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Essays on the Determinants and Consequences of Corporate Social and Environmental Responsibility

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DEDICATION

This work is dedicated to my beloved father "Jamil" and mother "Eman", to my beloved wife "Sama" and all my family members, for their love and support.

ABSTRACT

Corporate social and environmental responsibility is a subject of growing interest, with investors, creditors and analysts relying on it for their decision-making processes and forecasting. This growth of importance in CSR, however, is coupled with complexities and a lack of unified CSR disclosure guidance, which has led users to express suspicion about the issues related to the reliability, comparability, materiality, completeness, relevance and transparency of CSR reporting (Bouten and Hoozée, 2015, Deegan et al., 2006, Ball et al., 2000). Consequently, this thesis extends the existing literature and attempts to bring some clarification towards the determinants and consequences of CSR in three related essays.

The first essay investigates whether the relationship between earnings management (EM) and corporate social responsibility is affected by family-controlled firms for a sample of UK listed firms in the FTSE all-share index during the period 2010 to 2017. The study argues that family-controlled firms, given the nature of its socioemotional wealth, shows an ambivalent tendency in being responsible and irresponsible at the same time. The findings suggest that firms, with lower accrual earnings management (AEM), have a better aggregate CSR rating, which supports the hypothesis of enhanced ethical behaviour. The findings also suggest that if EM comes from real activities, referred to as real activities manipulation (RAM), firms use CSR as an instrument to cover-up misconduct, which supports the hypothesis of opportunistic behaviour. When the sample is divided into family and non-family-controlled firms, family-controlled firms show a similar but stronger relationship. In addition, by splitting CSR scores into environmental, social and governance scores, the relationship between CSR and EM becomes not consistent when compared with each CSR dimension, especially in family-controlled firms. More specifically, in the case of EM, family-controlled firms pay more attention to activities related to external stakeholders (i.e. environment) than non-family-controlled firms. These findings could provide a meaningful tendency towards CSR strategy in family and non-family firms; thus, it would assist British regulations in improving corporate governance rules related to various ownership structures. For policymakers, it is important to confirm that CSR disclosers are congruent with actual activities and not used to mislead stakeholders.

In terms of the theoretical and academic implications, the findings provide supporting evidence on the double-edged sword nature of family-controlled firms, which appears in the case of such RAM and AEM. Therefore, studies of family firms should consider this issue. Moreover, it has been noticed that considering each component of CSR in a model can provide meaningful insight

into management behaviour and motivations. Therefore, CSR dimensions should be considered when conducting research related to CSR.

The second essay aims to examine the link between CSR and information asymmetry in a sample of UK family and non-family-controlled firms listed on the FTSE All-Share Index during the period 2010-2017. This essay argues that CSR can play a complementary role in reducing information asymmetry. In addition, family firms, as a case of informed investors, can moderate this relationship. The results show that CSR disclosures significantly decrease the bid-ask spread, which is a proxy for information asymmetry. The findings also show that the relationship between CSR and information asymmetry is weaker in family-controlled firms that non-family counterparts. These findings could improve our understanding of CSR motivation and provide an interpretation of CSR tendency in companies that are controlled by families. Moreover, the role of family-controlled firms in mitigating or exacerbating this relationship could contribute to British regulations on improving corporate governance rules related to various ownership structures. For policymakers, it is important to show that CSR disclosures are congruent with actual activities and not merely used to mislead stakeholders.

The third essay investigates the influence of corporate environmental, social and governance (ESG) performance "strengths" and the controversies "concerns" over decisions to issue sustainability assurance reports. It also tests the influence of ESG performance and controversies on the type of assurance provider, the level of assurance and assurance scope. Building on legitimacy theory, the study suggests that not only could socially responsible companies issue sustainability assurance (SA) reports as a signal of their commitment, but also those involved in ESG controversies could use SA as a tool to gain, maintain or repair legitimacy. The study sample consists of 5784 firm-year observations from European companies listed in the STOXX Europe 600 index over the period 2011-2018. The results show that both ESG performance and controversies have a significant and positive influence on decisions to issue SA reports.

Furthermore, firms with a higher ESG performance tend to choose higher assurance scopes and levels, meaning they follow a holistic CSR strategy. These findings reveal the tendencies towards issuing SA reports and address several concerns noted in prior studies that the quality and process of SA reporting can be affected by opportunistic managerial behaviour. Therefore, future studies on CSR and SA reporting should not tacitly assume that SA reports are issued only by socially responsible companies, but also that irresponsible companies could obtain SA reports as a camouflaging strategy. Moreover, the findings of this study could also assist

stakeholders and decision-makers in differentiating between such symbolic and substantial reports. For standard-setters and policymakers, it is important to pay more attention to the independence of assurance providers and to ensure that the management does not influence SA process.

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LIST OF ABBREVIATIONS

AA1000 AS	AA1000 Assurance Standard
ACA	Associate Chartered Accountant
ACCA	Association of Chartered Certified Accountants
AEM	Accrual earnings management
Big4	Big4 accounting assurance providers
BOD	Board of directors
CEO	Chief Executive Officer
CG	Corporate Governance
CSR	Corporate Social Responsibility
DJSI	Dow Jones Sustainability Indices
EM	Earnings management
ESG	Environmental, social and governance
FTSE	Financial Times Stock Exchange
GHG	Greenhous gas
GMM	Generalized Method of Moments
GRI	Global Reporting Initiative
IA	information asymmetry
IAASB	International Auditing and Assurance Standards Board
IAPC	International Auditing Practices Committee
ISAEs	International Standard on Assurance Engagements
ISEA	The Institute of Social and Ethical Accountability
KPIs	Key performance indicators
NGOs	Non-government organisations
RAM	Real activities manipulation

SA	Sustainability Assurance
SEW	Social-emotional wealth
UK	United Kingdom
US	United States

DECLARATION

I hereby declare that this thesis is entirely my work and I have fully referenced the sources as appropriate. I am aware of the penalties for plagiarism.

The thesis consists of three different essays. The first essay in Chapter 2 that titled "The Role of Family controlled firms in Explaining the Relationship between Corporate Social Responsibility and Earnings Management: A Perspective of Socioemotional Wealth" was submitted to two conferences, which are The European Accounting Association (EAA) conference - Athénée Palace Hilton and the Radisson Blu, Bucharest, Romania - May 27-29, 2020, and British Accounting and Finance Association (BAFA) conference - University of Southampton, England- 30-1 April 2020. The second essay in Chapter 3 that titled "The Complementary Role of CSR Disclosures in Reducing Information Asymmetry: A Case from Family and Non-Family Controlled Firms" was submitted to UERAM conference - University College Dublin, Ireland - June 10-12, 2019. Both first and second essays were accepted to be presented in the above-mentioned conferences. However, due to the current circumstances "COVID-19", BAFA conference was cancelled and the other conferences were postponed. Accordingly, none of these essays were published as a conference paper.

I also participated in Kent Business School (KBS) PhD conference on June 14, 2019, and June 19, 2020.

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

Corporate social responsibility (CSR) is increasingly becoming a subject of interest for businesses, academic literature, consumers and other stakeholders. As a result, most companies are becoming responsive to society's expectations and stakeholders at large. Thus, they consider it a fundamental part of overall firm strategies. The trends of practice and disclosure of CSR have been continuously investigated through an international survey conducted by KPMG[1] (1999, 2002, 2008, 2011, 2013, 2015, 2017). This survey consists of two different samples: G250[2] and N100[3]. Generally, results from the surveys show a gradual increase in CSR reporting. Recent reports state that around 97% of G250 companies and 79% of N100 companies provide disclosures about CSR engagement, compared with 79% and 45% respectively in 2008 and 52% and 33% in 2002 (KPMG 1999, 2002, 2008, 2011, 2013, 2015, 2017).

Some complications follow this thriving popularity and importance of CSR in terms of how people conceive it and the lack of joint CSR guidance (Cho et al., 2014, Muslu et al., 2019). Garriga and Melé (2004) argue that CSR offers a range of theories and a proliferation of controversial, complicated, and unclear approaches. Accordingly, they were among the first who attempted to clarify CSR concepts by classifying the main theories related to CSR into four groups: instrumental theories, political theories, integrative theories and ethical theories (see Garriga and Melé, 2004: p 63).

In this regard, studies that have attempted to empirically examine the motivations and consequences behind applying CSR and to link it with the theories mentioned above have obtained mixed findings and conclusions. One perspective suggests that CSR promotes a positive contribution to companies by creating an ethical environment, so management adopts responsible practices which meet stakeholders' expectations (Kim et al., 2012, Scholtens and Kang, 2013); this viewpoint refers to ethical theories (Atkins, 2006, Carroll, 1979, Freeman, 2010). Another perspective argues that since CSR can play a vital role in shaping the public image and reputation

[1] KPMG is one of the Big Four accounting firms.
[2] G250 is a sample consisting of the world's 250 top companies in terms of revenue, based on a ranking provided by Fortune 500.
[3] N100 is a multinational sample consisting of 4900 companies from 49 countries, with 100 companies taken from each country based on revenue.

of the entity and thus maintain legitimacy (Deegan, 2000), it can be used opportunistically by management (Chih et al., 2008, Choi et al., 2013a, Hong and Andersen, 2011, Kim et al., 2012, Prior et al., 2008, Sun et al., 2010, Scholtens and Kang, 2013). This viewpoint refers to the instrumental theory perspective (see Garriga and Melé, 2004)[4].

Given the above ambivalent perspectives, 'theories' and results, this thesis extends to the growing body of literature on CSR determinants and consequences in three interrelated essays. The first essay in Chapter 2 investigates the relationship between CSR disclosures and earnings management (henceforth EM) in family- and non-family-controlled firms. Building on the first essay, the second essay, in Chapter 3, examines the influence of CSR disclosures on information asymmetry (IA) in family- and non-family-controlled firms. Finally, the third essay in Chapter 4 investigates the impact of CSR performance ('strengths') and controversies ('concerns') on the decision to obtain a sustainability assurance report, the type of assurance provider, level of assurance and assurance scope.

The moderating role of family-controlled firms in the first and second essays are tested because family ownership is considered to be the most dominant type of ownership around the world (La Porta et al., 1999, Faccio and Lang, 2002, Claessens et al., 2002); therefore, as a corporate governance mechanism, family firms could provide further justifications for the relationship between CSR and EM, as well as CSR and IA. Another primary reason is that family-controlled firms tend to have unique characteristics that distinguish them from non-family owned ones (Gomez-Mejia et al., 2011). These characteristics were first suggested by Gómez-Mejía et al. (2007) in a new theoretical perspective called socioemotional wealth (SEW), which is defined as "non-financial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty" (Gomez-Mejia et al., 2007: p106). This perspective, however, has been criticised for a lack of precision in the theoretical development, as some scholars have questioned the assumptions of SEW (Chua et al., 2015, Miller and Le Breton–Miller, 2014, Schulze and Kellermanns, 2015). Accordingly, testing the moderating role of family-controlled firms could address some of the theoretical concerns regarding the nature of SEW mentioned by previous studies, as well further clarifying the CSR-EM association (e.g. Zientara, 2017, Schulze and Kellermanns, 2015).

[4] More theories and details are presented in each essay.

1.2 RESEARCH PROBLEM

Each essay in this thesis was developed based on a specific research problem and particular research gaps. Accordingly, the primary motivation behind studying the relationship between CSR and EM in Chapter 1 is that the empirical findings on managers' intentions to promote CSR are still mixed and inconclusive. It has been noticed that several methodological considerations are lacking when studying the relationship between CSR and EM[5]. Accordingly, this essay uses different statistical methods and broader concepts of CSR and EM in order to provide further clarification of this relationship.

With regards to the second essay in Chapter 3, the majority of previous studies focus more on the influence of financial disclosures and voluntary earnings announcements on information asymmetry (henceforth IA). In contrast, there is little empirical evidence (Dhaliwal et al., 2012, Cho et al., 2013, Cui et al., 2018, Nguyen et al., 2019) to prove whether, and in what way, CSR, as a part of non-financial disclosure, can play a complementary role in financial disclosures by reducing the IA[6] problem. Other studies have investigated these concerns in a much broader way by considering liquidity (Balakrishnan et al., 2014) or the cost of capital (Dhaliwal et al., 2014) as proxies for IA. However, the majority of research focuses on CSR performance rather than the level of disclosures (Cho et al., 2013, Cui et al., 2018, Lopatta et al., 2016).

In terms of the third essay in Chapter 4, previous studies that have attempted to understand the intrinsic motivation for obtaining sustainability assurance (henceforth SA) have yielded mixed findings. One viewpoint posits that companies with a high level of CSR solely acquire SA as a signal of their commitment (Clarkson et al., 2019, Simoni et al., 2020). However, the other perspective argues that SA could be used as a greenwashing tool by companies that have ESG concerns to repair, maintain, or gain legitimacy (Casey and Grenier, 2015).

1.3 AIMS, OBJECTIVES AND RESEARCH QUESTIONS

Based on the research problems mentioned above, the first essay aims to investigate the relationship between CSR and EM in family- and non-family-controlled firms for a sample of UK

[5] E.g. the majority of studies did not take into consideration the endogeneity issue between CSR and EM. In addition, earnings manipulations coming from real activities were not broadly considered by prior studies (further explanations are introduced in Ch2).

[6] Information asymmetry is a condition in which one party in a relationship has better access to information than the other party (Akerlof, G. A. 1978. The market for "lemons": Quality uncertainty and the market mechanism. *Uncertainty in Economics*. Elsevier.)

companies listed on the London stock exchange FTSE all-share index during the period 2010-2017. The second essay aims to examine the influence of CSR disclosures on information asymmetry in family- and non-family-controlled firms for a sample of UK companies listed on the London stock exchange FTSE all-share index during the period 2010-2017. Finally, the primary purpose of the third essay is to extend the understanding of the factors influencing the quality of SA reporting and companies' decisions to obtain SA, by testing the influence of environmental, social and governance performance ('strengths'), as well as considering the controversies, or 'concerns', over the adoption of SA reports. Another aim is to examine the impact of ESG performance and controversies on the choice of assurance provider, and the level and scope of assurance. The study sample consists of 5784 firm-year observations from European companies listed in the STOXX Europe 600 index over the period 2011-2018.

Accordingly, the following research questions were developed:

Research question 1: How is the relationship between CSR and EM affected by whether a firm is family- or non-family controlled?

Other sub-questions:

- Why may a particular type of CSR be preferred by family- or non-family firms in managerial misconduct cases?
- Is the extent of accrual vs real activities manipulation different in family firms compared to their non-family counterparts?

Research question 2: Does the relationship between CSR and information asymmetry differ in family-controlled firms? If so, in what way?

Sub-question

- Is the choice of assurance provider, and the level and scope of assurance, in socially responsible companies different from in socially irresponsible ones?

Research question 3: Are SA reports issued solely by socially responsible companies?

Sub-question

- Is there any difference between CSR-committed and CSR-irresponsible companies in terms of sustainability assurance, the type of assurance provider, the scope of assurance and assurance level?

1.4 RESEARCH METHODOLOGY

The generic purpose of the thesis is to provide a framework in three empirical studies that describes the phenomenon of CSR in terms of its determinants and consequences. The essays use a quantitative research method and were mainly developed by adopting a deductive approach.

The chosen research method and approach are based on philosophical reasoning, which generally relies on a research paradigm. A research paradigm is defined as a philosophical framework that provides direction on how scientific research should be conducted, following a set of assumptions regarding the world and the nature of knowledge (Collis and Hussey, 2014). Kuhn (1962) used the term to refer to a scientific community's conceptual framework, which provides them with an appropriate model of how to examine and solve problems. Kuhn characterises a paradigm as "an integrated cluster of substantive concepts, variables and problems attached with corresponding methodological approaches and tools…" (p.33). Understanding these assumptions helps to characterise and identify one paradigm from another. Guba (1990) and Creswell (1994) introduce a set of assumptions which are *ontological* (the nature of reality/knowledge), *epistemological* (the theory of knowledge), *methodological* (the research process), *axiological* (the role of values) and *rhetorical* (the research language).

Accordingly, there are three popular research paradigms in social science: positivism/functionalism, interpretivism and critical. Positivism is a paradigm that stems from natural science and has roots in realism[7] (Creswell, 2014); it assumes that reality is singular and objective because the evidence comes from measurable phenomena relying on observations and experiments. The methodology in positivist research involves a deductive process (Smith, 1983; Collis and Hussy, 2014). On the other hand, the interpretivist paradigm has emerged as a response to criticisms of positivism; it assumes that knowledge comes from the subjective experiences of individuals (participants). Thus, reality is socially constructed and multiple. The critical realism

[7] Direct realism: assumes that there are external objects that exist independently of our minds and which we directly perceive with the senses (Ladyman 2002)

paradigm focuses on explaining what we see and experience in terms of the underlying structures of reality that shape observable events (Saunders, Lewis and Thornhill, 2016).

While both positivist and interpretivist paradigms are frequently used in accounting research, the positivist is considered to be the dominant one (Lukka, 2010; Burrell and Morgan, 1979). Therefore, the general trend in accounting research seeks mainly to discover law-like regularities through empirical data (Lukka, 2010). Moreover, it takes the perspective that a similar 'scientific method' can be applied in all sciences (see Boyd et al., 1991). This is underlined by the fact that economics is currently the undisputable source of theories and methods for mainstream accounting research.

Looking more closely at the *methodological* (the research process) assumption, positivists are more concerned with ensuring that all the concepts of their research can be operationalised; that is, can be explained in a measurable way (Collis and Hussey, 2014). They typically employ a deductive approach, in which they begin with a theory that is often developed by reviewing the academic literature and designing a research strategy in order to test the theory (Saunders et al. 2016). On the other hand, the interpretivist paradigm starts with the collection of data to explore a phenomenon and consequently build a theory (Saunders et al., 2016), generally dealing with small samples and applying several research methods to acquire different perceptions of the phenomenon. Consequently, analysis under this paradigm looks for patterns and reaches an understanding of a situation (Collis and Hussy, 2014).

This thesis follows a deductive approach in the three empirical studies by reviewing the literature and identifying theories (e.g. legitimacy theory, ethical theory, stakeholder theory, socioemotional wealth theory and signalling theory). The theories are then tested using a statistical process, as positivism paradigms relate to empirical science and scientific methods (Creswell, 2014); therefore, the quantitative model followed in this thesis uses a statistical design to investigate cause and effect phenomena. Moreover, positivism deals with large samples and artificial locations (Collis and Hussy, 2014). Accordingly, two samples were used in this thesis: one consisting of companies listed on the FTSE All-Share index in Chapters 2 and 3, and ones listed on STOXX Europe 600 in Chapter 4. The former sample comprised 2,532 firm-year observations for the period 2010 to

2017, while the latter sample consisted of 5,784 firm-year observations for the period 2011 to 2018[8].

1.5 OVERVIEW OF THE RESEARCH

This section provides an overview of the theories, hypotheses, variable measures, and data sources used in each essay.

The first essay tests the moderating role of family-controlled firms on the CSR-EM nexus. It first reviews the main ongoing debate regarding the relationship between CSR and EM, by assessing whether the behaviour of the manager and/or firm reflects ethical or opportunistic practices. The ethical/philanthropic argument, the 'ethical theory', suggests that businesses should be managed in line with moral and ethical principles, which consequently limits unethical managerial tendencies, such as earnings management (e.g. Carroll, 1979, Donaldson and Preston, 1995, Hong and Andersen, 2011, Jones, 1991, Kim et al., 2012, Logsdon and Wood, 2002, Phillips et al., 2003). The opportunistic perspective, 'instrumental theory', argues that as long as CSR plays an effective role in boosting a public firm's image and improving its reputation (Deegan et al., 2002), the ethical codes could be exploited in a type of 'window dressing', which allows managers to hide any misconducts (Choi et al., 2013b). The essay then focuses on the influence of family-controlled firms on the relationship between CSR and EM.

Given the double-valence nature of socioemotional wealth (SEW)[9] that is often witnessed in the CSR literature, a more appropriate question to pose is "how and why do family-controlled firms perceive and apply CSR?", rather than asking whether "family-controlled firms are more socially responsible than non-family ones?" (Zientara, 2017). Accordingly, this tendency could be more pronounced when family-controlled firms are involved in the relationship between CSR and EM, so that if SEW is benign both inside and outside the company, then the negative relationship between CSR and EM will be stronger in family-controlled firms. On the other hand, if the nature of SEW is opportunistic and/or has 'dark sides', two scenarios could happen. First, the positive relationship between CSR and EM will be dominant, meaning that family firms use CSR as an instrument to cover up misconducts (e.g. EM) and thus preserve SEW, and with all CSR

[8] The first and second essays used a sample of UK companies listed on the FTSE all share during the period 2010-2017, given that the UK is considered the leading country in CSR reporting (Beck et al., 2010). The third essay employed a sample of European companies listed on STOXX Europe 600 over the period 2011-2018. This broader sample was chosen in order to select a larger number of SA observations during the study period[8], and European companies were specifically chosen because they are considered leaders in obtaining SA reports (Kolk, 2008, Simnett et al., 2009b).

