Voluntary CSR: Ab_CFO (+) Ab_Prod (0) Ab_Disc (0) REM1 (0) REM2 (0) Mandatory CSR: Ab_CFO (-) Ab_Prod (-) Ab_Disc (0) REM1 (0) REM2 (-)	Voluntary CSR: Ab_CFO (+) Ab_Prod (0) Ab_Disc (0) REM1 (0) REM2 (0) Mandatory CSR: Ab_CFO (-) Ab_Prod (0) Ab_Disc (0) REM1 (0) REM2 (0)

The impact of CSR-related regulation on the firm subsequent performance	Does CSR-related regulation affect the subsequent performance of the UK FTSE All-share non-financial firms?	-Agency theory -Economic theory -Stakeholder theory -Signalling theory	Voluntary CSR: Tobin's Q $_{t+1}$ (0) Tobin's Q $_{t+2}$ (0) Tobin's Q $_{t+3}$ (0) ROA $_{t+1}$ (-) ROA $_{t+2}$ (-) ROA $_{t+3}$ (0) Mandatory CSR: Tobin's Q $_{t+1}$ (+) Tobin's Q $_{t+2}$ (0) Tobin's Q $_{t+3}$ (+) ROA $_{t+1}$ (0) ROA $_{t+2}$ (+) ROA $_{t+3}$ (+)	-	-

Notes: This table summarises the thesis results. Signs identified as follow: significant positive relationship (+), significant negative relationship (-), insignificant relationship (0).

6.2 Policy Implications

This study has several implications for policy-makers and regulators. First, it is important to expand our understanding of the extent of to which these regulations enhance the quality of CSR reporting. Also, it is important for policy-makers and regulators who enforce this new regulation or are willing to do so would need to understand the consequences of such a decision in terms of their efforts to improve communication between firms and stakeholders in the annual report (CSR-section) (FASB 2013, FRC 2013).

Also, this study sends a red flag to regulation setters that some CSR activities could be abused and utilised as a mechanism to mask other harmful practices. Such an indicator would help avoid the fake over-investment in CSR practices which reflects negatively on the accuracy of stakeholders' decisions, and the quality of the financial reporting.

Another important aspect of this study is related to assessing the extent to which these regulations affect the quality of CSR reporting, and in turn, affect the firm's subsequent performance. This impact would influence firms' environmental and social roles and brings them more in line with sustainability issues by getting the positiveness of applying this regulation or by being enforced to extend their CSR practices by external parties such as civil society, regulators and government pressure.

The findings also enhance the knowledge of shareholders and stakeholders about the quality of firms' CSR reporting and performance and the impact of such new regulations on their interests. This enhancement influences investors' beliefs and valuations, which in turn guide the firm's investment decisions, the firm's investment decisions affect the stock price and return, and the stock price feedback into the firm's investment choices (e.g., Gao, 2010). In other words, when investors decide where to invest their money, then they will direct employees to decide where to work, and as a consequence policymakers and regulators will decide what to regulate, thus they finally will direct the consumers to decide what items to purchase (Eccles and Krzus 2010).

6.3 Limitations and Future Research

Despite the researcher's endeavours to investigate ESG components to understand the overall impact of the new regulation on these components and, relatedly, their impact on

the earnings management and financial performance. The available ESG score from the *Bloomberg* Database is a *net* score for each dimension of ESG individually (which comes from evaluating set of related components for each dimension), and a total score for all three dimensions together, but it does not provide a net score for each component included in these dimensions separately.[36] Thus, it is not applicable to break down the net score to analyse the impact of each component on the aspects mentioned, subsequently limiting the ability to specify which component(s) of the environmental level, social level, or governmental level would enhance or harm the relationships in the context of the study.

Therefore, a future research direction could separately assess the different dimensions of CSR reporting to find out how relevant each of its components is a firm's performance. For example, it's worth to understand the influence of each element of the social dimension items (the number of employees, contract type and turnover, the community service expenditure, and human rights) on the quality of CSR reporting, the EM practices, and firm performance. Moreover, a promising direction would be to investigate what benefits the reporting of CSR commitment brings to other groups of firms' stakeholders (including, but not limited to, regulatory bodies, non-governmental organisations (NGOs), the community and employees). Of note is that different stakeholder groups do not demand the same levels of information (Adams et al., 1998) from firms that report their CSR activities.

Further, a fruitful topic for future research is a comparison between regions that adopt CSR reporting regulation to other regions which voluntarily report CSR. Also, to examine the impact of mandatory CSR reporting on the costs of capital, corporate investment efficiency, analyst forecasts accuracy and other determinants.

[36] The ESG *Bloomberg* score includes the following headings for the environmental dimension; CO2 emissions, energy consumption, water use, and total waste. The social dimension items are the number of employees, contract type and turnover, community service expenditure, and human rights. The last dimension is corporate governance (CG), which consists of information about board structure, board independence, board executives and diversity, board committees, audit committee, and compensation committee, among others (*Bloomberg* database). Bloomberg provides net score for each dimintion (heading) individually, and a total score for all ESG heading together, but it does not provide net score for each item (named previously) under each dimintion separetely.

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