[9] Refer to section 2.2.2 for further details.

dimensions affected in the same way. Alternatively, family-controlled firms follow a 'cherry-picking' strategy that affects the relationship between EM and each CSR dimension differently, in responsible and/or irresponsible ways (the double-edged sword or instrument/selective approach). Accordingly, three main hypotheses are suggested: the ethical perspective hypothesis, which expects a negative relationship between CSR and the extent of accrued and/or real EM; the opportunistic behaviour hypothesis, which suggests a positive relationship between CSR and accrued and/or real EM; and the third hypothesis, which proposes that family-controlled firms moderate the relationship between CSR and accrued and/or real EM.

The second essay aims to examine the influence of CSR disclosures on information asymmetry, considering the impact of each CSR component (environmental, social and governance). It also addresses how family-controlled firms, as informed investors, can moderate the relationship between CSR and information asymmetry, since the key owners have a significant influence over a firm's investment decisions by suggesting and voting on strategic plans for the firm (Barclay and Holderness, 1989). Generally, this study argues that the information asymmetry problem mainly arises as a result of the separation between management and shareholders, in which management works on behalf of the shareholder, thus the former can exploit private information for its own sake (Jensen and Meckling, 1976). One of the key measures to narrow down information differences is to reveal information to the public in the form of corporate disclosures (Diamond and Verrecchia, 1991, Scott and O'Brien, 2003). Accordingly, this study pays more attention to disclosures related to CSR, as it posits that family ownership could either strengthen or weaken the negative relationship between CSR and IA. It suggests two main hypotheses: the first proposes that CSR disclosures are negatively related to IA, while the second suggests that family-controlled firms moderate the relationship between CSR disclosure and information asymmetry.

The third essay aims to provide further clarification of the intrinsic motivation for obtaining SA reports, since previous studies that have attempted to understand the drivers have yielded mixed results. After reviewing the literature, two main arguments were developed. One perspective argues that SA is obtained exclusively by socially responsible companies as a signal of CSR commitment, which is consistent with signalling theory. The other viewpoint argues that SA reports are only be obtained by CSR-committed companies, but also ones that face controversies related to environmental, social or governance issues, and which could use SA symbolically as a smokescreen to repair, maintain or gain legitimacy, since managers have a degree of control over the SA process (Casey and Grenier, 2015, Clarkson et al., 2019, Simoni et al., 2020). The third

essay was developed as a response to the calls in the contemporary literature to further examine the relationship between the factors influencing the quality of SA reporting and companies' decisions to obtain SA, in which CSR performance could one of the factors. Accordingly, this essay tests the influence of ESG strengths and controversies on the adoption of SA reports. The study further provides insight into the impact of ESG performance and controversies on the choice of assurance provider, and the level and scope of assurance.

Building on both signalling theory and legitimacy theory, the essay proposes two sets of hypotheses. Hypothesis 1a suggests that there is a positive relationship between CSR performance and SA, meaning that socially responsible companies exclusively acquire SA as a signal of their commitment towards CSR. Hypothesis 1b, however, proposes that there is no relationship between CSR controversies and SA. Hypothesis 2a suggests that ESG performance scores are positively associated with the type of assurance provider, level of assurance and assurance scope, while Hypothesis 2b proposes that ESG controversies are negatively related to these three factors. Contextually, this is achieved by using a sample of European companies listed on the STOXX 600 index over the period 2011-2018. ESG controversies are used as a proxy for CSR concerns and refer to questionable ESG conduct and negative events (e.g. product harm scandals, tax fraud controversies, business ethics controversies) that are reflected in the global media.

As CSR is the main focus throughout the three essays, it is worth mentioning that it includes both environmental and social performance (ESP) and environmental and social disclosures (ESD). While they have some linkages (see Clarkson et al., 2008), several previous studies have failed to differentiate between them when testing CSR with other variables. Therefore, it is important to demonstrate the difference between them in order to choose the right strand that serves the purpose of each essay in this thesis. ESP refers to the company's actual environmental and social performance, such as carbon emissions, water leakage, employee CSR training and contribution to the community (Clarkson, 2008). ESD relate to disclosures collected from the company's annual reports, sustainability/CSR reports and websites (Gray, 1995, Patten 2002a, Deegan, et al. 2002). For research purposes, collecting CSR data from different sources to measure performance and disclosure quality could be challenging, especially when using a large sample over several years. Therefore, several global rating agencies have developed comprehensive environmental and social related indices (e.g. Bloomberg and Asset4, KLD, and CSRhub). This thesis uses the ESG ratings provided by Bloomberg in Chapters 2 and 3 and those of Asset4-

Thomson Reuters in Chapter 4. The former database provides ESG disclosure scores[10], whereas the latter gives ESG performance scores.

The reason for using ESG disclosure scores in the first and the second essays is that the main purpose is to examine whether firms that are involved in earning management disclose more CSR information in order to sidetrack stakeholders' attention. Moreover, in the second essay, the study tests whether CSR disclosures have consequences on the market by reducing the information asymmetry problem. Therefore, Bloomberg is the most suitable database to measure CSR disclosures in the first and second essays[11]. On the other hand, the third essay examines the SA obtained by firms that perform well in terms of CSR, and whether socially irresponsible companies could also obtain SA as a camouflaging tool. Accordingly, Asset 4-Thomson Reuters is the appropriate database for CSR performance (further details about Bloomberg and Asset4-Thomson Reuters are provided in each chapter).

In terms of other measures in this thesis, EM is predicted using two proxies, namely the absolute value of discretionary accruals calculated using the performance-matched model (AEM) proposed by Kothari et al. (2005), and the combined value of real activities manipulation (RAM) proxies that take the sum of the abnormal level of cash flow from operations, the abnormal level of production costs and the abnormal level of discretionary expenses (Roychowdhury, 2006)[12]. Family-controlled firms are measured as a dummy variable equal to 1 for family-controlled firms, and 0 otherwise. Information asymmetry was measured using the bid-ask spread (SPREAD), the annual average percentage of the daily bid-ask spread to the closing price. The wider the spread, the higher the degree of IA (Copeland and Galai, 1983).

Data in the first and second essays were collected from the Bloomberg database, while data related to family ownership and other related variables were collected from the FAME database. Other missing ownership data was manually collected and inspected from firms' annual reports and their websites. In the third essay, data were collected from several sources and at different stages. First, based on the Global Reporting Initiative (GRI) database, it was identified whether the sample companies had issued an external SA report during the study period or not. If so, we then collected data about the assurance provider, level of assurance and assurance scope for

[10] Refer to 2.3.2.2 "CSR Measurement" for further details.
[11] This essay also uses CSR performance ratings provided by CSRhub as an additional test. Clarkson et al. (2009) mention that CSR disclosures have a positive association with CSR performance. They argue that firms that are performing well in terms of CSR should be willing to provide more information "disclosures" about their CSR activities (refer to section 3.5.2 for more details).
[12] Refer to section 2.3.2.1 "Earnings Management" for further details.

companies that had issued SA reports in a given year, whereas all the financial data were collected from DataStream.

Overall, after investigating the determinants and consequences of CSR in the three chapters, it can be concluded that information about CSR contributes positively towards market participants and reduces information asymmetry. However, this kind of information could be symbolically issued by firms that practise real earnings manipulations, meaning that what is disclosed about CSR might not necessarily be congruent with what is done in reality. Accordingly, some companies that make ethical endeavours and are intrinsically involved in CSR activities tend to audit their CSR information and issue sustainability assurance reports in order to provide a signal to stakeholders about their true commitments. Nevertheless, SA continues to have a low level of regulation and allows reporting companies a degree of control over the assurance process, which affects the independence of the assurance provider. Therefore, companies that are facing ESG scandals and negative events could also use sustainability assurance reports to gain, repair or maintain legitimacy.

1.6 SUMMARY OF THE KEY FINDINGS

Each empirical study in this thesis obtains several findings. The findings of the first essay in Chapter 2 show that firms with lower accrual earnings manipulation have better CSR scores, which supports the ethical perspective. The results also show that if EM stems from real activities, companies promote CSR to work as a tool to cover up any unethical behaviour, which supports the opportunistic perspective. When the sample is separated into family- and non-family-controlled firms, the former show a similar but stronger relationship between CSR and both AEM and RAM. By considering the environmental, social and governance (ESG) scores independently, the outcomes show that the above relationship is no longer consistent when compared with each dimension, especially in family-controlled firms. More specifically, the study finds that in the case of EM, family-controlled firms tend to focus more on activities related to external stakeholders (i.e. the environment) than their non-family counterparts. Indeed, this tendency can be attributed to families' concerns about preserving and boosting their reputation and image, which represents a vital component of SEW (Berrone et al., 2012).

The findings of the second study in Chapter 3 show that CSR, as an aggregate score, reduces IA. The second main finding shows that the negative relationship between CSR and IA weakens and even becomes positive in family-controlled firms. This finding supports the adverse selection

perspective of Hypothesis H2, in which family-controlled firms take advantage of the information they have access to, to the cost of minor shareholders and less-informed investors. Finally, by testing the direct impact of each ESG pillar (environmental, social and governance scores) on IA, all the components continue to show a negative influence on the bid-ask spread (the proxy used to capture IA). More specifically, disclosures about environmental issues tend to have a slightly stronger influence on IA compared to social and governance scores. However, the moderating role of family-controlled firms weakens the negative effect of environmental and governance scores and strengthens the negative impact of social scores on IA. This outcome indicates that family-controlled firms follow a 'cherry-picking' CSR strategy rather than applying a holistic approach, and also focus more on information related to social activities.

The findings of the third essay show that both highly ESG-committed companies and companies facing ESG scandals and negative events issue SA reports. The former use them to signal their ESG commitments, whereas the latter use them to shift stakeholders' attention from scandals. These findings support the concerns mentioned in previous studies, in which sustainability assurance is still less regulated and allows management a level of control over the assurance process, thus affecting the independence of the assurance provider[13]. Additional tests reveal that, unlike irresponsible companies, highly CSR-committed ones choose higher assurance levels and scopes of assurance.

1.7 RESEARCH CONTRIBUTIONS

This thesis contributes to the existing literature on CSR in several ways. The generic contribution is related to the nature of CSR reports, whether they are issued substantially or symbolically. Throughout the three different empirical studies, it becomes clear that CSR is not exclusively issued for ethical reasons; other motivations may make managers issue CSR reports. This tendency was shown when the CSR dimensions were tested independently, as well as when the relationship between CSR and EM was tested. Another generic contribution in this thesis is related to the reason for issuing a sustainability assurance report. Previous studies show that only socially responsible companies issue SA reports, whereas this thesis shows some evidence of their symbolic use.

[13] The influence of earnings management on SA was used as a robustness check, showing that earnings management has a significantly positive influence on the decision to issue SA reports.

More specifically, each empirical study makes several contributions. The first essay contributes to the existing literature on family firms, as well as on the CSR and EM nexus in several ways. First, in the context of EM, the majority of studies tend to detect EM by using discretionary accrual models, whereas manipulation of real activities is argued to be more dominant in business (Graham et al., 2005, Roychowdhury, 2006). Therefore, this study uses both RAM and AEM. Second, according to Zientara (2017), for certain reasons, managers tend to target external stakeholders by focusing only on environmental and community issues (called the cherry-picking strategy), rather than applying a holistic CSR strategy. Accordingly, it would not be sufficient to fully understand and interpret managers' behaviour towards CSR if it is taken as a single factor, as done by the majority of previous studies. Therefore, in this study, we consider multiple CSR dimensions (environmental, social and governance) to understand better how family-controlled firms behave across different CSR dimensions. Third, SEW has been criticised for lack of precision in its theoretical development, with some researchers raising questions regarding its assumptions (Miller and Le Breton–Miller, 2014, Chua et al., 2015, Schulze and Kellermanns, 2015). Therefore, this paper attempts to further explore the nature of SEW by examining how family-controlled firms affect the relationship between CSR and EM. Fourth, despite the effective role that UK companies play in practising and disclosing CSR, previous studies show a lack of evidence on how CSR is related to earnings reporting, as they do not study CSR dimensions separately in the UK context. Finally, the causal relationship between EM and CSR might be endogenously determined by the policies of managers or other external factors, which results in reversed causality, simultaneity, or other endogeneity problems (Choi et al., 2013b). Therefore, if CSR and EM are simultaneously determined using the ordinary least squares regression (OLS) method, this would be inefficient in this case. Therefore, this paper extends the methodological approaches of previous studies by using the generalized method of moments (GMM) approach in order to overcome this issue.

The second study contributes to the existing literature on CSR, IA and family-controlled firms in several ways. First, in addition to using aggregate ESG scores, it also further tests the influence of each ESG element, namely environmental, social and governance, individually. The reason is that CSR is a multidimensional concept that represents the relationship between business and society (De Bakker et al., 2005, Lockett et al., 2006). Despite its complexity, several studies have dealt with it as a homogeneous activity and regressed it as a single indicator, without considering its dimensions (e.g. Martínez-Ferrero et al., 2018, Nguyen et al., 2019, Cui et al., 2018, Cho et al., 2013). Rationally, considering CSR dimensions independently (e.g. environmental, social and governance scores) could result in a better understanding of management strategy and its mentality

towards being involved in CSR activities. Second, the moderating role of the relationship between CSR and IA has been previously studied using firm characteristics (Nguyen et al., 2019), equity risk (Cui et al., 2018) and institutional ownership (Cho et al., 2013). This study extends the previous literature by examining the moderating role of family-controlled firms in the CSR-IA nexus. The reason for choosing such firms is that they are argued to have unique characteristics that distinguish them from non-family firms (Dyer Jr, 2003, Gomez-Mejia et al., 2011). Moreover, family ownership is considered to be the most prevalent type of ownership around the world (La Porta et al., 1999, Faccio and Lang, 2002, Claessens et al., 2002).

Thirdly, while the UK is considered to be one of the leading countries in terms of the application and disclosure of CSR, there is a lack of evidence in the literature on how it is related to IA in the UK context, as the majority of studies focus on the US market (see Cho et al., 2013, Cui et al., 2018, Lopatta et al., 2016, Lu and Chueh, 2015). Accordingly, this study contributes to the research by considering UK companies listed on the FTSE all-share index. Fourthly, the study extends the methodological approaches of previous studies by using the generalised method of moments (GMM) model. The reason is that the association between CSR and IA might be endogenous, as a result of managerial strategies and other issues that lead to reverse causality and simultaneity. Thus, if CSR and IA are simultaneously determined, ordinary least squares (OLS) models may not be accurate. Consequently, based on Arellano and Bond (1991), the GMM model can be useful to address these issues while controlling for heterogeneity.

The third essay in Chapter 4 contributes to the literature on CSR and SA in different ways. First, it provides evidence of the symbolic use of SA reporting. Specifically, the findings provide evidence in support of the claims in previous research that the quality and process of SA reporting can be affected by opportunistic managerial behaviour (Boiral et al., 2019a, Boiral et al., 2019b, Smith et al., 2011). Second, following Aouadi and Marsat (2018), this essay uses ESG controversies as a proxy for CSR concerns based on a sample of European companies. Previous studies mainly focus on the US market when addressing the effect of CSR concerns, on the basis that the data available on CSR concerns on databases such as the KLD[14] only provides CSR data for the US market. Given that developments in CSR and ethics have been argued to be influenced by national differences and contexts (Crane and Matten, 2016), a European focused study makes an insightful contribution to the literature.

[14] Kinder, Lydenberg, Domini, and Company (KLD) database.

1.8 THESIS STRUCTURE

In addressing and outlining the research issues highlighted above, the thesis is structured as follows; The first chapter, the introduction, presents the main thesis problems and provides a summary of the three essays. The second, third and fourth chapters are empirical essays concerning the role of family-controlled firms in the relationship between CSR and EM; the complementary role of CSR disclosures in reducing information asymmetry, with a case study of family and non-family controlled firms; and the creation of legitimacy through sustainability assurance, with an analysis of STOXX Europe 600 firms. Each of these chapters comprises an introduction, literature review and hypothesis development, research design, results and discussions, additional tests and conclusion. Chapter 5 summarises the main findings of Chapters 2, 3 and 4 and discusses the general contributions and implications of the results.

CHAPTER 2

The Role of Family controlled firms in Explaining the Relationship between Corporate Social Responsibility and Earnings Management: A Perspective of Socioemotional Wealth

2.1 INTRODUCTION

The corporate social responsibility (CSR) of organisations has become a common debate among a variety of stakeholders who are becoming increasingly aware of its importance, particularly in terms of its role in ensuring a proper balance in the long-run between the commercial viability of a firm and its obligations to society (Berthelot et al., 2003). According to McWilliams et al. (2006: p1), CSR is defined as a "situation where the firm goes beyond compliance and engages in actions that appear to further some social good, beyond the interests of the firm and that which is required by law". This definition, however, is only one of several that prescribe the term of CSR (McWilliams et al., 2006). Votaw (1972) claims that although CSR has a meaning, it does not necessarily mean the same thing to everybody; different groups of people could explain CSR from different perspectives. For instance, it can be seen as an ethical sense, legal obligation and responsibility, fiduciary duty or synonym of legitimacy, thus leaving theoretical development and deciding the ways in which CSR can be determined or qualified as no easy task, but is open for discussion (Votaw, 1972).

This bifurcation of the definition has attracted researchers to the attempt to justify and examine the motivations and consequences behind applying CSR and its relationship with the quality of financial reporting (e.g. the earnings management tendency). This presents a controversy as to whether such initiatives and voluntary disclosures of CSR can either contribute positively to the entity ("doing well by doing good" ethical perspective) or whether they just use CSR as an instrument to fulfil opportunistic purposes (doing good to avoid bad) (Chih et al., 2008, Prior et al., 2008, Sun et al., 2010, Hong and Andersen, 2011, Kim et al., 2012, Choi et al., 2013a, Scholtens and Kang, 2013).

In an ethical sense, several scholars (e.g. Carroll, 1979, Jones, 1995, Atkins, 2006) suggest a theoretical background that integrates the ethical dimension into legal and economic considerations. Carroll (1979) introduces a model; Carroll's CSR Pyramid, which depicts the social obligations in the company as being economically viable (i.e. profitable operations), legally

commendable, ethically mindful and socially allegeable. Jones (1995) claims that a trusting and cooperative atmosphere encourages the entity to be more committed to ethical conduct. Similarly, Atkins (2006) claims that the true meaning of CSR is reflected in being more transparent in firms' financial reporting. Accordingly, CSR is given a dimension through not only reporting on social activities but as an inspirational role and creates a general atmosphere to educate management in adopting a public responsibility-oriented mentality which constrains earnings management (EM) activities and meets stakeholders' expectations (Kim et al., 2012, Scholtens and Kang, 2013).

Alternatively, CSR can be used to pursue the interests of managers (Jensen and Meckling, 1976, McWilliams et al., 2006). While it is argued that CSR can play an essential role in shaping the public image and reputation of the entity and thus maintain legitimacy (Deegan, 2000), managers could adopt CSR strategies and promote their virtues through corporate annual reports and mass media to work as a smokescreen of such unethical conducts (Hemingway and Maclagan, 2004). Taking the widely publicised Enron Corporation case as an example, for many years before the scandals, the organisation was considered as an international model of CSR[15] (Powers et al., 2002). Organisations such as Shell and British American Tobacco are cited by Chih et al. (2008) as being committed to an extensive CSR disclosures scheme, which is more symbolic rather than substantive. Accordingly, Prior et al. (2008) and Martínez-Ferrero et al. (2016) support this organizational approach to CSR by empirically finding a positive correlation in the level of EM and CSR initiatives.

In light of the above discussion, it is noticed that the empirical evidence regarding the relationship between CSR and EM seems inconclusive, which offers an opportunity to revisit this relationship and provide further possible evidence. CSR involvement induced by the opportunistic behaviour of management would be more noticeable in weak corporate governance (Choi et al., 2013a), e.g. firms with weak corporate governance and high ownership concentration tend to engage more in CSR activities in order to demonstrate that they are working in the interests of stakeholders (Scholtens and Kang, 2013). This evidence supports the argument of Barnea and Rubin (2010) that corporate insiders may overinvest in CSR in order to pursue private benefits. Looking more closely at the ownership structure, this study mainly focuses on how family-controlled firms and so seeks to examine its effect on the relationship between CSR and EM.

[15] Fortune magazine categorized Enron firms as "the most innovative company in America", and in 2000 it was ranked 22nd of the "100 best companies work for America", especially since it was awarded higher points in issues related to the quality of services, products, and employees' talent. At the same time, Enron was engaging in a tremendous accounting fraud that finally brought about its collapse in 2001 (Powers et al. 2002).

Since key shareholders have a significant influence over a firm's investment decisions by suggesting and voting on strategic plans for the firm (Barclay and Holderness, 1989), prior literature shows that different ownership structures (e.g. institutions, family, government, managerial ownership, etc.) have diverse ethos and strategies that influence firms' behavior positively or negatively (Warfield et al., 1995, Chung et al., 2002, Klein, 2002, Mitani, 2010). Family ownership, indeed, tends to show unique characteristics that distinguish them from other non-family counterparts (Gomez-Mejia et al., 2011).

In this regard, it is argued that the assumption that financial considerations are of prime importance in family firms is neither a simple nor satisfactory explanation for their distinctiveness (Chrisman et al., 2005). Similarly, wealth maximization and financial performance only address the commercial aspects of family businesses, whereas non-pecuniary interest (e.g. control and influence, identity or succession of generations) are regarded as important links to the family itself (Gomez-Mejia et al., 2011). Gomez-Mejia et al. (2007: p106), therefore, propose a new theoretical concept of the family-controlled firm called "socio-emotional wealth (SEW)", which they define as the "non-financial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty". Subsequent theoretical literature regarding the nature of SEW implicitly supposes that family firms behave ethically and proactively. However, this positive motivation towards CSR, may not be based solely on altruism and authentic endeavour (normative motives, holistic and strategic approach) as prior literature implicitly assumes (e.g. Berrone et al., 2012 a,b), but is also a viable approach to garner social legitimacy and enhance firm image and reputation, which in turn helps to preserve the existence of the organization (instrument motive/ selective motive) (Kellermanns et al., 2012, Zientara, 2017).

Due to the double-valence nature of SEW that is mainly witnessed in CSR literature, the more appropriate question is to ask how and why family-controlled firms conceive and practice CSR, rather than asking whether family-controlled firms are more socially responsible than non-family firms (Zientara, 2017). Accordingly, introducing the moderating role of family-controlled firms could bring more clarifications towards the CSR-EM nexus. Therefore, the main purpose of this study is to examine the nature of the relationship between CSR and EM in family and non-family-controlled firms, considering three CSR dimensions namely, environmental, social, and governance.

Overall, this study contributes to the existing literature on family firms as well as CSR and EM nexus in several ways. First, according to Zientara (2017), for some reason, managers tend to target external stakeholders by focusing only on environmental and community issues (called a cherry-picking strategy) rather than applying a holistic CSR strategy. Accordingly, taking CSR as a single factor, as the majority of previous studies have considered, is not sufficient to fully understand and interpret the manager's behaviour towards CSR. Therefore, in this study, we consider multiple CSR dimensions (environmental, social and governance) in order to better understand how family-controlled firms behave across different CSR dimensions. Second, SEW has been criticised for a lack of precision in the theoretical development, as some researchers raised some questions regarding the assumptions of SEW (Miller and Le Breton–Miller, 2014, Chua et al., 2015, Schulze and Kellermanns, 2015). Accordingly, this paper tries to further explore the nature of SEW by examining how family-controlled firms affect the relationship between CSR and EM. Third, despite the effective role that UK companies play in practising and disclosing CSR, previous studies show a lack of evidence on how CSR is related to earnings reporting as they do not study CSR dimensions separately in the UK context. Finally, the causal relationship between EM and CSR might be endogenously determined by the policies of managers or any other external factors, which results in reversed causality, simultaneity, or other endogeneity problems (Choi et al., 2013b). Thus, if CSR and EM are simultaneously determined using the Ordinary Least Squares regression (OLS) method, this would be inefficient in this case. Therefore, this paper extends the methodological approaches of previous studies by using the generalized method of moments (GMM) approach in order to overcome this issue.

The findings based on a sample of UK firms listed on the FTSE All-Share Index over the period 2010 to 2017 suggest that firms, with lower accrual earnings management (AEM), show better overall CSR rating, which supports the hypothesis of enhanced ethical behaviour. In addition, the findings show that if the EM emanates from real activities, referred to as real activities manipulation (RAM), firms use CSR as an instrument to cover-up misconduct, which supports the hypothesis of opportunistic behaviour. When the sample is divided into family and non-family-controlled firms, family-controlled firms show a similar but stronger relationship in both AEM and RAM. In addition, by splitting CSR scores into environmental, social and governance scores, we find that the relationship between CSR, as a combined score, and EM is no longer consistently comparing with each dimension, especially in family-controlled firms. Generally, this inconsistency supports the "cherry-picking" strategy adopted by some firms when applying CSR as it shows the "dark side" of SEW (Kellermanns et al., 2012, Zientara, 2017). More specifically, we find that, in

the case of EM, family-controlled firms pay more attention to activities related to external stakeholders (i.e. environment) than non-family controlled firms. This motivation, indeed, can be attributed to the families' concerns to protect and augment the family reputation and image, which represents an essential element of SEW (Berrone et al., 2012). Family identity is closely connected to the firms so that it can be seen by the external stakeholders as an extension for the same family. In many cases, the family even links its reputation and name to the products they sell (Bingham et al., 2011a). Consequently, family-controlled firms are expected to be more willing to support any practices that improve their legitimacy and image in the outside world (Cennamo et al., 2012), especially in the cases of EM (accrual or real).

To address the issues presented above, the remainder of this paper is structured as follows. The literature review and hypothesis development section provides a theoretical and empirical overview of the relationship between CSR and EM, thus providing a basis to further discuss the influence of family-controlled firms on this relationship. Thereafter, the research design is presented, in which the sample selection, data source, variables measurement and empirical models are highlighted. The last two sections outline the empirical outcomes and discussion of the findings.

2.2 LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.2.1 CSR Reporting and EM

The relationship between EM and CSR bears two competing arguments on whether the behaviour of the manager and/or firm reflects ethical or opportunistic practices. On the one hand, the ethical and philanthropic argument prescribes that the business should be managed in line with moral and ethical principles, which undoubtedly limits earnings management (e.g. Carroll, 1979, Jones, 1991, Donaldson and Preston, 1995, Logsdon and Wood, 2002, Phillips et al., 2003, Hong and Andersen, 2011, Kim et al., 2012). In this vein, theoretical agenda integrates ethical views into a rational economic structure; Carroll (1979), for instance, suggests a model that indicates firms' social role obligations, through conducting business in an economically viable (i.e. profitable operations), legally commendable, ethically mindful and socially eligible way. Moreover, Jones (1995) develops a theoretical background that incorporates business ethics and economic theory. From his point of view, firms conducting business on the basis of trust and cooperation have a motivation to reveal a commitment to ethical activities. This argument is also consistent with political theories (e.g. Donaldson and Dunfee, 1999, Logsdon and Wood, 2002, Matten et al., 2003) and integrative

theories (e.g. Sethi, 1975, Jones, 1980, Agle et al., 1999) of CSR that suggests both managers and firms have inducements to deal honestly, ethically and trustworthily with the society, thus contributing positively to society as well as earnings quality. Empirical studies that support the ethical argument find a negative association between CSR and EM, implying that socially responsible firms are less likely to manipulate earnings and thus, provide higher quality and more transparent financial reports (Chih et al., 2008, Heltzer, 2011, Hong and Andersen, 2011, Calegari et al., 2010, Scholtens and Kang, 2013, Litt et al., 2014).

The first initiative came from Chih et al. (2008) who conducted an international study using a sample of 1,653 firms in 46 countries, classified into socially and non-socially responsible firms. They find that when EM is substituted by earnings smoothing, socially responsible firms are inclined to engage less in earnings smoothing, which is consistent with the myopia avoidance hypothesis. They argue that CSR increases transparency and reduces the likelihood to manipulate earnings. In the same vein, Shleifer (2004) mentions that companies that have a strong commitment towards society are less like to engage in EM. Likewise, Scholtens and Kang (2013) examine the relationship among CSR, investor protection and EM, relying on the model used by Chih et al. (2008) using a sample of 139 firms in ten Asian countries. They reveal that firms with good CSR are considerably less likely to engage in earnings management practices and that investor protection has a negative relation with EM.

Calegari et al. (2010) propose two scenarios regarding this relationship; one supports the opportunistic view (agency problem, discussed below) and the other supports the ethical view. They conclude that CSR is not a tool used to hide EM practices, rather it belongs to corporate culture, providing an environment away from earnings manipulation effects, thus providing high-quality financial reports. Consequently, CSR increases the quality of reported earnings by changing the corporate culture away from earnings manipulation. They also find that by having better quality earnings reporting, CSR indirectly affects firm value positively through high-quality earnings.

Hong and Andersen (2011) examine whether CSR activities inhibit EM behaviour in non-financial US firms. To distinguish their work from that of Chih et al. (2008), they detect EM through both accrual EM and real activity based EM. Their findings indicate that socially oriented firms have higher accruals quality (i.e. lower AEM) and less activity-based EM (i.e. REM). Using the same measurement, Kim et al. (2012) examine whether the behaviour of socially responsible firms is different from non-socially responsible ones in making accounting and operating decisions, thus delivering more transparent financial information to investors. Using a sample from the KLD and

Compustat database of 23,391 firm-year observation from non-financial firms during the period 1991 to 2009, they find that CSR firms that devote their resources and efforts in CSR activities in order to meet ethical expectations of society are likely to issue more transparent financial and high-quality reports. This negative relationship takes an ethical motivation rather than reputational and future financial performance. On the other hand, they argue that managers could occupy CSR for self-interest reasons and therefore delude stakeholders with opportunistic financial reporting. They find that moral instincts direct managers to produce high-quality financial reports.

On the other hand, as long as CSR plays an effective role in shaping a public image of the firm and enhancing its reputation (Deegan et al., 2002), the opportunistic perspective argues that ethical codes could be employed as "window dressing" in a way that permits managers to hide such unethical behaviour (Choi et al., 2013b). Kim et al. (2012) claim that, according to the opportunistic financial reporting hypotheses, managers exploit CSR for such a private agenda. For instance, CSR gives an image that a company is transparent, whereas it works to divert attention from financial misconduct.

Studies that find a positive relationship between CSR and EM, argue that CSR practices could be employed as an entrenchment tool to mislead stakeholders about such opportunistic behaviour and exploit CSR for self-interest, which is consistent with instrumental theories that only consider the economic objectives (Garriga and Melé, 2004). Legitimacy theory, according to Lindblom (1994: p2) is "a condition or status which exists when an entity's value system is congruent with the value system of the larger social system of which the entity is a party". When there is a gap between two value systems (legitimacy gap), companies try to follow one of four strategies proposed by Lindblom (1994) to recover and maintain its legitimacy. One of these strategies is manipulating the perception of relevant stakeholders by diverting their attention from one issue to another. Therefore, it is argued that CSR reporting represents one of the efficient strategies to preserve the company from legitimacy threats (Deegan et al., 2002, Patten, 2002).

In terms of stakeholder theory, Pagano and Volpin (2005) mention that managers could reward stakeholders, such as employees, with generous benefits and privileges to minimize any pressure caused by a hostile seizure. Engendering a friendly relationship with stakeholders can also reduce the likelihood of a firm's operation being subjected to inspection by internal and external stakeholders, thus preserving job security for managers (Cespa and Cestone, 2007).

Empirically, in an earlier multinational study using a sample of 593 firms from 26 countries during the period, 2002 to 2004, Prior et al. (2008) examine whether executives who manipulate earnings do so to create a more socially and friendly image for the firm by using CSR. Building on stakeholder-agency theory, Hill and Jones (1992) posit that managers who exploit their position and power of taking decisions to pursue personal benefits through opportunistic earnings manipulation are more inclined to engage in CSR activities. They opine that CSR is used as an entrenchment strategy to gain support from stakeholders who are negatively affected by earnings management. Managers believe that by satisfying stakeholders' interests and projecting an image of social and environmental concern and awareness, they reduce the likelihood of being scrutinized about the management of earnings (Prior et al., 2008).

In contrast with Chih et al. (2008) finding, Prior et al. (2008) find that, in the instance of EM, managers pay attention to stakeholders to avoid their activism and thus secure their position. The idea is that firm's decisions not only affect shareholders but will also damage the interest of stakeholders (Clarkson et al., 1994, Zahra, 1996). Therefore, if stakeholders suspect such discretion decisions the initial response is undermining the power of managers through lobbying and boycotts (through costly boycotts and media campaigns, stakeholders exert indirect power and may affect the managers' job) (Prior et al., 2008: p162). Prior et al. (2008) also find that earnings management plays a moderator role to mitigate the relationship between CSR and firm performance. Similarly, a positive relationship between CSR and EM was proposed in the UK context for 245 non-financial firms in 2007 by Sun et al. (2010). Building on signalling, agency and stakeholder-legitimacy theories, they suggest that firms that indulge in earnings management will chose CSR to cover up this misconduct. Through applying OLS regression on cross sectional data, they did not find any significant association between the assigned variables.

Prior et al. (2008) and Sun et al. (2010), use CSR as a dependent variable, which represents a consequence of EM practices. From another perspective, CSR could exacerbate the agency problem. Petrovits (2006) and Chih et al. (2008) try to explain this kind of relationship from the perspective of the multiple objective hypotheses (Jensen, 2001). Similarly, Kim et al. (2012) concur that managers might use CSR practices to serve personal agendas as well as to advance their careers rather than looking to stakeholders' interests. McWilliams et al. (2006) consider CSR as a managerial prerequisite, meaning that managers use CSR to enhance their careers or other personal agendas. Petrovits (2006) and Gargouri et al. (2010) find evidence consistent with this perspective.

In all cases, whether CSR is used as a dependent or independent variable, it is noticeable that CSR is opportunistically used as an instrument or means of fulfilling or realizing certain motivations.

Considering the competing perspectives above, we propose the following hypotheses:

Hypothesis *1a*. When the ethical perspective hypothesis is dominant, a negative relationship between CSR and the extent of (accrual and/or real) EM is expected.

Hypothesis *1b.* When the opportunistic behaviour hypothesis is dominant, a positive relationship between CSR and (accrual and/or real) EM is expected.

2.2.2 The Role of Family Controlled Firms

Owners have a significant influence over a firm's investment decisions by suggesting and voting on strategic plans for the firm (Barclay and Holderness, 1989), which has shared benefits through mitigating the classical type of agency problem (principle-agent problem) (Jensen and Meckling, 1976)[16]. Prior literature claims that different ownership structures imply different incentives to control and monitor a firm's management (Morck et al., 1988, Shleifer and Vishny, 1986). Consequently, a firm's behaviour could be affected negatively due to the majority and minority problem (Shleifer and Vishny, 1986) or positively as in the "alignment effect" (Wang, 2006). Generally, Barclay and Holderness (1989) suggest that the main catalyst prompting owners to accumulate blocks and exert control over firms stems from pecuniary consideration, as for instance, by appointing managers from the block-holders, who not only demand higher salaries, but exert control over the dividend stream, as well as having sufficient voting power to influence anticipated administrative changes, reduce actual control over the existing senior shareholders, or obstruct the control of voting from abroad. These objectives, however, may not be the exclusive motivations in family-controlled firms (Dyer Jr, 2003, Gomez-Mejia et al., 2011), but rather, non-pecuniary benefits seem to be the prime objective for this type of ownership.

The assumption that financial considerations are of prime importance in family firms is neither a simple nor satisfactory explanation of their distinctiveness (Chrisman et al., 2005). Similarly, wealth maximization and financial performance only address the commercial aspects of family businesses,

[16] Agency problem type I "classical agency problem" occurs when managers are appointed to act on behalf of shareholders, thus they will have better access to their authority in making decisions that serve their own interests at the cost of other shareholders, in order to maximize their utilities (Jensen and Meckling, 1976, Myers and Majluf, 1984). In Agency problem Type I, it is generally agreed that the ownership structure, considered one of the internal corporate governance mechanisms, can serve as a gatekeeper to alleviate this problem (DeFond and Jiambalvo, 1994, Peasnell et al., 2000, Yeo et al., 2002, Jung and Kwon, 2002, Singh and Davidson III, 2003).

whereas non-pecuniary interests (e.g. control and influence, identity or succession of generations) are regarded as important links to the family itself, which explains why family-controlled firms tend to be characterized by distinctive features compared with their non-family counterparts (Gomez-Mejia et al., 2011). This tendency was first highlighted by Gómez-Mejía et al. (2007), who reviewed and analysed the strategic decisions in Spanish olive oil factories from the perspective of the agency model. Their results show that family firms are three times more likely to choose not to join a cooperative with a view to lucrative rewards, explaining that to do so may threaten socioemotional wealth (SEW), including loss of family image and reputation, less opportunity to sustain the family name and loss of family identification, since the firm represents an extension of the family. Contrarily, such a decision tends to carry the hazard that the company's performance may suffer in order to protect their heritage and keep family control over the firm, implying that they advance their non-financial objectives on any profitable investment in order to preserve their heritage and survive through generations (Gomez-Mejia et al., 2011).

Accordingly, Gómez-Mejía et al. (2007: p106) propose a new theoretical concept of the family-controlled firms called "socio-emotional wealth (SEW)", which they define as "non-financial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty". This concept, thereafter, opened the door for the theoretical and empirical studies to pay more attention to family controlled firms and their role inside and outside the company, creating a debate on whether the nature of SEW motivation contributes ethically towards the firms and society and/or it has some "dark sides" that only serve the family heritage and move the business for subsequent generations (Kellermanns et al., 2012, Zientara, 2017). Considering this argument, this study sheds light on the nature of SEW by examining families' behaviour toward CSR practices as well as in situations when there is earnings manipulation.

Subsequent studies that build their theoretical background based on the SEW mind-set find a positive trend in family firms towards CSR. Gomez-Mejia et al. (2011) extensively reviewed the literature, and state that in contrast to non-family businesses, family-controlled firms are more likely to be socially responsible and contribute more in initiatives and commitment towards undertaking philanthropic activities than do their non-family counterparts. Moreover, a longitudinal study conducted by Berrone et al. (2010) using a sample of US companies, show that family-controlled firms tend to safeguard their SEW through superior environment-associated performance than that of non-family firms. These results are also supported by Yu et al. (2015) in

Taiwan and Uhlaner et al. (2012) in Holland. Similarly, Bingham et al. (2011b) study the impact of social initiatives and concerns, finding a higher commitment by family-controlled firms to be more socially active than non-family firms, regarding social initiatives benefitting employees and the community as a whole. These results are consistent with Litz and Stewart (2000), who find that family firms tend to have greater community involvement.

In accordance with the above discussion, it can be perceived that the debate between family and non-family controlled firms denotes a higher commitment towards social and environmental interaction in the family-controlled firms, with recent literature commonly noting that from the perspective of SEW, family-controlled firms illustrate homogeneous behaviour. This positive tendency, however, may not only hold an altruistic and authentic endeavour (normative motives, holistic and strategic approach) as much of the theoretical literature implicitly assumes (e.g. Berrone et al., 2012a,b) and empirical findings are built upon it, but also a viable approach to garner social legitimacy and enhance firms' image and reputation, which in turn helps to preserve the organization's continued existence (instrument motive/ selective motive) (Kellermanns et al., 2012, Zientara, 2017).

Such adoptions and behaviours within family firms are explained as a potential heterogeneity within family firms (Sharma et al., 1997, Berrone et al., 2012, Chrisman and Patel, 2012, Marques et al., 2014, Wright et al., 2014). Thus, family values and principles would be guided by normative concerns as others could employ CSR as an instrument by which to preserve SEW. In this vein, Kellermanns et al. (2012) argue that SEW dimensions proposed by Berrone et al. (2012)[17] could have positive and/or negative valence, as well as make distinctions between the selective/instrumental, and the holistic/ normative approaches to CSR. Cruz et al. (2014) try to fill this gap or at least bring some empirical clarifications through examining whether family-controlled firms are more socially responsible than non-family firms. The main contribution in their work is that instead of relying on a single CSR indicator to understand families' behaviour, they consider family heterogeneity using four different dimensions for CSR (environment, employees, community, and governance), thus each dimension can indicate a tendency of family firms. Cruz et al. (2014) find that SEW nature in family firms is a "double-edged sword", which can be a socially responsible and irresponsible at the same time, having both a "bright" and a "dark

[17]Berrone et al. (2012) try to explain this heterogeneity by suggesting five different dimensions of SEW called FIBER, claiming that the weight of these dimensions might vary according to the family preferences; these dimensions are family control and influence, identification, binding social ties (kinship ties), emotional attachment, renewal of family bond succession.

side". On the one hand, they are socially responsible to the external stakeholders (environment and community), to protect their image and reputation and thus preserve SEW. While on the other hand, they are less likely to be socially responsible towards internal stakeholders (employees and governance) as a way to sustain control and influence over the firm's decisions and emotional bonds.

Given the double-valence nature of SEW that is mainly witnessed in CSR literature, the more appropriate question is to ask how and why family-controlled firms conceive and practice CSR, rather than asking whether family firms are more socially responsible than non-family firms (Zientara, 2017). Accordingly, this tendency could be clearer when the family-controlled firms involve in the relationship between CSR and EM, so that if SEW is benignant inside and outside the company, then the negative relationship between CSR and EM will be stronger in family-controlled firms. In addition, all CSR dimensions will be affected in the same direction, which is called a holistic CSR strategy. This means family-controlled firms are increasingly asking for higher quality financial reporting and provide better disclosures practices, which is faithfully represented. Meanwhile, the minority will be aligned with family interests and that is called the alignment effect (Wang, 2006). On the other hand, if the nature of SEW is opportunistic or/and has some "dark sides", which is the most probable case, two scenarios could happen. First, the positive relationship between CSR and EM will be dominant, meaning that family firms, in case of earning manipulation, use CSR as an instrument to cover-up such misconducts and thus preserve its SEW and that all CSR dimensions will be affected in the same way. Second, family-controlled firms follow a "cherry-picking" strategy that affects the relationship between EM and each CSR dimension differently, in responsible and/or irresponsible ways (double-edged sword or instrument/selective approach). Thus, we propose the following hypothesis.

Building on the above-competing viewpoints, the relationship between CSR and EM can be either affected ethically or opportunistically by family-controlled firms as a response to preserving socioemotional wealth. Thus, we propose the following hypothesis:

Hypothesis 2. Family-controlled firms moderate the relationship between CSR and (accrual and/or real) EM.

2.3 RESEARCH DESIGN

2.3.1 Sample Selection and Data Source

The sample of the study consists of 3,808 firm-year observations for UK firms listed on the FTSE All-Share Index over the period 2010 to 2017. This index represents 98-99% of UK market capitalization and combines FTSE 100, FTSE 250 and FTSE Small Cap indices. The reason for choosing the FTSE-all share index is to capture a large number of family firms from different levels and sectors. Financial institutions are excluded from the sample due to their different nature and the regulations related to reporting of earnings, as well as social and environmental disclosures (Peasnell et al., 2000, Marrakchi Chtourou et al., 2001, Macve and Chen, 2010, Hong and Andersen, 2011). Data for the EM models and CSR are mainly collected from the Bloomberg database. The later relies on ESG scores provided by Bloomberg[18]. Data related to family ownership and other related variables were collected from the FAME database. Other missing ownership data was manually collected and inspected from firms' annual reports and their websites. Firms' financial data was also collected from both Bloomberg and FAME databases.

2.3.2 Variables Measurement

2.3.2.1 Earnings Management

Since earnings contain both accruals and cash, managers have two choices when manipulating earnings. One strategy is called Accrual Earnings Management (AEM), which can be achieved by changing accounting methods or using estimates in order to obtain the anticipated level of earnings (Healy and Wahlen, 1999). Another form of earning management is Real Activities Manipulation (RAM), which aims to alter earnings reporting in a certain direction, through changing the structuring and timing of operating, financing and investing transactions (Roychowdhury, 2006, Zang, 2011). Measuring earnings management is not an easy task, as it needs a model to detect any tendencies. Therefore, several initiatives in pioneering studies have been made to detect earnings management (see Dechow et al., 2010). Previous studies have used both AEM and RAM as proxies of earnings management.

[18] Farther details are given in section 2.3.2.2.

2.3.2.1.1 Accrual earnings management models

Accrual earnings management has been extensively used as a proxy for EM (Healy, 1985, DeAngelo, 1986, Jones, 1991, Dechow et al., 1995, Kothari et al., 2005). Total accruals contain both discretionary and non-discretionary accruals; the former are accruals created from accounting treatments and transactions in order to manage earnings, thus the absolute value of discretionary accruals shows the level of opportunistic EM practices and abnormal reporting decisions, whereas non-discretionary accruals refer to the accruals that arise in a certain period (Becker et al., 1998, Ronen and Yaari, 2008) over which management has little control. Estimating discretionary accruals involves two steps. The first is to identify total accruals and the second to employ a model to estimate discretionary accruals. To measure total accruals, two different approaches can be followed; the balance sheet approach (Healy, 1985, Dechow et al., 1995) and the cash flow approach (Subramanyam, 1996, DeFond and Subramanyam, 1998). This study follows the cash flow approach, as recommended by Hribar and Collins (2002), which is calculated as below;

$$TACC_i = NI_i - OCF_i \quad (1)$$

where:

TACC is the total accruals; NI is the net income; OCF is operating cash flow

After measuring TACC, the next step is to estimate discretionary accruals. The most commonly used method to measure discretionary accruals in the literature is the Jones (1991) and the modified Jones models as developed by Dechow et al. (1995). However, Kothari et al. (2005) argue that firm performance could influence the estimation of EM because non-discretionary accruals may be classified erroneously as discretionary accruals when firm performance is abnormal and the relationship between firm performance and accruals is non-linear. Therefore, they suggest the performance-matched model, which contains an intercept, as well as controlling for firm performance by using Return on Assets (ROA), so that the heteroscedasticity problems in the previous aggregate models could be reduced (Ronen and Yaari, 2008).

Discretionary accrual (DACC*it*), which is the proxy to detect EM (AEM), represents the residuals of Kothari et al.'s model:

$$\frac{TACC}{TA_{i,t-1}} = \beta_0 \frac{1}{TA_{i,t-1}} + \beta_1 \frac{\Delta REV_{it} - \Delta REC_{it}}{TA_{i,t-1}} + \beta_2 \frac{PPE_{it}}{TA_{i,t-1}} + \beta_3 ROA_{it} + e_{it} \qquad (2)$$

Where $TACC_{it}$ is the total accruals for sample firm i for year t; TA_{it-1} is the total assets for sample firm i for year t-1; ΔREV_{it} is the change in revenue for sample firm i for year t; ΔREC_{it} is the change in accounts receivable for sample firm i for year t; PPE_{it} is the gross property plant and equipment for sample firm i for year t; e_{it} is the error term for sample firm i for year t.

Finally, discretionary accruals are the result of the deduction of non-discretionary accruals from (NDACC) TACC, which are estimated in the previous model:

$$DACC_{it} = TACC_{it} - NDACC_{it} \qquad (3)$$

2.3.2.1.2 Real activities manipulation model

While the previous literature has widely studied and provided evidence regarding AEM (e.g. Dechow and Sloan, 1991, Jones, 1991, Dechow et al., 1995, Cheng and Warfield, 2005), recent studies have provided evidence of RAM. A survey conducted by Graham et al. (2005) of 400 executives found that managers are attracted to earnings benchmarks that are related to cash flow; about 80 percent of the respondents tended to reduce discretionary expenditure through advertising, maintenance and research and development, whereas 55.3 percent tended to delay starting new projects in order to meet such earnings targets.

Roychowdhury (2006) provides evidence of several types of real activities manipulation, for instance, sales manipulation through the acceleration of sales by using price discounts; overproduction to reduce the cost of goods sold (COGS); and reductions in discretionary expenditure (e.g. advertising expenses, R&D expenses, and selling, general and administrative (SG&A) expenses) in order to avoid reporting losses. Building on Dechow et al. (1995) model, Roychowdhury (2006) uses models that capture the normal levels of operating cash flow, production costs and discretionary expenses. The residuals from these regressions are used as proxies for RAM.

First model: Abnormal cash flow from operation (AbCFO)

$$\frac{CFO_t}{TA_{t-1}} = \alpha_0 \frac{1}{TA_{it-1}} + \alpha_1 \frac{S_t}{TA_{t-1}} + \alpha_2 \frac{\Delta S_{it}}{TA_{t-1}} + e_t \quad (4)$$

Where CFO is the cash flow from operations; TA is the total assets; S is the net sales; ΔS is the change in net sales.

Abnormal production cost (AbPROD)

To detect abnormal production cost, we first estimate the normal cost level of goods sold (COGS), as well as the normal change in inventory:

$$\frac{COGS_t}{TA_{t-1}} = \alpha_0 + \alpha_1 \frac{1}{TA_{t-1}} + \alpha_2 \frac{S_t}{TA_{t-1}} + \varepsilon_t \quad (5a)$$

$$\frac{\Delta INV_{\mathrm{t}}}{\mathrm{TA_{t-1}}} = \alpha_0 + \alpha_1 \frac{1}{TA_{t-1}} + \alpha_3 \frac{\Delta S_t}{TA_{t-1}} + \alpha_3 \frac{\Delta S_{t-1}}{TA_{t-1}} + \varepsilon_t \quad (5b)$$

Where COGS is the cost of goods sold; ΔINV is the change in inventory

Accordingly, we define the total production cost as the sum of both COGS and inventory. Therefore, by merging both previous models, we detect the normal level of production cost, whereas the residual will be the abnormal production cost (*AbPROD*).

Second Model: abnormal production cost (AbPROD).

$$\frac{\Delta PROD_{\mathrm{t}}}{\mathrm{TA_{t-1}}} = \alpha_0 + \alpha_1 \frac{1}{TA_{t-1}} + \alpha_2 \frac{S_t}{TA_{t-1}} + \alpha_3 \frac{\Delta S_t}{TA_{t-1}} + \alpha_4 \frac{\Delta S_{t-1}}{TA_{t-1}} + \varepsilon_t \quad (5)$$

Third model: Abnormal discretionary expenses (AbDISEx)

$$\frac{\text{DISEx}}{\text{TA}_{t-1}} = \alpha_0 + \alpha_1 \frac{1}{TA_{t-1}} + \alpha_2 \frac{S_{t-1}}{TA_{t-1}} + \varepsilon_t \quad (6)$$

Where DISEx is the sum of advertising expenses, R&D expenses, and selling, general and administrative (SG&A) expenses.

Accordingly, combining the three individual models (*AbCFO, AbPROD and AbDISEx*) will reflect RAM.

2.3.2.2 CSR Measurement

To measure CSR, this study uses (ESG) disclosure scores provided by Bloomberg as a proxy for environmental, social and governance disclosures levels in each firm. For each company, Bloomberg has developed key performance indicators KPIs and ratios, thus contributing in better analysing and comparing companies in ESG Metrics. It also takes into consideration the differences between industries i.e. the scores are "industry-specific". Each company, accordingly, is given a different ESG factor and evaluated according to the industry that it belongs to (Bloomberg, 2018). For instance, the points given for phones/mobiles recycling are only attributed to the telecommunication system.

The evaluation scoring of ESG disclosures relies on 100 ESG points (60 for environmental 'E', 26 for social 'S' and 14 for governance 'G'), starting from 0.1 for those disclosing a minimum amount of ESG points to 100 for companies that fully disclose ESG points. As mentioned, each data point is weighted according to its importance, for example, Greenhouse emissions have greater weight compared with other disclosures. Moreover, each company is evaluated in comparison to other companies in the same industry implying that Bloomberg analysts do not derive or derivate data. It is mainly collected from companies' filings (e.g. annual reports, CSR sustainability standalone reports, firms' websites and ESG survey prepared by Bloomberg that is attached to the companies on an annual basis).

2.3.2.3 Family Firms

To distinguish between family and non-family-controlled firms, studies have relied on various measurements and thresholds. Some (e.g. Anderson and Reeb, 2003, Villalonga and Amit, 2010,

Cruz et al., 2014) recognise family-controlled firms like those of which the family owns more than 20 percent of the shares in the company. On the other hand, a 10% cut-off point has been used by other studies to define family firms (La Porta et al., 1999, Smith and Amoako-Adu, 1999, Faccio and Lang, 2002, Barontini and Caprio, 2006, Gomez-Mejia et al., 2010, Cabeza-García et al., 2017, Labelle et al., 2018).

Using a definition by Anderson and Reeb (2004), a firm can be considered as being a family-controlled entity when family ownership exceeds 5% and/or there are two or more board members are from the family (these entities are recognized as family firms even if they are not owned by one family). This definition has been used by several studies (e.g. Gomez-Mejia et al., 2003, Villalonga and Amit, 2006b, Berrone et al., 2010, Martin et al., 2016). Family relationships include father, mother, sisters, brothers, sons, daughters, spouses, in-laws, aunts, nieces, nephews and cousins (Gomez-Mejia et al., 2003). Similarly, Claessens et al. (2002) and Peng and Jiang (2010) define firms as being family-controlled if family groups dominate more than 5% of voting rights (a family group could be one family or groups of families). Chrisman and Patel (2012) define a family firm as one in which family ownership exceeds 5% of the capital, and in which at least one family member serves as a member of top management. This study relies on Anderson and Reeb (2004) to differentiate between family-controlled firms and non-family ones. A dummy variable equal to 1 will be given to family-controlled firms, and 0 otherwise.

2.3.3 Empirical Models

To test the hypothesis, this study uses panel regressions. Based on previous studies (Prior et al., 2008, Kim et al., 2012, Choi et al., 2013b), the following models test the two competing arguments between CSR and EM as well as the moderating role of family variables.

$$ESG_{SCORE} = \beta_0 + \beta_1 AEM_{it} + \beta_2 RAM_{it} + \beta_3 Family_{it} + \beta_4 AEM_{Family_{it}} + \beta_5 RAM_{Family_{it}} + \beta_6 SIZE_{it} + \beta_7 LEV_{it} + \beta_8 ROA_{it} + \beta_9 CFOTA_{it} + \beta_{10} MTB_{it} + \beta_{11} GROWTH_{it} + \beta_{12} RD_{INT_{it}} + \varepsilon_{it}$$

$$ENV_{SCORE} = \beta_0 + \beta_1 AEM_{it} + \beta_2 RAM_{it} + \beta_3 Family_{it} + \beta_4 AEM_{Family_{it}} + \beta_5 RAM_{Family_{it}} + \beta_6 SIZE_{it} + \beta_7 LEV_{it} + \beta_8 ROA_{it} + \beta_9 CFOTA_{it} + \beta_{10} MTB_{it} + \beta_{11} GROWTH_{it} + \beta_{12} RD_{INT_{it}} + \varepsilon_{it}$$

$$SOC_{SCORE} = \beta_0 + \beta_1 AEM_{it} + \beta_2 RAM_{it} + \beta_3 Family_{it} + \beta_4 AEM_{Family_{it}} + \beta_5 RAM_{Family_{it}} + \beta_6 SIZE_{it} + \beta_7 LEV_{it} + \beta_8 ROA_{it} + \beta_9 CFOTA_{it} + \beta_{10} MTB_{it} + \beta_{11} GROWTH_{it} + \beta_{12} RD_{INT_{it}} + \varepsilon_{it}$$

$$GOV_{SCORE} = \beta_0 + \beta_1 AEM_{it} + \beta_2 RAM_{it} + \beta_3 Family_{it} + \beta_4 AEM_{Family_{it}} + \beta_5 RAM_{Family_{it}} + \beta_6 SIZE_{it} + \beta_7 LEV_{it} + \beta_8 ROA_{it} + \beta_9 CFOTA_{it} + \beta_{10} MTB_{it} + \beta_{11} GROWTH_{it} + \beta_{12} RD_{INT_{it}} + \varepsilon_{it}$$

Where ESG_SCORE is the total CSR scores of three dimensions (environment, social and governance); ENV_SCORE is the total environmental scores; SOC_SCORE is the total social scores that include both community and employees scores; GOV_SCORE total governance scores. AEM is the absolute value of discretionary accruals calculated through modified Jones model adjusted for performance (Kothari et al., 2005); RAM is the real activities manipulation (Roychowdhury, 2006), which is a sum of AbCFO, AbPROD and AbDISEx proxies; AbCFO is the abnormal level of cash flow from operations; AbPROD is the abnormal level of production costs, where production cost is the sum of the change in inventory and cost of goods sold (COGS); AbDISEx is the abnormal level of discretionary expenses, where the expenses are the sum of advertising expenses, R&D expenses, and selling, general and administrative (SG&A) expenses; Family is a dummy variable that equals 1 for family-controlled firms, and 0 otherwise; AEM_Family is the interaction between family-controlled firms and AEM; RAM_Family is the interaction between family-controlled firms and RAM.

Several control variables employed in previous studies are also included in the above models; regarding the size of the company, larger companies tend to be more visible to the public, thus they tend to be more actively involved in CSR in order to manage their relations with external stakeholders (Brammer & Pavelin, 2006). SIZE is measured as the natural logarithm of total assets. According to Waddock and Graves (1997), profitable companies that would have additional resources tend to be more involved in CSR. Accordingly, Leverage and ROA are expected to have a negative and positive correlation with CSR, respectively. LEV is measured as long term debt scaled by total assets; ROA is measured as income before extraordinary items scaled by lagged

total assets; CFOTA is a ratio of cash flow to lagged total assets. Growing companies are more likely to engage in CSR activities in order to attract more investors and thus reduce the cost of equity capital (Dhaliwal et al. 2001). Therefore, a positive relationship between CSR and growth is expected; GROWTH is measured as the growth rate of sales; MTB is the market-to-book equity ratio, measured as MVE/BVE, where BVE is the book value of equity. Promoting CSR is also closely related to research and development because both can create product differentiation through product and process innovations (McWilliams and Siegel, 2000). Therefore, a positive relationship between CSR and R&D is expected; RD_INT is research and development intensity measured as the R&D expenses to net sales ratio.

2.3.3.1 Simultaneous Equations for CSR and EM

The causal relationship between EM and CSR might be endogenously determined by the policies of managers or any other external factors (Choi et al., 2013b) resulting in reversed causality, simultaneity or other endogeneity problems (McKnight and Weir, 2009). For instance, if a company is exposed to being investigated for violating antitrust regulations, it might gain massive media attention which may put the manager under pressure. On the one hand, the manager will respond through engaging in more socially responsible activities to absorb the negative consequences from the public (Bansal, 2005). At the same time, managers may manage earnings (downward) to avoid regulatory intervention (Cahan, 1992). Therefore, if CSR and EM are simultaneously determined, OLS regression will be inefficient. To address this issue, empirical literature in corporate finance uses several approaches such as generalized methods of moments (GMM), fixed effects, instrumental variables using two stages least square method (2sls) (Choi et al. (2013b) and Gavana et al. (2017)), lagged variables, and control variables (Huang and Ritter, 2009, Li, 2016). Using instrumental variables may control for the endogeneity issues, but it might not be efficient in the presence of heteroscedasticity (Baum et al., 2003). However, the dynamic panel estimator introduced by Arellano and Bond (1991), based on the generalised method of moment approach (GMM) proposed by Hansen (1982) can deal with these limitations. Accordingly, this study uses a two-step estimator of GMM proposed by Arellano and Bond (1991).

2.4 RESULTS AND DISCUSSION

This section provides descriptive analysis, Pearson correlation coefficients and regression analysis to respectively test the hypotheses using the GMM regression methods.

2.4.1 Descriptive Statistics and Univariate Analysis

Table 2.1 reports the descriptive statistics of all variables used in the analysis. Panel A presents figures for the full sample, whereas Panel B provides comparisons between family and non-family-controlled firms. All variables are winsorised at the top and bottom 1 percent of their distribution.

In Panel A, the statistics show that the mean value of ESG is 31.58 and ranges from 3.30 to 69.4215, whereas the average values for environmental, social and governance scores are 21.40, 34.68 and 54.97 respectively. In Panel B, the mean values of ESG scores in family-controlled firms tend to be lower in all ESG categories suggesting that non-family controlled firms commit more in CSR activities. In terms of earnings management, the mean value of discretionary accruals for the full sample is 0.056 and ranges from 0.00 to 0.986. In Panel *B*, it is noticed that there is no significant differences in the extent of earnings management between family and non-family controlled firms; the average value of discretionary accrual in family-controlled firms is 0.063, which is slightly higher than its counterparts that report 0.053 average discretionary accruals.

2.4.2 Correlation Analysis

presents the results of the Pearson correlation matrix of all independent variables in order to check whether there is high collinearity among them. The highest correlation is 0.56 between ROA and CFOTA, followed by 0.35 between AEM and RAM. As long as all correlations are lower than 0.80, which is the threshold that is recommended by Gujarati and Porter (2003) and Hair et al. (2006), there is no concern of multicollinearity problems that may threaten the regression analysis. Furthermore, the Variance Inflation Factor (VIF) (see Table 2.7) is also considered. According to Gujarati and Porter (2003), the acceptable level of VIF is less than 10, whereas the highest VIF value is 1.38 for ROA and CFOTA.

2.4.3 CSR and Earnings Management

Table 2.3 presents the results obtained for all models used to test the relationship between EM variables (AEM and RAM) and CSR (environment, social and governance). When CSR and EM variables are tested without considering the interaction term of family-controlled firms, AEM reports a negative relationship (coef. -5.580; $p<0.001$). This finding supports the hypothesis 1a that the ethical perspective "ethical theory" dominates the opportunistic behaviour hypothesis, in which CSR plays an inspirational role to educate management in adopting a public responsibility-oriented mentality, which consequently constrains EM activities and meets stakeholders' expectations. This finding is consistent with Kim et al. (2012), Chih et al. (2008) and Scholtens and

Kang (2013) who find that firms that devote their resources in CSR activities to meet ethical expectations of society, tend to issue more transparent financial reports. Alternatively, relying on a sample of UK companies in 2007, Sun et al. (2010) did not find any significant association between CSR and AEM.

In RAM, the outcomes, however, show a positive relationship between RAM and CSR (coef. 0.888; $p<0.05$), meaning that when the company involves in real activities manipulation it uses CSR as an instrument. This finding can be explained from the perspective of legitimacy theory. Legitimacy theory, which is derived from the political economy paradigm, sheds light on the concept of organizational legitimacy, assuming that firms' actions should be compatible with the context of the prevailing system of rules, values and beliefs (Deegan, 2013, Suchman, 1995, Dowling and Pfeffer, 1975). When there is a gap between two value systems (legitimacy gap), companies try to follow one of four strategies proposed by Lindblom (1994) to recover and maintain its legitimacy. One of these strategies is manipulating the perception of relevant stakeholders by diverting their attention from one issue to another. Therefore, it is argued that CSR reporting represents one of the efficient strategies to preserve the company from legitimacy threats (Deegan et al., 2002, Patten, 2002).

In Model (2), the moderating role of family-controlled firms has been considered into the above relationship, showing the same directions but with stronger influence in both AEM and RAM, (coef. -55.48; $p<0.01$) and (coef. 7.949; $p<0.05$) respectively. From this, we can conclude that firms with low AEM have better overall ESG scores, and family-controlled firms, in specific, tend to be more ethical in this regard. On the other hand, the usage of CSR disclosures as an instrument increases in the case of real activities manipulations (RAM) is stronger in family controlled firms.

To gain further explanation towards the firms' behaviour and family-controlled firms in specific, ESG dimensions (environment, social and governance) were tested independently. The findings show different directions and coefficients among each other and between family and non-family firms indicating a "cherry-picking" approach of CSR rather than applying a "holistic CSR strategy". Starting with the environment-EM nexus without considering the role of family-controlled firms in Model (3), the coefficients are still negative between AEM and environment (coef. -49.89; $p<0.001$) and positive between RAM and environment (coef. 2.376; $p <0.10$), respectively. However, in Model (4) when the sample is divided into family and non-family-controlled firms, the results show a positive coefficient of the family interaction term in both AEM and RAM (coef. -7.397 + 30.88 -9.288) and (coef. -1.574+ 9.844+ -9.288), respectively.

In terms of the relationship between social dimension and EM, the result in Model 5 shows a negative relationship between EM variables and social scores. When family-controlled firms are considered in the sample, the AEM-Social relationship is still negative while the relationship between Social and RAM becomes positive. Similar findings can be noticed in Models 7 and 8 that regress the relationship between EM variables and the governance dimension.

2.5 CONCLUSIONS

Studies examining the relationship between CSR and earnings management show different viewpoints and outcomes on whether CSR contributes positively to the company or it is used as an instrument to cover-up financial misconducts. Accordingly, the current study revisits this relationship using different statistical mothed and a broader concept of CSR for a sample of UK firms listed on the FTSE All-Share Index over the period 2010 to 2017. It also considers the moderating role of family-controlled firms, arguing that the perspective of socioemotional wealth might have "a dark side" that could appear through the family-controlled firms by interacting with the relationship between earnings management and CSR.

In assessing the dynamics of these interactions, the study measured CSR using Bloomberg ESG score across the dimensions (environment, social and governance); EM is predicted using two measures, which are the absolute value of discretionary accruals calculated using the performance-matched model (AEM) proposed by Kothari et al. (2005), and combined value of real activities manipulation (RAM) proxies that take the sum the abnormal level of cash flow from operations, the abnormal level of production costs and the abnormal level of discretionary expenses.

The findings indicate that firms with lower AEM have better CSR ratings, which supports the ethical hypothesis. This means that CSR plays an inspirational role and creates a general atmosphere in which to educate management in adopting a public responsibility-oriented mentality, which consequently constrains EM activities and meets stakeholders' expectations (Kim et al., 2012, Scholtens and Kang, 2013). The findings also show that if the EM stems from real activities, firms use CSR as a smokescreen to cover up and deflect attention from such unethical conduct related to real activities manipulation, which supports the opportunistic hypothesis (Hemingway and Maclagan, 2004, Prior et al., 2008, Suchman, 1995).

When the sample is divided into family and non-family-controlled firms, family-controlled firms show a stronger relationship between CSR and both AEM and RAM. By splitting the ESG rating

into environmental, social and governance scores, we find that the above relationship is no longer consistent when compared with each dimension, especially in family-controlled firms. Generally, this inconsistency supports the "cherry-picking" strategy adopted by some firms when they apply CSR, as it reveals the "dark side" of socioemotional wealth as mentioned by Kellermanns et al. (2012) and Cruz et al. (2014). More specifically, we find that in the case of EM, family-controlled firms pay more attention to activities related to external stakeholders (i.e. environment) than non-family controlled firms. This motivation, indeed, can be attributed to the families' concerns to protect and augment the family reputation and image, which represents an essential element of SEW (Berrone et al., 2012). Family identity is closely connected to the firms so that it can be seen by the external stakeholders as an extension of the same family. In many cases, the family even links its reputation and name to the products they sell (Bingham et al., 2011a). Consequently, family-controlled firms are expected to be more willing to support any practices that improve their legitimacy and image to the outside world (Cennamo et al., 2012), especially in the cases of earnings management. In this regard, Berrone et al. (2010) empirically support their premise that family firms are more likely to be responsive towards institutional environmental pressures, discovering that family firms tend to bear the cost involved in applying environment-friendly schemes because managers believe that, the risk is counterbalanced by the gains in social legitimacy derived from conforming to environmental demands.

Generally, these findings provide a meaningful insight towards CSR strategy that family-controlled firms follow, thus it would assist British regulations in refining corporate governance rules related to various ownership structures. For policymakers, it is important to confirm that CSR disclosures are congruent with actual activities and performance, and not used to mislead stakeholders by only issuing symbolic ones. Similarly, for investors, the findings give them evidence about the intentions of firms in general, and family-controlled firms in specific, towards using CSR disclosures in case of any misconduct. In terms of the theoretical and academic implications, the findings provide supporting evidence for the double-edged sword nature of family-controlled firms, which appears in the case of such RAM and AEM. Therefore, studies in family firms should consider this issue. Moreover, it has been noticed that considering the CSR components independently can provide further explanation for management behaviour and motivations. Therefore, CSR dimensions should be considered when conducting research related to CSR.

The study has its limitations. At least three aspects must be highlighted. SEW was not measured directly, but rather proxied using a dummy variable that takes into consideration both family

ownership in the entity and family members on the board. Thus, it could be difficult to interpret the influence of each SEW dimension suggested by Berrone et al. (2012). Future studies could consider the heterogeneity within family-controlled firms by using scales that directly measure SEW (Berrone et al., 2012, Hauck et al., 2016, Debicki et al., 2016, Prügl, 2019). Secondly, besides the influence of family-controlled firms, future studies could compare it with other ownership types (e.g. institutional ownership and foreign ownership). Third, in spite of the fact that the study period of 2010-2017 was split between the time when CSR disclosures were voluntary, that is pre 2013, and when it mandated after 2013, it tests ESG disclosures without distinguishing between voluntary and mandatory ones. Studying the impact of each voluntary and mandatory disclosures separately could provide further justification of management behaviour and strategies. Therefore, future studies could examine the relationship between CSR and EM pre and post 2013 in the UK.

Table 2.1: Descriptive Statistics

Panel A:	Full-sample					
Variables	Obs.	Mean	Median	St. Dev.	Min	Max
ESG_SCORE	3194	31.575	30.165	11.738	3.306	69.422
ENV_SCORE	2896	21.405	18.605	13.951	0.826	73.554
SOC_SCORE	3065	34.683	33.333	12.916	3.509	84.211
GOV_SCORE	3193	54.978	53.571	7.945	10.714	82.143
AEM	3896	0.056	0.039	0.065	0.000	0.986
RAM	3919	0.408	0.308	0.380	0.002	3.642
SIZE	4514	6.714	6.527	1.844	-1.171	12.927
LEV	4390	0.183	0.144	0.208	-0.001	2.986
ROA	3998	0.037	0.046	0.142	-0.674	0.488
CFOTA	4508	0.085	0.081	0.097	-0.362	0.406
MTB	4047	2.891	2.014	4.868	-15.019	31.432
GROWTH	4395	0.358	0.028	2.043	-0.988	16.984
RD_INT	4285	0.031	0.000	0.113	0.000	0.908

Panel B:	Non-family-controlled firms				Family controlled firms				*Compare-mean*
Variables	Obs.	Mean	Median	St. Dev.	Obs.	Mean	Median	St. Dev.	t-test
ESG_SCORE	2566	32.383	30.992	11.861	628	28.274	27.122	10.607	7.939***
ENV_SCORE	2360	22.378	19.835	14.137	536	17.122	13.954	12.228	7.958***
SOC_SCORE	2477	35.266	33.333	13.117	588	32.227	31.579	11.730	5.151***
GOV_SCORE	2565	55.352	53.571	8.109	628	53.451	53.571	7.040	5.398***
AEM	3087	0.054	0.038	0.062	809	0.064	0.042	0.073	-3.920
RAM	3110	0.390	0.301	0.366	809	0.476	0.351	0.425	-5.736
SIZE	3697	6.741	6.545	1.875	817	6.589	6.495	1.690	2.143**
LEV	3585	0.189	0.148	0.215	805	0.156	0.117	0.173	4.132***
ROA	3187	0.030	0.044	0.141	811	0.062	0.057	0.140	-5.627
CFOTA	3691	0.082	0.080	0.093	817	0.100	0.086	0.115	-4.813
MTB	3266	2.620	1.935	4.617	781	4.027	2.322	5.667	-7.303
GROWTH	3592	0.400	0.017	2.227	803	0.166	0.073	0.789	2.934***
RD_INT	3504	0.031	0.000	0.111	781	0.026	0.000	0.123	1.144

***, **, * Indicate statistical significance at the 1%, 5%, and 10% levels respectively.

Table 2.2: Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) AEM	1.000								
(2) RAM	0.355*	1.000							
(3) SIZE	-0.229*	-0.251*	1.000						
(4) LEV	-0.044*	-0.037	0.174*	1.000					
(5) ROA	-0.079*	-0.030	0.135*	-0.140*	1.000				
(6) CFOTA	0.020	0.143*	0.120*	-0.009	0.557*	1.000			
(7) MTB	0.103*	0.186*	-0.009	-0.047*	0.242*	0.251*	1.000		
(8) GROWTH	0.023	0.035	0.130*	0.008	-0.007	0.017	0.006	1.000	
(9) RD_INT	0.106*	0.078*	-0.177*	-0.088*	-0.172*	-0.183*	0.064*	-0.020	1.000

This table shows the Pearson's correlation coefficients among the independent variables**.** All variables are as defined in Appendix 2.1. * shows significance at the .01 level

Table 2.3: CSR and Earnings management using GMM regression

	1	2	3	4	5	6	7	8
	ESG		**Environment**		**Social**		**Governance**	
AEM	-5.580***	7.418	-49.89***	-7.397**	**-5.841****	20.03**	**-15.19*****	-10.08***
	(1.751)	(4.607)	(18.53)	(2.935)	(2.273)	(9.437)	(5.606)	(3.871)
AEM_Family		-55.48***		30.88**		**-125.6****		**-8.69**
		(18.65)		(14.17)		(53.6)		(7.35)
RAM	0.888**	-1.881*	2.376*	-1.574	**-0.454**	-4.049***	**-2.050*****	-2.086***
	(0.421)	(1.076)	(1.222)	(1.202)	(0.642)	(1.412)	(0.758)	(0.762)
RAM_Family		7.949**		9.844*		**11.84***		**1.672***
		(3.481)		(5.543)		(6.541)		(0.917)
FAMILY		-0.916		-9.288*		7.925		-0.112
		(1.333)		(4.849)		(5.353)		(0.532)
SIZE	1.380***	0.915***	0.948***	0.589	1.005***	0.503**	1.152**	0.301
	(0.251)	(0.139)	(0.227)	(0.517)	(0.129)	(0.225)	(0.569)	-0.605
LEV	-0.467	-0.0964	-3.084**	-1.289	-0.791	1.033	-1.227	-0.0338
	(0.749)	(0.789)	(1.213)	(0.831)	(0.923)	(6.514)	(1.579)	(1.164)
ROA	0.468	-0.294	-7.549**	-0.619	-2.357	-0.19	-17.19***	-11.82***
	(1.079)	(1.31)	(3.194)	(1.408)	(2.18)	(2.215)	(5.888)	(4.272)
CFOTA	4.099***	5.796***	12.11***	0.879	6.409*	10.48***	66.17***	48.75***
	(1.567)	(1.876)	(4.121)	(2.212)	(3.834)	(3.082)	-18.23	(12.72)
MTB	-0.003	0.000712	-0.0547	0.00849	0.188	0.00711**	-0.122	-0.0903
	(0.00239)	(0.0485)	(0.0376)	(0.0221)	(0.173)	(0.00335)	(0.222)	(0.171)
Growth	0.233	0.466***	-0.267	-0.338***	0.258	-0.13	0.291	0.363
	(0.297)	(0.171)	(0.249)	(0.0645)	(0.557)	(0.351)	(0.324)	(0.305)
RD_INT	-1.445***	-0.322	-6.104	-0.685	-1.43	2.745	-0.563	-0.167
	(0.455)	(0.957)	(8.263)	(0.576)	(0.9)	(2.059)	(2.518)	(3.5)
Constant	0.215	0.975	0.655	0.844	2.374***	-0.146	12.92***	11.09***
	(0.723)	(0.849)	(1.865)	(2.364)	(0.838)	(1.663)	(3.333)	(3.497)
Observations	2,532	2,532	2,029	2,279	2,420	2,420	2530	2530
Arellano-Bond test for AR(2) in first differences	z = 0.55 Pr > z = 0.583	z = 0.48 Pr > z = 0.633	z = 0.16 Pr > z = 0.871	z = -0.25 Pr > z = 0.806	z = 0.95 Pr > z = 0.341	z = 1.11 Pr > z = 0.265	z = -0.24 Pr > z = 0.813	z = 0.61 Pr > z = 0.539
Hansen test of overid. Restrictions	= 19.54 Prob > chi2 = 0.107	= 20.13 Prob > chi2 = 0.126	= 17.45 Prob > chi2 = 0.133	= 5.47 Prob > chi2 = 0.603	= 21.43 Prob > chi2 = 0.124	= 15.16 Prob > chi2 = 0.175	= 7.69 Prob > chi2 = 0.361	= 17.01 Prob > chi2 = 0.199

***, **, * Indicate statistical significance at the 1%, 5%, and 10% levels respectively. This table presents the results of GMM regression. The sample consists of UK firms listed on the FTSE All-Share Index over the period 2010 to 2017 and includes 2,532 firm-year observations. The dependent variables are the combined Bloomberg ESG score and its dimensions (environment, social and governance). EM is measured using two proxies, which are the absolute value of discretionary accruals calculated using performance-matched model proposed by Kothari et al. (2005) and combined value of real activities manipulation (RAM) proxies that takes the sum the abnormal level of cash flow from operations, the abnormal level of production costs and the abnormal level of discretionary expenses), Family is a dummy variable of family firms equal 1 for family 0 otherwise. Other control variables are defined in Appendix 2.1.

Table 2.4: CSR and Earnings management in family and non-family-controlled firms using GMM regression

	1	2	3	4	5	6	7	8
	ESG		**Environment**		**Social**		**Governance**	
	Non-family	**Family**	**Non-family**	**Family**	**Non-family**	**Family**	**Non-family**	**Family**
AEM	-5.840***	-7.979***	-60.31***	17.15*	-4.171*	-13.70**	-9.319**	-9.84
	(2.167)	(2.91)	(22.57)	(10.4)	(2.191)	(6.198)	(4.298)	(6.344)
RAM	1.042*	1.757***	3.434**	2.232**	-1.047**	10.60***	-1.984**	2.683**
	(0.583)	(0.635)	(1.719)	(0.919)	(0.443)	(2.379)	(0.781)	(1.225)
SIZE	1.540***	1.095***	1.352***	1.373***	0.758***	1.918***	1.490***	1.911***
	(0.345)	(0.244)	(0.342)	(0.42)	(0.217)	(0.394)	-0.216	-0.722
LEV	-5.619	-4.419	-1.75	-0.867	-0.474	-0.488	-3.25	-0.937
	(5.896)	(5.153)	(2.838)	(2.147)	(0.921)	(2.907)	(3.297)	(1.736)
ROA	-0.412	2.013	-4.995	7.037	-1.588	4.77	-10.09***	-5.082
	(1.797)	(2.339)	(3.378)	(9.6040)	(1.596)	(3.569)	(3.858)	(8.359)
CFOTA	6.002**	2.843	-8.16	-30.61	7.861***	3.703	54.67***	21.82
	(2.48)	(2.11)	(18.59)	(25.82)	(2.765)	(4.085)	(19.72)	(14.05)
MTB	-0.228	0.0135	-0.0244	-0.0262	0.0277	-0.0754	-0.0398	-0.466
	(0.154)	(0.0613)	(0.0454)	(0.0661)	(0.0694)	(0.06)	(0.224)	(0.308)
Growth	0.456***	-0.228	-0.585***	0.172	0.415*	-1.659***	-0.00225	-0.187
	(0.0911)	(0.581)	(0.152)	(0.92)	(0.23)	(0.38)	(0.105)	(0.739)
RD_INT	-2.031***	0.306	2.874	-40.30**	-2.196***	3.245	-0.994	8.922
	(0.725)	(2.435)	(8.062)	(18.62)	(0.801)	(6.253)	(2.032)	(5.698)
Constant	0.767	-0.826	-0.296	-3.133	3.421***	-5.738**	15.61***	15.09*
	(0.904)	(1.546)	(2.146)	(2.697)	(0.886)	(2.681)	(2.064)	(7.804)
Observations	1,963	569	1,791	473	1,688	529	1963	569
Arellano-Bond test for AR(2) in first differences	z = 0.33 Pr > z = 0.741	z = 0.62 Pr > z = 0.532	z = 0.26 Pr > z = 0.795	z = -0.70 Pr > z = 0.486	z = 1.00 Pr > z = 0.315	z = 0.44 Pr > z = 0.662	z = 0.82 Pr > z = 0.412	z = -0.13 Pr > z = 0.897
Hansen test of overid. Restrictions	= 16.87 Prob > chi2 = 0.205	= 10.61 Prob > chi2 = 0.477	= 12.34 Prob > chi2 = 0.339	= 8.20 Prob > chi2 = 0.514	= 11.21 Prob > chi2 = 0.593	= 8.79 Prob > chi2 = 0.360	= 16.25 Prob > chi2 = 0.180	= 11.86 Prob > chi2 = 0.374

***, **, * Indicate statistical significance at the 0.01, 0.05, and 0.10 levels. This table presents the results of GMM regressions. The sample consists of UK firms listed on the FTSE All-Share Index over the period 2010 to 2017 and includes 2,532 observations. The dependent variables are the combined Bloomberg ESG score and its dimensions (environment, social and governance). EM is measured using two proxies, which are the absolute value of discretionary accruals calculated using performance-matched model proposed by Kothari et al. (2005) and combined value of real activities manipulation (RAM) that takes the sum the abnormal level of cash flow from operations, the abnormal level of production costs and the abnormal level of discretionary expenses), Family is a dummy variable of family firms equal 1 for family 0 otherwise.

Table 2.5: Sample distribution throughout the years

Year	Non-family-controlled firms	Family controlled firms	Full sample
2010	410	104	514
2011	410	104	514
2012	418	96	514
2013	417	97	514
2014	406	108	514
2015	408	106	514
2016	410	104	514
2017	416	98	514
Total	**3,808**	**818**	**4,626**

Table 2.6: Sample distribution throughout the sectors

Sector	Non-family-controlled firms	Family controlled firms	Full Sample
Communications	310	50	360
Consumer Discretion	1,145	277	1,422
Consumer Staples	284	76	360
Energy	228	69	297
Health Care	255	33	288
Industrials	613	134	747
Materials	442	107	549
Technology	443	70	513
Utilities	88	2	90
Total	**3,808**	**818**	**4,626**

Table 2.7: Multicollinearity test

Variables	VIF
ROA	1.38
CFOTA	1.38
RAM	1.22
SIZE	1.15
AEM	1.14
MTB	1.12
LEV	1.11
RD_INT	1.03
GROWTH	1.01
Mean VIF	1.17

Appendix 2.1: Variable Definition

Variables	Definitions
ESG_SCORE	Total CSR scores composite from Bloomberg database, which combines four dimensions (environment, community, employees and governance)
ENV_SCORE	Total environmental scores (source: Bloomberg)
SOC_SCORE	Total social scores that include both community and employees scores (source: Bloomberg)
GOV_SCORE	Total governance scores (source: Bloomberg)
AEM	The absolute value of discretionary accruals calculated through the modified Jones model adjusted for performance (Kothari et al., 2005) (source: Bloomberg)
RAM	Real activities manipulation measure (Roychowdhury, 2006), which is a sum of AbCFO, AbPROD and AbDISEx proxies: AbCFO the abnormal level of cash flow from operations; AbPROD is the abnormal level of production costs, where production cost is sum of the change in inventory and cost of goods sold (COGS); AbDISEx is the abnormal level of discretionary expenses, where the expenses are the sum of advertising expenses, R&D expenses, and selling, general and administrative (SG&A) expenses (source: Bloomberg)
Family	Dummy variable equals 1 to family-controlled firms, and 0 otherwise (source: FAME)
AEM_Family	The interaction between family-controlled firms and AEM
RAM_Family	The interaction between family-controlled firms and RAM
SIZE	Natural logarithm of total assets

LEV	The leverage ratio, measured as long-term debt scaled by total assets
ROA	Return on assets ratio, measured as income before extraordinary items scaled by the lagged total assets
CFOTA	A ratio of cash flow from operation on total assets
MTB	Market to book ratio, measured as the market value of equity to book value of equity.
GROWTH	Sales growth rate
RD_INT	Research and development intensity, measured as (R&D expense/net sales).

CHAPTER 3

The Complementary Role of CSR Disclosures in Reducing Information Asymmetry: A Case from Family and Non-Family Controlled Firms

3.1 INTRODUCTION

In recent years, CSR has become an area for market participants (Cho et al., 2012). Various stakeholders rely on CSR disclosure to inform their decision making processes and forecasting (Cohen et al., 2011, Dhaliwal et al., 2012). A recent international survey conducted by KPMG shows that 78 percent of 250 world's largest companies[19] include CSR information in their annual reports, believing that CSR is relevant for their existing and potential investors (KPMG, 2017). Studies that have examined the benefits of CSR engagement by linking it with direct financial measures of corporate financial performance find that its application can increase the attention paid to it by analysts (Hong and Kacperczyk, 2009), resulting in more accurate forecasting (Dhaliwal et al., 2012), and consequently favourable recommendations from them (Ioannou and Serafeim, 2012).

Despite this flourishing significance of CSR information, the majority of studies focus more on the influence of financial disclosures and voluntary earnings announcements on information asymmetry (henceforth IA), whereas there is little empirical evidence (Dhaliwal et al., 2012, Cho et al., 2013, Cui et al., 2018, Nguyen et al., 2019) to prove whether, and in what way, CSR, as a part of non-financial disclosure, can play a complementary role in financial disclosures by reducing the IA[20] problem. Cormier et al. (2011) and Dhaliwal et al. (2012) were the first to attempt to examine the influence of CSR disclosures on IA. Cormier et al (2011) argue that environmental and social disclosures substitute for each other in mitigating stock market asymmetry, while Dhaliwal et al. find that CSR reports were linked with lower forecast errors by analysts, and that this association was moderated by stakeholder orientation and financial transparency.

Other studies have investigated these concerns in a much broader way, by considering liquidity (Balakrishnan et al., 2014) or the cost of capital (Dhaliwal et al., 2014) as proxies for IA. The

[19] Based on the Fortune 500 ranking for the year 2016.

[20] Information asymmetry is a condition in which one party in a relationship has better access to information than the other party AKERLOF, G. A. 1978. The market for "lemons": Quality uncertainty and the market mechanism. *Uncertainty in economics*. Elsevier.

majority of research, however, focuses on CSR performance rather than the level of disclosures (Cho et al., 2013, Cui et al., 2018, Lopatta et al., 2016). Accordingly, this study investigates the consequences of CSR information on market participants by examining the link between CSR disclosures and IA, taking into account the influence of each component of CSR (such as environmental, social and governance – hereafter ESG). It also addresses how family-controlled firms, as an example of informed investors, could moderate the CSR-IA nexus.

Overall, the study contributes to the existing literature on CSR, IA and family-controlled firms in several ways. First, in addition to using aggregate ESG scores, it also tests the influence of each ESG element, namely environmental, social and governance, individually. The reason is that CSR is a multidimensional concept that represents the relationship between business and society (De Bakker et al., 2005, Lockett et al., 2006). Despite its complexity, several studies have dealt with it as a homogeneous activity and regressed it as a single indicator without considering its individual dimensions (e.g. Cho et al., 2013, Cui et al., 2018, Martínez-Ferrero et al., 2018, Nguyen et al., 2019). Rationally, considering CSR dimensions independently (e.g. environmental, social and governance scores) could result in a better understanding of management strategy and its mentality towards CSR activities.

Second, the moderating role of the relationship between CSR and IA has been previously studied using firm characteristics (Nguyen et al., 2019); equity risk (Cui et al., 2018); and institutional ownership (Cho et al., 2013). This study extends the previous literature by examining the moderating role of family-controlled firms in the CSR-IA nexus. The reason for choosing such firms is that they are argued to have unique characteristics that distinguish them from others (Dyer Jr, 2003, Gomez-Mejia et al., 2011). Moreover, family ownership is considered to be the most prevalent type of ownership around the world (La Porta et al., 1999, Claessens et al., 2002, Faccio and Lang, 2002). Third, while the UK is considered to be one of the leading countries in terms of the application and disclosure of CSR, there is a lack of evidence in the literature on how it is related to IA in the UK context, as the majority of studies focus on the US market (see Cho et al., 2013, Lu and Chueh, 2015, Lopatta et al., 2016, Cui et al., 2018). Given the fact that the developments on CSR have been argued to be influenced by national differences and context (Crane and Matten, 2016), a European focused study (the UK in this instance) makes an insightful contribution to the extant literature. Accordingly, this study contributes to the research by considering UK companies listed on the FTSE All-Share Index. Fourth, this study extends the methodological approaches of previous studies by utilising the generalised method of moments

(GMM) model. The causal association between CSR and IA could be endogenous as a result of managerial policies and other factors that result in simultaneity and reversed causality. Therefore, if CSR and IA are simultaneously determined, the ordinary least squares (OLS) method will not be accurate. Consequently, based on Arellano and Bond (1991), the GMM model is considered useful in addressing these issues and also controlling for heterogeneity.

Based on a sample of UK firms listed on the FTSE All-Share Index during the period 2010-2017, the findings show that the relationship between CSR and IA is negatively significant, suggesting that CSR disclosures can play a complementary role in reducing the information gap that exists between firms and their stakeholders. The results also show that the relationship between CSR and IA is weaker in family-controlled firms, as it tends to be positive. This means that family-controlled firms, with their information advantage, may disguise their trading through small transactions in order to maximise their profit by buying at lower asking prices and selling at higher prices. Moreover, Easley and O'hara (2004) suggest that informed investors can adjust their portfolios due to the private information they possess, whereas less-informed investors will not be able to adjust their portfolios effectively due to their lack of private information, which will increase IA by raising the risks of less-informed investors and consequently widen the bid-ask spread. Finally, by independently examining the influence of environmental, social and governance elements on IA, the negative relationship remains similar to the main findings. However, interacting family-controlled firms with each of these pillars (environmental, social and governance) reveal different tendencies. For example, the study finds that family-controlled firms weaken the negative influence of environmental and governance disclosure scores on IA, but strengthen the negative influence of social disclosures on IA. Generally, this outcome indicates that family-controlled firms tend to be selective in publishing CSR disclosures, as there are certain governance and environmental issues that they tend to hide, which creates an adverse selection problem.

The rest of the study is structured as follows. The following section presents the literature review and hypothesis development with regard to the CSR-IA relationship, before moving on to further discuss the influence of family-controlled firms on the above relationship. We then discuss the sample and measurement of the main study variables, together with our research design. The final two sections present the empirical outcomes and discuss the findings.

3.2 LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

3.2.1 CSR and Information Asymmetry

Information asymmetry is a condition in which one party in a relationship has better access to information than the other party (Akerlof, 1978). Accounting and finance literature have mainly discussed two types of IA. The first occurs as a result of the separation between managers (the "agents") and investors (the "principals") (Jensen and Meckling, 1976, Diamond, 1985, Diamond and Verrecchia, 1991), whereas the second type arises between the investors themselves (e.g. informed and less-informed investors, who are a form of majority and minority shareholders) (Kim and Verrecchia, 1994). Although the latter type has attracted less attention in the literature, the following sections deal with both types of IA interchangeably, by arguing how corporate disclosures, namely CSR, influence the information asymmetry problem. The second part of the discussion is directed towards the role of family-controlled firms, which are categorised as informed investors, in moderating the CSR-IA nexus.

The opportunities and challenges of IA are fundamentally interrelated to several theories, one of which is agency theory (Jensen and Meckling 1976). This theory, in its classical form, is based on the principal-agent relationship, in which managers ("agents") are appointed by a firm to act on behalf of shareholders ("principals") (Jensen and Meckling, 1976). This kind of separation gives managers the privilege of enjoying better access to information about the firm's prospects, and thus allows them to exploit this in projects that serve their interests (Jensen and Meckling, 1976); this refers to the moral hazard problem. At the same time, such conflicts may lead to a collapse in the performance of the capital market, meanings that if shareholders cannot distinguish between "good" and "bad" business actions, managers committing "bad" actions will try to claim that these are valuable as "good" actions, whereas shareholders will value both "bad" and "good" actions at the same level. Therefore, the capital market will undervalue some "good" actions and overvalue others which are "bad" for the information available to the managers (Healy and Palepu, 2001), which refers to the adverse selection problem (Diamond, 1985, Leuz and Verrecchia, 2000). Diamond and Verrecchia (1991) and Leuz and Verrecchia (2000) argue that IA can create such costs as a consequence of adverse selection, the reason being that information gathering by investors can be expensive as it takes time, and as a consequence raises opportunity costs.

One of the key measures to narrow the information gap that might exist as a result of the separation between ownership and control is to keep investors informed by revealing information to the public in the form of corporate disclosures (Diamond and Verrecchia, 1991, Scott and

O'Brien, 2003). Logically, when investors have more information about the company's activities, they will be able to value the available alternatives and make accurate decisions. In this vein, Diamond and Verrecchia (1991) argue that company disclosures can help reduce information differences between managers and shareholders, thus increasing liquidity in the market, reducing the volatility of stock prices, and hence decreasing companies' equity capital costs (e.g. Diamond, 1985, Amihud and Mendelson, 1986, Botosan, 1997, Botosan and Plumlee, 2002).

Information disclosures by firms can be issued using a set of communication reports, which may be mandatory in the form of regulated reports and other regulatory filings periodically, or voluntary, meaning that they are not required by law or other regulatory bodies (Healy and Palepu, 2001). Another essential distinction which may be involved within mandatory and voluntary disclosures is that between financial and non-financial disclosures, with the latter is attributed to social and environmental disclosures. Generally, financial disclosures are more likely to be mandatory, whereas non-financial disclosures tend to be less disciplined. In this vein, the theoretical literature shows that both voluntary and mandatory disclosures reduce information asymmetry (Kothari 2000). However, there is little empirical evidence that proves whether, and in what way, CSR, as a part of non-financial disclosures, influences IA (Cho et al. 2013; Nguyen et al. 2018; Cui et al. 2018; Dhaliwal et al. 2012). While the theoretical literature shows that both types of disclosure could help in reducing IA, this study particularly emphasises information related to CSR, an area of business activity that is becoming increasingly attractive for market participants (Cho et al., 2013).

Theoretically, the relationship between CSR and information asymmetry can be explained from the perspective of stakeholder theory, according to which managers have a fiduciary duty towards all stakeholders[22] instead of maintaining exclusive relationships with them (Freeman, 2010). Meeting the expectations of different stakeholder groups by actively committing to CSR can help to improve company reputation (Albinger and Freeman, 2000). Therefore, it has been argued that reputation building is linked with better earnings reporting quality (Cao et al., 2010), which ultimately reduces IA (Peterson et al., 2015). Previous studies argue that CSR is positively related to earnings quality suggesting that it plays an inspirational role and creates a general atmosphere to educate managers in adopting a public responsibility-oriented mentality, which subsequently encourages the issuance of more transparent financial reporting and meets stakeholder

[22] Stakeholders are any identifiable individual or group who can effect on or be affect by the achievements of a firms' objectives (Freeman and Reed, 1983)

expectations (Kim et al., 2012, Scholtens and Kang, 2013). Clarkson et al. (2008) findings also show that socially responsible firms tend to disclose more information to the public, in order to build their reputation and inform stakeholders about their citizenship role (Dhaliwal et al., 2012). In the same vein, when a company has built a reputation (via CSR), it can improve its financial performance by attracting more qualified employees, boosting customer loyalty and gaining considerable attention from analysts (Raithel and Schwaiger, 2015); the so-called Drivers for Business Case for Sustainability (Schaltegger and Wagner, 2017).

Empirically, studies that have examined the relationship between CSR and IA have generally found evidence of a negative relationship. For example, Cho et al. (2013) investigated the link between CSR performance and information asymmetry, relying on a bid-ask spread[23] as a proxy for IA, on a sample of the US stock market over the period 2003-2009. Their main findings show that both negative and positive CSR performance are negatively related to the bid-ask spread. More specifically, negative CSR performance tends to be stronger than positive performance in mitigating IA. This negative relationship was also observed by Nguyen et al. (2018), who tested whether CSR practices reduced the bid-ask spread in a sample of 391 Australian non-financial companies during the period 2004 to 2014. This negative association was reported to be more prominent in larger companies and those that possessed stronger market power. Cui et al. (2018) recently provided evidence on the relationship between CSR and IA using a sample of US non-financial companies during the period 1991-2010. IA was measured using three different proxies (e.g. dispersion of analysts' forecasts, the price impact measure and the bid-ask spread). After employing two-stage least squares (2SLS) and generalised methods of moment (GMM) models, they found that CSR was negatively related to IA. Dhaliwal et al. (2012) further examined the impact of CSR on analysts' forecast accuracy. They found that issuing stand-alone CSR reports was positively related to analysts' forecast accuracy, implying that CSR reduces IA (a negative relationship). In this respect, we propose the following hypothesis:

Hypothesis 1. CSR disclosures are negatively related to information asymmetry.

3.2.2 The Role of Family-Controlled Firms

While the separation between agents and principals is argued to be one of the key factors that lead to IA (Healy and Palepu, 2001), investors are heterogeneous with regard to the level of information they possess or have access to. For instance, those who hold the majority of shares could gain

[23] A bid-ask spread is the amount by which the ask price exceeds the bid price for an asset in the market

better access to information than minority shareholders (Shleifer and Vishny, 1986). In such a case, there will be "informed" and "less informed" investors. Family-controlled firms, which are characterised by majority ownership, are seen to be a common case of majority and minority shareholders. Research on corporate ownership (e.g. La Porta et al., 1999, Claessens et al., 2000, Faccio and Lang, 2002) shows that family ownership is the most prevalent ownership type around the world. Several studies have documented the fact that it represents over one-third of large US-listed companies (Anderson and Reeb, 2003, Shleifer and Vishny, 1986), more than 55 percent of smaller companies. The percentage is also high in the European context, at around 44.29 percent in 13 western European countries (Faccio and Lang, 2002, Anderson and Reeb, 2003).

This concentration gives family owners the privilege to hold higher managerial positions and allows them to engage in day-to-day activities, giving them better access to information. Accordingly, the gatekeeper role that family-controlled firms play over management behaviour could result in better monitoring of it, which will lead to mitigation of the classical form of the agency problem[24], the "principal-agent problem", and thus the IA that stems from the separation between management and ownership will decline (Chrisman et al., 2005, Chen et al., 2008, Ho and Kang, 2013). However, since family-controlled firms possess more information than other investors and have the opportunity to be in management, another type of agency problem (Type II) between the family as the majority investor and other minority investors may arise (Villalonga and Amit, 2006, Chau and Gray, 2010).

Based on the above contradictory impacts that informed investors could have, it is possible that the influence of family-controlled firms on the relationship between CSR and IA could help to reduce overall IA, implying that the role of such firms is not only to monitor management behaviour, but also to take the initiative in being more active and involved in CSR activities. On the other hand, family-controlled firms could increase the information gap by taking advantage of the private information they have as major shareholders, meaning the relationship between CSR and IA will be positive. Based on Cho et al. (2013), the former perspective is described as the information efficiency effect, and the latter the adverse selection effect.

[24] Previous studies have addressed the agency problems from different perspectives. Conflict of interests can arise between shareholders principal) and managers (agent) (Type I agency conflict) (Jensen and Meckling, 1976), majority and minority shareholders (Type II agency conflict) (Morck, Shleifer, and Vishny, 1989) and shareholders and stakeholders (Type III agency conflict). A commercial entity dominated by an ownership concentration fits type II agency conflict. One issue of concern is that the majority ownership uses its power and privileges in an opportunistic way to further its interests at the expense of the interests of the minority.

From the perspective of the information efficiency effect, it is argued that the private information that the majority of family-controlled firms possess allows them to actively participate in the market (Cho et al., 2013). Therefore, their trading will help to disseminate more information to the market and encourage other "less informed" investors to imitate their behaviour. Consequently, stock market liquidity will increase and the bid-ask spread will be reduced (Merton, 1987, Lakonishok et al., 1992). According to the information efficiency theory, family-controlled firms will improve market liquidity by displaying CSR, thus publishing their information in a timely and detailed manner. Based on this reasoning, it is argued that the higher the proportion of family stock ownership, the stronger the negative relationship between CSR and IA.

Additionally, some previous studies argued that the adverse selection of informed investors could increase information differences between informed and less informed investors and thus widen the bid-ask spread (Cho et al., 2013). Informed investors, with their information advantage, may disguise their trading through small transactions in order to maximise their profit by buying at lower ask prices and selling at higher bid prices. This way of trading can be sustained until any private information is fully disclosed to the public, or as long as the profit from that trading against less-informed investors is adequate to cover any cost of information acquisition (Kyle, 1985). Moreover, Easley and O'hara (2004) suggest that informed investors can adjust their portfolios because of the private information they have, whereas less-informed investors will not be able to do so effectively due to their lack of private information, which will increase IA by raising the risks of less-informed investors, and consequently the bid-ask spread will be widened. Accordingly, a higher proportion of family ownership is expected to attenuate any reduction in IA attributed to CSR.

Hypothesis 2. Family-controlled firms moderate the relationship between CSR disclosure and information asymmetry.

3.3 RESEARCH DESIGN

3.3.1 Sample Selection and Data Sources

The study sample consists of UK companies listed on the FTSE All-Share Index over the period 2010 to 2017. This is a capitalisation-weighted index, representing around 98% of the market capitalisation of listed shares in the UK, being a combination of the FTSE Small Cap, FTSE 100 and FTSE 250 indices. The reason for choosing the FTSE All-Share Index was to capture a larger

number of family firms from different industries and at different levels. Financial institutions were excluded from the sample due to their different nature and associated regulations related to social and environmental disclosures (Peasnell et al., 2000, Marrakchi Chtourou et al., 2001, Macve and Chen, 2010, Hong and Andersen, 2011).

Data on the IA index, CSR and financial variables were mainly collected from the Bloomberg database, while ownership data for family firms were collected from the FAME database. We dealt with missing data, especially ownership data, by examining firms' annual reports and their websites.

3.3.2 Variable Measurement

3.3.2.1 Information Asymmetry

Since we are dealing with an unobservable phenomenon, predicting IA is a complex task. Therefore, previous studies have introduced several proxies to measure IA (e.g. bid-ask spread, stock liquidity (trading volume), price volatility, market to book ratio, the accuracy of analyst forecasts, and price impact measure (Welker, 1995, Healy and Wahlen, 1999, Leuz and Verrecchia, 2000). In this study, the bid-ask spread (SPREAD) was used to measure IA; specifically, the annual average percentage of the daily bid-ask spread to the closing price. The wider the spread, the higher the degree of IA (Copeland and Galai, 1983).

3.3.2.2 Family Firms

To distinguish between family- and non-family-controlled firms, studies have relied on various measurements and thresholds. Some (e.g. Anderson and Reeb, 2003, Villalonga and Amit, 2010, Cruz et al., 2014) recognise family-controlled firms as those of which the family owns more than 20 percent of the shares. On the other hand, a 10% cut-off point has been used by other studies to define such firms (La Porta et al., 1999, Smith and Amoako-Adu, 1999, Faccio and Lang, 2002, Barontini and Caprio, 2006, Gomez-Mejia et al., 2010, Cabeza-García et al., 2017, Labelle et al., 2018).

Using a definition by Anderson and Reeb (2004), a firm can be considered as being a family-controlled entity when family ownership exceeds 5% and/or there are two or more board members from the family (such entities are recognised as family firms even if they are not owned by one family). This definition has been used by several other studies (e.g. Gomez-Mejia et al., 2003, Villalonga and Amit, 2006b, Berrone et al., 2010, Martin et al., 2016). Family relationships include father, mother, sisters, brothers, sons, daughters, spouses, in-laws, aunts, nieces, nephews

and cousins (Gomez-Mejia et al., 2003). Similarly, Claessens et al. (2002) and Peng and Jiang (2010) define firms as being family-controlled if family groups dominate more than 5% of voting rights (a family group could be one family or groups of families). In addition, Chrisman and Patel (2012) define a family firm as one in which family ownership exceeds 5% of the capital, and in which at least one family member serves as a member of top management.

This study relies on the definition of Anderson and Reeb (2004) and Martin et al. (2016) who classified a firm as a family-controlled entity when family ownership exceeds 5% and/or there are two or more board members from the family (these entities are recognised as family firms even if they are not totally owned by one family). A dummy variable equal to 1 was given to family-controlled firms, and 0 otherwise.

3.3.2.3 CSR Measurement

To measure CSR, this study uses ESG disclosure scores provided by Bloomberg as a proxy for environmental, social and governance disclosure levels in each firm.

The Bloomberg ESG database is a comprehensive index related to the environmental, social and governance (ESG) disclosure of about 11,500 companies in more than 83 countries (Bloomberg, 2020). For each company, Bloomberg developed key performance indicators (KPIs) and ratios, thus contributing to better analysis and comparison of companies in employing ESG metrics. It also takes into consideration the differences between "industry-specific" factors. Accordingly, each company will be given different ESG factors and evaluated according to the industry it belongs to (Bloomberg, 2018). For instance, the points are given for phone/mobile recycling only relate to telecommunications systems.

The evaluation scoring of ESG disclosures is based on 100 ESG points (60 environmental 'E', 26 social 'S' and 14 governance 'G'), starting from 1 for companies that disclose a minimum number of points, to 100 for those that fully disclose all points. If any of 100 points is not disclosed and/or the company is not covered by an ESG group, 'N/A' will be indicated. As mentioned, each data point is weighted according to its importance; for example, greenhouse emissions have a greater weight than other disclosures. In addition, each company is evaluated in comparison with other companies in the same industry. This means that Bloomberg analysts do not derive or derivate data; they are mainly collected from company filings (e.g. annual reports, CSR sustainability standalone reports, firms' websites and ESG surveys prepared by Bloomberg that are attached to the companies on an annual basis).

3.3.3 Empirical Model

The main model to test H1 was mainly adopted from Cho et al. (2013) and Cui et al. (2018), with some modifications to test H2:

$$SPREAD = \beta_0 + \beta_1 ESG\_SCORE_{it} + \beta_2 Family_{it} + \beta_3 ESG\_FAMILY_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 GROWTH_{it} + \beta_8 \text{ANALYSTS}_{it} + \varepsilon_{it}$$

where SPREAD is the annual average percentage of the daily bid-ask spread to the closing price; ESG_SCORE is the total CSR scores of the three pillars (environment, social and governance); Family is a dummy variable equal to 1 for family-controlled firms, and 0 otherwise[25]; ESG_Family is the interaction between family-controlled firms and ESG score; SIZE is the natural logarithm of total assets; LEV is a leverage ratio measured as long term debt scaled by total assets; ROA is the return on assets ratio, measured as income before extraordinary items, scaled by lagged total assets; GROWTH is the sales growth rate; ANALYSTS is the number of analysts following the company.

The causal association between CSR and IA could be endogenous as a result of managerial policies and other factors that result in simultaneity and reversed causality. Therefore, if CSR and IA are simultaneously determined, the ordinary least squares (OLS) method will not be accurate. Consequently, based on Arellano and Bond (1991), the GMM model is considered useful in addressing these issues and also controlling for heterogeneity.

3.4 RESULTS AND DISCUSSIONS

3.4.1 Univariate Results

Table 3.1 presents the descriptive statistics of the main variables used in the analysis. The table contains two panels; Panel A shows the statistics for the full sample, whereas Panel B splits the study sample into family and non-family-controlled firms. The mean value of the annual bid-ask spread is 1.01, and the standard deviation is 2.07. Regarding Panel B, the mean value of the bid-ask spread is slightly higher in non-family-controlled firms than family-controlled ones, at 1.01 and 0.97 respectively. In terms of ESG_SCORE, the average value for the full sample is 31.58, and those for the ENV_SCORE, SOC_SCORE and GOV_SCORE[26] pillars are 21.40, 34.68 and 54.98

[25] See family firm criteria in the variable measurement section.
[26] Refer to appendix (3.1) for variable definitions.

respectively, showing that the sample firms performed better in the governance component. In Panel B, the mean values of ESG_SCORE and its components (i.e. ENV_SCORE, SOC_SCORE and GOV_SCORE) tend to be lower in family-controlled firms (28.27, 17.12, 32.23 and 53.45, respectively) than non-family ones (32.38, 22.38, 35.27 and 55.35, respectively) . The highest scores relate to the GOV_SCORE component in both family and non-family controlled firms. With regards to the other variables, there were no large differences between family and non-family-controlled firms in terms of size, leverage, ROA and analysts, whereas Growth average in family-controlled firms is significantly lower than non-family controlled firms.

3.4.2 Correlation Analysis

shows the results of the correlation matrix of all the independent variables. The values show that the highest correlation is 0.67 between ANALYSTS and SIZE, followed by 0.61 between SIZE and ESG_SCORE. Based on Gujarati and Porter (2003), there is no multicollinearity issue concern, since the correlation between the two variables less than 80%.

3.4.2 Multivariate Results

Table 3.3 shows the results obtained for the models. Model 1 explores the direct impact of CSR disclosures on the bid-ask spread, which is a proxy for IA. The ESG_SCORE variable shows a negative and significant coefficient (-0.00973; P<0.001), which is consistent with Hypothesis 1, suggesting that CSR disclosures can play a complementary role in reducing the information gap that occurs between firms and stakeholders. In this vein, stakeholder theory can explain this finding, in which managers have a fiduciary duty towards all stakeholders instead of maintaining exclusive relationships with them (Freeman, 2010). Meeting the expectations of different stakeholder groups by actively committing to CSR can help to improve company reputation (Albinger and Freeman, 2000). Therefore, it has been argued that reputation building is linked to better earnings reporting quality (Cao et al., 2010), which ultimately reduces IA (Peterson et al., 2015). This outcome confirms the evidence reported by (Cui et al., 2018, Nguyen et al., 2019).

In Model 2, the moderating role of family-controlled firms has been introduced to the relationship between CSR and IA, showing that it is moderated by family-controlled firms (-0.00947; p< 0.05). From this, we can observe that the negative relationship is weakened by introducing family-controlled firms, as it will become positive (FAMILY_ESG + FAMILY) (0.352 -0.00947= 0.34253). This finding supports the adverse selection effect (Cho et al., 2013), in which family owners are involved in day-to-day operations and usually hold higher managerial positions, so they

will gain better access to information than minor shareholders. In this case, family owners, who are more informed investors, tend to exploit this information for private purposes. Accordingly, the moderating role of family-controlled firms will weaken and decrease IA caused by corporate social and environmental disclosures.

Moreover, this finding suggests that family-controlled firms, with their information advantage, may disguise their trading through small transactions to maximise their profit by buying at low ask prices and selling at high bid prices (Kyle, 1985). This way of trading can be continued until any private information is fully revealed to the public, or for as long as profit from that trading against less-informed investors is sufficient to cover any information acquisition costs (Kyle, 1985). Easley and O'hara (2004) suggest that informed investors can adjust their portfolios because of the private information they possess, whereas less-informed investors will not be able to adjust their portfolios effectively due to a lack of such information, which will increase IA by raising the risks for less-informed investors, and consequently the bid-ask spread will be widened. Accordingly, family ownership tends to weaken any reduction in IA that is linked with CSR.

3.5 ADDITIONAL TESTS

3.5.1 Additional Test - CSR Components

Considering CSR dimensions independently (e.g. environmental, governance and social scores) could result in a better understanding of management strategy and mentality towards its involvement in CSR activities. For instance, some studies argue that managers tend to target outsiders by focusing only on issues related to the environment and community. This targeted approach is known as the "cherry-picking strategy", as it does not apply a holistic CSR strategy[27]. Accordingly, considering CSR as an aggregate score would not be sufficient to interpret managers' behaviours related to its application (Zientara, 2017). Therefore, we further our analysis by exploring the impact of each CSR component on IA in family and non-family-controlled firms.

Models 1, 3 and 5 presented in Table 3.4 show the results of each ESG component for the full sample, indicating that ENV_SCORE, SOC_SCORE and GOV_SCORE all contribute to reducing IA (coef. -0.00581; $p< 0.05$, coef. -0.00399; $p< 0.1$, coef. -0.0119; $p <.1$ respectively). This homogeneous direction, however, will no longer be consistent in family-controlled firms.

[27] See Zientara et al. (2017) and Cruz et al. (2014) for more details.

Models 2, 4 and 6 integrate family-controlled firms with each ESG component, showing that not all the pillars contribute to mitigating IA. Model 2 shows a positive and significant relationship between ENV_SCORE and SPREAD (coef. 0.0399; $p< 0.01$), while in model 4, the social pillar negatively affects SPREAD (coef. –0.00399; $p< 0.1$). Finally, GOV_SCORE is positively related to SPREAD.

3.5.2 Additional Tests - Alternative Measurement of CSR

CSRhub scoring has used an alternative to the ESG Bloomberg scoring. CSRhub is a tool that provides access to sustainability and corporate social responsibility (CSR) ratings, with information on more than 18,424 companies from 136 different industries in 141 countries. The scoring system relies on twelve subcategories (indicators), which are grouped into four main categories: employees, community, environment and governance (see Appendix 3.2). To date, CSRhub has mapped more than 5000 data elements related to CSR where each element is sorted into one or more subcategories and if it does not fall under any of the twelve indicators, it is categorised as a special issue. The data are aggregated and normalised from eight leading CSR analysts (ASSET4/Thomson Reuters, Trucost, ET Index, Carbon Disclosure Project (CDP), Vigeo EIRIS, IW Financial, MSCI (Risk Metrics IVA and Impact Monitor), RepRisk, Governance Metrics International/Corporate Library and MSCI (Carbon Tracker, ESG Intangible Value Assessment and ESG Impact Monitor)). Therefore, CSRhub represents the world's largest and most comprehensive dataset on sustainability and CSR.

After aggregating data from the above-mentioned entities, each data source was converted into a rating on a 0 to 100 scale. The scores from different datasets were then compared for the same company, allowing variations (biases) between sources to be determined and adjusted/ eliminated to create more consistent ratings, making the data relatively objective and not based solely on self-reported measures. Finally, ratings were given for each subcategory and aggregated to a category level. CSRHub has been used and recommended by Bu et al. (2013) and Cruz et al. (2014).

The results in Table 3.5 Model 1 show that the relationship between CSR and IA remains negative and significant when considering the full sample. In Model 2, however, the values show that the ESG_IA relationship becomes positive in family-controlled firms, which is consistent with the earlier findings.

3.6 CONCLUSIONS

Despite the growing importance of CSR information for investors and other stakeholders, the majority of studies have focused more on financial disclosures and their influence on IA, whereas there is little empirical evidence (Dhaliwal et al., 2012, Cho et al., 2013, Cui et al., 2018, Nguyen et al., 2019) to show whether, and in what way, CSR, as a part of non-financial disclosure, can play a complementary role to financial disclosures in reducing IA problems (Dhaliwal et al., 2012). Therefore, this study examines the influence of CSR disclosures on IA, taking into account the influence of each CSR component (environmental, social and governance) independently. It also addresses how family-controlled firms, as informed investors, can moderate the CSR-IA nexus, since the key owners have a significant influence over a firm's investment decisions by suggesting and voting on strategic plans for the firm (Barclay and Holderness, 1989).

The findings show that CSR, as an aggregate score, reduces IA. This finding supports hypothesis H1, which suggests that managers have a fiduciary duty towards all stakeholders[28] ; therefore, meeting the expectations of different stakeholder groups by actively committing to CSR can help improve a company's reputation (Albinger and Freeman, 2000). Consequently, reputation building is argued to be linked to better quality earnings reporting (Cao et al., 2010), which ultimately reduces IA (Peterson et al., 2015). Kim et al. (2012) and Scholtens and Kang (2013) add that CSR plays an inspirational role and creates a general atmosphere in which to educate managers on developing a public responsibility-oriented mentality, which subsequently encourages the issuance of more transparent financial reporting and the meeting of stakeholder expectations. The second main finding shows that the negative relationship between CSR and IA weakens and even becomes positive in family-controlled firms. This supports the adverse selection perspective of Hypothesis H2, in which family-controlled firms take advantage of the information they have access to, at the cost of less informed investors.

Finally, by testing the direct impact of each ESG pillar (environmental, social and governance scores) on IA, all components still show a negative influence on the bid-ask spread. More specifically, disclosures about environmental issues tend to have a slightly stronger influence on IA compared to social and governance scores. However, the moderating role of family-controlled firms in the three models weakens the negative influence of environmental and governance scores and strengthens the negative impact of social scores on IA. This outcome indicates that family-

[28] Stakeholders are any identifiable individual or group who can affect, or be affected by, the achievements of firm objectives (Freeman and Reed, 1983).

controlled firms follow a cherry-picking CSR strategy rather than applying a holistic approach and focus more on information related to social activities.

These findings have important implications for regulatory bodies since CSR information helps stakeholders to assess the possible risks of a firm's relationship with its stakeholders. Accordingly, it is necessary to allow investors to have access to such information.

Overall, this study contributes to the existing literature in several ways. First, while previous studies have tested the moderating role of firm characteristics (Nguyen et al., 2019), equity risk (Cui et al., 2018), and institutional ownership (Cho et al., 2013) on the CSR-IA relationship, other ownership types have been overlooked. Therefore, this study contributes to the body of knowledge by addressing the moderating role in the relationship between CSR and IA. The reason for choosing family firms is that they are argued to have unique characteristics that distinguish them from other companies (Dyer Jr, 2003, Gomez-Mejia et al., 2011). Moreover, family ownership is considered to be the most prevalent ownership type around the world (La Porta et al., 1999, Claessens et al., 2002, Faccio and Lang, 2002).

Second, while the UK is one of the leading countries in terms of applying and disclosing CSR, the literature shows a lack of evidence on how CSR is related to IA in the UK context, as the majority of studies mainly focus on the US market (see Cho et al., 2013, Lu and Chueh, 2015, Lopatta et al., 2016, Cui et al., 2018). Accordingly, this study contributes by considering UK companies listed on the FTSE All-Share Index. Third, the study extends the methodological approaches of previous studies by utilising the generalised method of moments models (GMM). The causal association between CSR and IA could be endogenous because of managerial policies and other factors that result in simultaneity and reverse causality. Therefore, if CSR and IA are simultaneously determined, ordinary least squares (OLS) will not be accurate. Consequently, based on Arellano and Bond (1991), the GMM model can be useful in addressing these issues and also controlling for heterogeneity. Fourth, in addition to using aggregate ESG scores, this study also further tests the influence of each ESG element: environmental, social and governance, individually. It thus provides a clearer justification of management strategy and behaviour related to undertaking different CSR activities.

The study has some limitations that could be addressed in future research. First, the variable that represents family-controlled firms is a dummy taking a value 1 if family ownership exceeds 5% and/or there are two or more board members from the family, and 0 otherwise. Relying only on

categorical variable (cut-off point and threshold) (e.g. Anderson and Reeb, 2003, Schulze et al., 2003, Chrisman et al., 2004) may be insufficient, or make it difficult to draw a clear conclusion about family behaviour. Therefore, future studies could use continuous variables, which could better reflect the level of family influence and involvement (e.g. Daily and Near, 2000, Klein et al., 2005, Chrisman and Patel, 2012), as different cut-off points will be used. Second, the study uses bid-ask spread as a proxy for IA, which is one of the common measures used in previous studies. It would be interesting if future studies verified the findings of this research using different proxies (e.g. stock liquidity (trading volume), price volatility, market to book ratio, the accuracy of analysts' forecasts, and the price impact measure). Third, in spite of the fact that the study period of 2010-2017 was split between the time when CSR disclosures were voluntary, that is prior to 2013, and when they became mandatory after 2013, it tests ESG disclosures without differentiating between voluntary and mandatory ones. Studying the effect of each voluntary and mandatory disclosure separately could provide further explanation of management behaviour. Therefore, future studies could investigate the relationship between CSR and EM before and after the mandating of ESG disclosures in the UK.

Table 3.1: Descriptive Statistics

Panel A	Full sample				
Variable	Obs.	Mean	Median	St. Dev.	Min	Max
SPREAD	3142	1.00	0.26	1.99	0.02	41.86
ESG_SCORE	3194	31.58	30.17	11.74	3.31	69.42
ENV_SCORE	2896	21.40	18.60	13.95	0.83	73.55
SOC_SCORE	3065	34.68	33.33	12.92	3.51	84.21
GOV_SCORE	3193	54.98	53.57	7.94	10.71	82.14
SIZE	4514	6.71	6.53	1.84	-1.17	12.93
LEV	4390	0.18	0.14	0.21	0.00	2.99
ROA	3998	0.04	0.05	0.14	-0.67	0.49
GROWTH	4395	0.36	0.03	2.04	-0.99	16.98
ANALYSTS	3612	9.57	7.00	8.76	0.00	50.00

Panel B	Non-family-controlled firms				Family-controlled firms				*Compare mean*
Variables	Obs.	Mean	Median	St. Dev.	Obs.	Mean	Median	St. Dev.	*t-test*
SPREAD	2401	1.01	0.23	2.07	741	0.97	0.32	1.67	0.447
ESG_SCORE	2566	32.38	30.99	11.86	628	28.27	27.12	10.61	7.9386***
ENV_SCORE	2360	22.38	19.83	14.14	536	17.12	13.95	12.23	7.958***
SOC_SCORE	2477	35.27	33.33	13.12	588	32.23	31.58	11.73	5.1509***
GOV_SCORE	2565	55.35	53.57	8.11	628	53.45	53.57	7.04	5.3979***
SIZE	3697	6.74	6.55	1.88	817	6.59	6.49	1.69	2.1427**
LEV	3585	0.19	0.15	0.21	805	0.16	0.12	0.17	4.1323***
ROA	3187	0.03	0.04	0.14	811	0.06	0.06	0.14	-5.6265***
GROWTH	3592	0.40	0.02	2.23	803	0.17	0.07	0.79	2.9344***
ANALYSTS	2841	9.53	7.00	9.08	771	9.70	8.00	7.48	-0.464

***,** and * indicate statistical significance at the 1%, 5% and 10% levels respectively. See Appendix 3.1 for definitions of the variables.

Table 3.2: Correlation Coefficients

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) ESG_SCORE	1.000					
(2) SIZE	0.615*	1.000				
(3) LEV	0.109*	0.174*	1.000			
(4) ROA	0.035	0.135*	-0.140*	1.000		
(5) GROWTH	0.049*	0.130*	0.008	-0.007	1.000	
(6) ANALYSTS	0.521*	0.677*	0.140*	0.199*	0.011	1.000

This table shows the Spearman correlation coefficient among the main variables for a maximum of 3697 firm-year observations from 2010 to 2017. See Appendix 3.1 for definitions of the variables.
* shows significance at the .01 level

Table 3.3: CSR-IA relationship using the GMM model

	1 SPREAD	2 SPREAD
SPREAD	0.770***	0.712***
	(0.0809)	(0.0712)
ESG_SCORE	-0.00973***	0.00248
	(0.00365)	(0.00404)
FAMILY_ESG		-0.00947**
		(0.00459)
FAMILY		0.352**
		(0.164)
SIZE	0.0287*	0.0697
	(0.022)	(0.0697)
LEV	1.903*	1.212**
	(0.991)	(0.611)
ROA	-1.127***	-1.025**
	(0.403)	(0.435)
GROWTH	-0.019	-0.290*
	(0.0134)	(0.175)
ANALYSTS	-0.00793*	-0.00568
	(0.00431)	(0.00547)
Constant	0.0331**	0.476***
	(0.207)	(0.338)
Observations	2,058	2,042
Arellano-Bond test for AR(2) in first differences:	z = 0.23 Pr > z = 0.818	z = 0.16 Pr > z = 0.876
Hansen test of overid. restrictions:	chi2(5) = 7.46 Prob > chi2 = 0.189	= 10.49 Prob > chi2 = 0.275

*,** and *** indicate statistical significance at the levels of 10%, 5% and 1% respectively. The table shows the results of the GMM regression. The study sample consists of UK firms listed on the FTSE All-Share Index during the period 2010-2017 and includes 2,058 observations. The dependent variable is bid-ask spread, whereas the independent variable is ESG_SCORE, which combines environmental, social and governance scores (all variables are defined in appendix 3.1).

Table 3.4: CSR Components and IA

Variable	1 SPREAD	2 SPREAD	3 SPREAD	4 SPREAD	5 SPREAD	6 SPREAD
ENV_SCORE	-0.00581**	0.0399**				
	(0.00274)	(0.0198)				
SOC_SCORE			-0.00399*	-0.0407***		
			(0.00222)	(0.0143)		
GOV_SCORE					-0.0119*	0.000964
					(0.0064)	(0.00401)
FAMILY		2.875**		-5.059***		0.628**
		(1.349)		(1.798)		(0.305)
FAMILY_ENV		-0.145**				
		(0.0693)				
FAMIY_SOC				0.151***		
				(0.0535)		
FAMIY_GOV						-0.0105*
						(0.00538)
SIZE	-0.00413**	-0.093	-0.0207	0.0577	0.00066	-0.0188
	(0.0267)	(0.107)	(0.0244)	(0.0683)	(0.0429)	(0.0928)
LEV	0.17	0.388	0.623	2.015***	0.799	1.731***
	(0.383)	(0.372)	(0.523)	(0.511)	(0.492)	(0.646)
ROA	-0.731***	-1.214***	-0.793**	-0.781***	-0.839**	-0.979**
	(0.275)	(0.372)	(0.349)	(0.294)	(0.397)	(0.463)
GROWTH	-0.00698	0.0121	-0.0108	0.0492**	-0.0194	-0.124
	(0.013)	(0.0193)	(0.0141)	(0.0237)	(0.0138)	(0.204)
ANALYSTS	-0.00525	-0.026	-0.00445	-0.0186	-0.00416	-0.00723
	(0.00577)	(0.02)	(0.00663)	(0.0125)	(0.0102)	(0.0146)
Constant	0.186**	0.251*	0.269*	0.474**	0.613*	-0.0938*
	(0.153)	(0.687)	(0.147)	(0.5)	(0.358)	(0.642)
Observations	1,928	1,881	2,010	2,010	2,072	2,072
Arellano-Bond test for AR(2) in first differences:	z = 0.62 Pr > z = 0.535	z = 0.37 Pr > z = 0.714	z = 0.61 Pr > z = 0.542	z = -0.05 Pr > z = 0.962	z = 0.45 Pr > z = 0.654	z = 0.33 Pr > z = 0.743
Hansen test of overid. restrictions:	chi2(8) = 11.68 Prob > chi2 = 0.166	chi2(5) = 2.90 Prob > chi2 = 0.716	chi2(8) = 12.13 Prob > chi2 = 0.146	chi2(5) = 7.46 Prob > chi2 = 0.189	chi2(8) = 11.51 Prob >	chi2(8) = 12.05 Prob > chi2 = 0.149

	chi2 =
	0.175

*,** and *** indicate statistical significance at the levels of 10%, 5% and 1% respectively. The table shows the results of the GMM regressions for each ESG component separately in family and non-family-controlled firms. The dependent variable is bid-ask spread, whereas the independent variables are ENV_SCORE, SOC_SCORE and GOV_SCORE all variables are defined in appendix 3.1.

Table 3.5: CSR performance - IA relationship

	1 SPREAD	2 SPREAD
SPREAD	1.035***	0.674***
	(0.293)	(0.128)
ESG_CSRHUB	-0.0213**	0.0146
	(0.00945)	(0.0208)
FAMILY		5.761**
		(2.403)
FAMILY_ESGHUB		0.0970**
		(0.0396)
SIZE	0.726*	-0.552***
	(0.396)	(0.2)
LEV	1.916	20.12***
	(1.591)	(4.114)
ROA	0.359	4.649*
	(2.822)	(2.594)
GROWTH	0.0462	-1.262
	(0.0534)	(1.257)
MKTOBV	-0.376**	1.507**
	(0.184)	(0.732)
ANALYSTS	-0.0716*	0.00518
	(0.0379)	(0.0233)
Constant	-3.244	-1.424
	(2.647)	(1.665)
Observations	2,066	1,706
Arellano-Bond test for AR(2) in first differences:	z = -0.17 Pr > z = 0.865	z = -1.36 Pr > z = 0.174
Hansen test of overid. restrictions:	chi2(5) = 2.42 Prob > chi2 = 0.789	chi2(9) = 14.32 Prob > chi2 = 0.111

*,** and *** indicate statistical significance at the levels of 10%, 5% and 1% respectively. The table shows the results of the GMM regressions for family and non-family-controlled firms. The dependent variable is the bid-ask spread, whereas the independent variable is ESG performance, adopted from the CSRhub database (all variables are defined in appendix 3.1).

Appendix 3.1: Variable Definitions

SPREAD	Bid-ask spread is the annual average percentage of the daily bid-ask spread to the closing price.
ESG	Total CSR score composite from the Bloomberg database, which combines four dimensions (environment, community, employees and governance).
ENV_SCORE	Total environmental scores (source: Bloomberg).
SOC_SCORE	Total social scores that include both community and employee scores (source: Bloomberg).
GOV_SCORE	Total governance scores (source: Bloomberg).
FAMILY	Dummy variable equal to 1 for family-controlled firms, and 0 otherwise (source: FAME).
FAMILY_ESG	The interaction between family-controlled firms and AEM.
SIZE	Natural logarithm of total assets.
LEV	The leverage ratio, measured as long-term debt scaled by total assets.
ROA	The return on assets ratio, measured as income before extraordinary items scaled by lagged total assets.
GROWTH	Sales growth rate.
ANALYSTS	The number of analysts following the company.

Appendix 3.2: CSR Categories and Subcategories

Community	**Employees**	**Environment**	**Governance**
Community Development & Philanthropy	Compensation & Benefits	Energy & Climate Change	Board
Product	Diversity & Labour Rights	Environmental Policy & Reporting	Leadership Ethics
Human Rights & Supply Chain	Training, Health & Safety	Resource Management	Transparency & Reporting

CHAPTER 4

Creating Legitimacy Through Sustainability Assurance:

An Analysis of STOXX Europe 600 Firms

4.1 INTRODUCTION

The growth in corporate social and environmental responsibility reporting, coupled with its inherent complexities and lack of unified CSR disclosure guidance, has led users to express scepticism about the issues related to the reliability, comparability, materiality, completeness, relevance and transparency of CSR reporting (Ball et al., 2000, Deegan et al., 2006, Bouten and Hoozée, 2015, Peters and Romi, 2015, Muslu et al., 2019). One possible measure that could be used to address this credibility gap and improve the quality of CSR disclosures is to have them assured by external independent third parties (O'Dwyer et al., 2011, KPMG, 2013, Cohen and Simnett, 2015). Jones and Solomon (2010) and Park and Brorson (2005) argue that assurance practices can be adopted to enhance the credibility of CSR disclosures through the role of assurance providers in evaluating companies' CSR reporting standards, collecting evidence and providing an independent opinion.

Generally, it has been argued that external assurance of CSR disclosures increases their recognition and trust; reduces risk; increases the value of reporting; enhances the engagement level of the board and CEO; reinforces the internal reporting and management systems; and improves stakeholder communication (GRI, 2013). Nevertheless, different concerns have been raised regarding managerial control over the assurance process and the lack of assurer independence, since the reporting company, specifically its management, has a degree of freedom to decide key sustainability assurance (hereafter SA) attributes, including the assurance level, the scope of assurance, and assurance provider (Boiral et al., 2019b). Consequently, SA could be exploited opportunistically by the management and thus becomes less credible (Owen et al., 2000, Smith et al., 2011).

Given these varied views, empirical studies that have attempted to understand the intrinsic motivation for obtaining SA have yielded mix results on whether it is issued substantially as a signal of wholehearted commitment to CSR, or whether it is used symbolically as a smokescreen to repair, maintain or gain legitimacy (Casey and Grenier, 2015, Clarkson et al., 2019). Clarkson et al. (2019), for instance, show that SA reports are mainly issued by companies with higher

environmental, social, and governance (hereafter ESG) commitment, as it could be costly to commission SA by less CSR-committed companies. Casey and Grenier (2015), on the other hand, find that it is not only companies with higher ESG performance that tend to issue SA reports, but also those with higher CSR concerns could use SA reports as means to mitigate against their CSR risks. Russo and Harrison (2005) also find that ISO14001 certification is significantly linked with organisations with significant toxic air emission.

In light of the above, it can be perceived that the empirical evidence on whether SA is ultimately issued by ethnically-motivated companies or whether they are also obtained symbolically by companies facing ESG scandals as a greenwashing strategy remains inconclusive, which provides an opportunity to revisit this relationship using different variables, samples and SA attributes in order to gain further understanding of this very important contemporary issue. In this regard, Boiral et al. (2019b) call for the necessity to further investigate how such symbolism can be converted into practice and how the ethical issues could shape it.

Accordingly, the main purpose of this study is to extend the understanding of the factors influencing the quality of SA reporting and companies' decisions to obtain SA, by testing the influence of environmental, social and governance performance "strengths", as well as considering the controversies "concerns" over the adoption of SA reports. Another purpose is to examine the impact of ESG performance and the controversies over the choice of assurance provider, and the level and scope of assurance. ESG controversies are used as a proxy for CSR concerns, referring to questionable ESG conduct and negative events (e.g. product harm scandals, tax fraud controversies, and business ethics controversies) that are reflected in the global media[29] (Carroll, 1979, Cai et al., 2012, Aouadi and Marsat, 2018).

Based on a sample of 5784 firm-year observations from European companies that are included in the STOXX Europe 600 index over the period 2011-2018, this study establishes several key outcomes. First, using ESG performance and controversy scores from ASSET4, this study finds that not only do highly ESG-committed companies issue SA reports to signal their commitment, but also the companies that face such ESG scandals and negative events, which are reflected in different media sources, use the SA reporting process as a tool to deviate or shift stakeholders' attention from these scandals. This outcome supports the above-mentioned concerns, in that, SA reports are less well developed in terms of assurance guidance or standards, so it has become

[29] See Appendix 4.2

a subject of exploitation by managers in case of any ESG scandals (Cohen and Simnett, 2015). This result is consistent with the research of Casey and Grenier (2015), who make an empirical examination of SA in the United States (US) market, arguing that companies tend to benefit from SA reporting through the credibility that it lends to how they deal with their CSR concerns, alongside other positive aspects of CSR initiatives. The second main finding shows that, unlike irresponsible CSR companies, highly CSR-committed ones choose higher assurance levels and scopes of assurance, which is consistent with Clarkson et al. (2019). Moreover, the results of additional tests show that board size, CEO-Chairman separation and gender diversity have a positive and significant influence on the decision to undertake SA reporting, as they play a role in diminishing or even eliminating the symbolic use of SA reports to mitigate against ESG scandals.

Overall, the study contributes to the existing literature on CSR and SA in different ways. First, it provides evidence of the symbolic use of SA reporting. Specifically, the findings provide further evidence in support of the claims in previous research that the quality and process of SA reporting can be affected by managerial opportunistic behaviour (Smith et al., 2011, Boiral et al., 2019a, Boiral et al., 2019b). Second, based on Aouadi and Marsat (2018), this study uses ESG controversies as a proxy for CSR concerns based on a sample of European companies. Prior studies mainly focus on the US market when addressing the influence of CSR concerns. Such reasoning is attributed to the availability of data on CSR concerns since database such as the KLD[30] database only provides CSR data for the US market. Given that developments on CSR and ethics have been argued to be influenced by national differences and context (Crane and Matten, 2016), a European focused study makes an insightful contribution to the literature.

To address these issues, the remainder of this study is structured as follows. The literature review and hypothesis development section provide a theoretical and empirical overview of SA and its relationship with both ESG performance and controversies. The research design section then discusses the sample selection, data sources, variable measurement and empirical models. The final two sections comprise the empirical outcomes and discussion of the findings as well as the concluding remarks.

[30] Kinder, Lydenberg, Domini, and Company (KLD) database.

4.2 LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This section presents the main concepts and the theoretical and empirical literature linked to the objectives of the study. Starting with an introduction to the need for SA reporting to bridge the credibility gap of CSR disclosures, it then introduces the key concepts and characteristics of the assurance process. Subsequently, the literature sheds light on the recent debate regarding the quality of the SA report and how it could be influenced by management discretion.

4.2.1 The Need for Sustainability Assurance

CSR is widely debated amongst researchers, standard setters, investors and consumers. Stakeholders at large are also realising its significance, especially the way it can help to maintain an appropriate balance between firms' long-term feasibility and their societal commitment (Berthelot et al., 2003). Studies that have examined the benefits of CSR activities show that it can contribute positively to financial performance through several channels, including costs, sales, operating efficiency, litigation risk and financing. Superior CSR performance can enhance a firm's reputation and brand value, thus improving the evaluation of its products by consumers (Brown and Dacin, 1997) and increase sales (Lev et al., 2010). Moreover, firms with a better CSR reputation and those that pay attention to enhancing employee welfare through CSR programs can attract more talented employees and boost employee productivity (Roberts and Dowling, 2002, Edmans, 2011, Bode et al., 2015). Subsequently, greater employee satisfaction is followed by the better future financial performance (Banker and Mashruwala, 2007). Moreover, studies find that CSR activities can attract more analysts (Hong and Kacperczyk, 2009), followed by favourable recommendations from them (Ioannou and Serafeim, 2015), reducing the cost of equity capital (Dhaliwal et al., 2011, Plumlee et al., 2015), and resulting in more accurate analyst forecasting (Dhaliwal et al., 2012). Indeed, the concept of the Drivers for Business Case for Sustainability (Schaltegger and Wagner, 2017) highlights the broader non-financial value that firms can gain by engaging with positive ESG activities. Nonetheless, the credibility and completeness of CSR reporting have been widely criticised in the literature (Cho et al., 2010, Boiral and Gendron, 2011, Boiral, 2013, Chen et al., 2016, Muslu et al., 2019).

Since CSR can play a vital role in shaping public image and reputation, management could adopt CSR strategies and reinforce its virtues through their annual reports. Independent CSR reports and/or the media can act as a smokescreen for any misconduct, implying that CSR information could be used in a symbolic way (Deegan, 2000, Hemingway and Maclagan, 2004). This tendency has been supported empirically by Prior et al. (2008) and Martínez-Ferrero et al. (2016), who

found that managers who manipulate earnings for personal purposes tend to protect themselves through engagement in CSR activities.

Enron Corporation, for instance, was considered to be an international model of CSR in the years before it was hit by scandal and subsequent collapse. Fortune magazine categorised it as "the most innovative company in America", and in 2000 it was ranked 22nd out of the "100 best companies work for America", especially since it was awarded higher points in issues related to the quality of services and products and employee talent. However, at the same time, it was engaging in an extensive accounting fraud that finally brought about its collapse in 2001 (Powers et al., 2002). Shell and British American Tobacco (BAT) were also committed to extensive CSR disclosure schemes, but this kind of disclosure was a symbolic approach rather than a substantive one (Chih et al., 2008, Michelon et al., 2015). Accordingly, the need to reinforce the quality of CSR information and to gain stakeholder trust has become necessary.

The assurance of CSR disclosures by external independent third parties is argued to be a valuable tool to increase transparency and bridge the credibility gap of CSR disclosures (Simnett et al., 2009, Cohen and Simnett, 2015). Jones and Solomon (2010) and Park and Brorson (2005) argue that assurance practices can be adopted to enhance the credibility of CSR disclosures through the role of assurance providers in evaluating companies' reporting standards, collecting evidence and providing an independent opinion. Consequently, the market for SA emerged (Blanco and Souto, 2015), as international evidence showed a continuous increase in the level of SA provided by companies (Kolk and Perego, 2010, Mock et al., 2013).

4.2.2 Synoptic View of Sustainability Assurance

Assurance is defined as "an engagement in which a practitioner aims to obtain sufficient appropriate evidence in order to express a conclusion designed to enhance the degree of confidence of the intended users other than the responsible party about the subject matter information" (IAASB, 2013, p.7).

As an initial step in having CSR disclosures assured, reporting companies must choose an external assurance provider. A valid external assurer is expected to be independent of the management of the reporting company in order to be able to assess and issue impartial and objective opinions; be competent in assurance practices; and apply different measures of quality control during the assurance process (Ball et al., 2000, GRI, 2013). Assurance providers are

generally categorized into two groups[31]: social and environmental consultants and accounting firms, mostly the Big 4 (Power, 1996, O'Dwyer, 2011, Manetti and Toccafondi, 2012). Accounting firms, specifically the Big 4, are more likely to provide high-quality assurance with regard to assurance processes and reporting format, due to their experience and efficiency in providing financial assurance services internationally (Simnett et al., 2009). On the other hand, social and environmental consultants tend to have a good understanding of social and environmental issues and are therefore expected to employ an appropriate approach in addressing specific risk factors, as they have a better understanding of stakeholder expectations (Perego, 2009, Wong and Millington, 2014). Perego (2009) also adds that social services experts offer high-quality assurance in terms of independent opinions and recommendations.

After selecting the assurance provider, both the reporting company and the provider need to agree on several key issues before starting the assurance process. This includes the assurance level that should be provided by providers; the scope of the disclosures to be covered in the process; and the methodology and standards (GRI, 2013)[32]. Once the assurance process is complete, the assurance provider issues the conclusion or opinion of the CSR information in a report or statement; this report generally contains the scope, level, the assurance standards and methodologies used by the reporting company when preparing the CSR/sustainability report, limitations faced during the assurance process, assurance provider activities, a conclusion and recommendations (O'Dwyer and Owen, 2005, Manetti and Becatti, 2009, GRI, 2013, Boiral et al., 2019a).

Assurance Standards

Involvement in SA is generally perceived as a complex process; such reasoning is attributed to the lack of uniform CSR reporting guidelines, as well as the corresponding assurance standards. For instance, there are both national and international standards for assuring CSR disclosures. ISAE 3000 (ISAE, 2013) and AA 1000 AS (AA1000, 2011) are the most referred to standards internationally. International Standard on Assurance Engagement 3000 (ISAE 3000) provides guidance on and requirements for assurance engagement other than the audit and review of historical financial information. This standard was established by the International Auditing and Assurance Standards Board (IAASB), which is an auditing and assurance services body of the International Federation of Accounting (IFAC). The standard was first approved in 2003 and

[31] GRI categorises them into accountancy firms, engineering firms and sustainability services firms.
[32] More details of assurance scope and level are provided in section (4.3.2).

became effective in nearly 2005, with the latest version updated in 2013. The key feature of ISAE 3000 is its consideration of relevance, materiality, and completeness. All these features should be taken into account in order to meet the needs of intended users according to the predetermined scope agreed upon between the reporting company and the assurance provider.

ISAE 3000 mainly focuses on the comprehensive procedures for assurance independence and competence, evidence gathering and examination of risk in the review process. Assurance reports prepared based on ISAE 3000 can only be issued by professional accountants, as they are required to comply with the ISAE code of ethics. Other assurance providers may employ assurance methodologies that comply with ISAE 3000 or combine some of its elements with other standards, for instance, AA1000AS. Overall, the assurance can be categorised into two levels: 'reasonable assurance' and 'limited assurance'. The former provides a higher level of assurance than the latter.

The AA1000AS standard was issued by the Institution of Social and Ethical Accountability (ISEA), known as AccountAbility, which is a non-profit organisation that specialises in providing corporate responsibility and sustainability solutions. AccountAbility offers assurance standards, reporting principles and standards related to stakeholder engagement via its AA1000 series. The series contains AccountAbility standard AA1000APS (2008), assurance standard AA1000AS (2008) and stakeholder engagement standard AA1000SES (2005). The emphasis of AA1000 standards is mainly on whether the entity and its sustainability reporting are incongruent with stakeholder concerns (AA1000, 2011).

AA1000AS specifically focuses on three principles - inclusivity, materiality and responsiveness - that should be taken into consideration by the assurance provider when assuring firms' sustainability reports. For companies that accept its accountability to those on whom it has an influence and who have influence over it, inclusiveness is the participation of the stakeholders in the development and achievement of a strategic and accountable response to sustainability. Under the materiality principle, companies are required to determine the issues that are relevant and significant to their stakeholders. A materiality issue has an influence on the decision making, performance and actions of an entity towards its stakeholders. The responsiveness attribute means that companies have to respond to stakeholder issues that may affect their sustainability performance that is realised through real actions, making decisions, performance, and communications with stakeholders (AA1000, 2011).

4.2.3 ESG Performance, Controversies and Sustainability Assurance

While the ultimate purpose of SA is to boost the credibility and the transparency of CSR disclosures (Simnett et al., 2009, Cohen and Simnett, 2015), theoretical and empirical SA literature shows two opposing perspectives on whether SA reports are only issued by firms that have genuine CSR commitments, or whether they could also be employed as a smokescreen by companies that are facing ESG controversies "concerns" in order to maintain, gain or reinstate stakeholder legitimacy (Casey and Grenier, 2015).

On one hand, the ethical perspective has been explained using signalling theory, proposing that firms with superior CSR performance tend to voluntarily provide assurance of CSR disclosures in order to signal their superior social and environmental commitment to stakeholders at large, given that the estimated marginal benefits would outweigh the assurance costs (Clarkson et al., 2008, Braam and Peeters, 2018, Clarkson et al., 2019, Simoni et al., 2020). Empirically, Clarkson et al. (2019) studied the causes and consequences of commissioning SA using an international sample comprising 17,050 firm-year observations from 40 countries during the period 2009-2015. They find that companies with higher CSR commitment "performance" are more likely to issue standalone CSR reports, commission external assurance for their CSR disclosures, acquire assurance from a Big 4 accounting company, and choose a higher assurance scope. They argue that from the signalling theory standpoint, highly CSR-committed firms are expected to be more active in having their CSR disclosures assured, and seek higher assurance levels as a credibility enhancement mechanism in order to deliver a signal to stakeholders about their commitment, while it will be costly for less-CSR committed companies to obtain SA report. Clarkson et al. (2019) also find that both SA and assurance scopes increase the possibility of the inclusion of DJSI[33], which gives an indicator that CSR assurance has beneficial consequences for capital market participants.

Clarkson et al. (2019) findings are also consistent with those of Simoni et al. (2020), who test the influence of environmental, social and governance factors on assurance strategy using a European sample[34] consisting of 417 companies over a five year period. Their findings show that the decision to secure SA is positively related to firms' ESG performance. They justify this relationship using three different theories: stakeholder theory, legitimacy theory and signalling theory. The first two theories explain the firms' motivation to adopt SA in order to maintain a

[33] Dow Jones Sustainability Indices
[34] Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, The Netherlands, Portugal, Spain, Sweden, Switzerland, UK.

moral relationship with their stakeholders, whereas the signalling theory proposes the same justification of the above mentioned.

Generally, Clarkson et al.'s (2019) and Simoni et al.'s (2020) findings give the impression that SA tends to be solely issued by companies with high CSR commitment in order to prove their ethical CSR contribution to the public. Nevertheless, other studies highlight concerns regarding the overall assurance quality process, which might be negatively affected by several factors, meaning that companies that obtain SA reports could have motivations for doing so other than the desire to be transparent and responsible (Ball et al., 2000, Owen et al., 2000, Park and Brorson, 2005, Manetti and Becatti, 2009, Boiral et al., 2019b).

The main criticisms are related to the degree of control by management over assurance procedures and the independency of the assurers (Ball et al., 2000, Owen et al., 2000, Manetti and Becatti, 2009, Park and Brorson, 2005, Boiral et al., 2019b). Indeed, as noted earlier, there is no specific scope or level of assurance that reporting companies should follow (ICAEW, 2010); they have the choice to select their preferred scope, level of assurance and assurance provider (Owen et al., 2000, GRI, 2013). Therefore, this discretion could support the idea of managerial control over the assurance process. This implies that the assurance process might be influenced by self-reporting and self-referential behaviours of the reporting company's management, as well as of the assurance providers themselves (Owen et al., 2000). Consequently, the outcomes of SA tend to be driven by company objectives and interests more than the need of stakeholders for more reliable and transparent reporting (Smith et al., 2011, Boiral et al., 2019a). Owen et al. (2000) add that managerial control allows company management to utilise the sustainability reporting and assurance process to primarily enhance the company's image and reputation, rather than to show accountability and transparency to their stakeholders. Other concerns are related to the differences in the title of the assurance report (Unerman et al., 2007); inconsistency in addressing assurance report and assurance provider efficiency (O'Dwyer and Owen, 2007); clarity in identifying the assurance scope (Adams and Evans, 2004); and significant differences in the opinions offered and conclusions drawn (SPA Australia, 2004). Indeed, these concerns are also argued to be influenced by and linked to managerial control, thus making reports incomplete and less credible (Owen et al., 2000, Smith et al., 2011).

From the legitimacy theory perspective, the political economy paradigm claims that the economic field cannot be studied in isolation from the political, social and institutional frameworks in which the economy is situated (Gray et al., 1996). In the context of the

relationship between organisations and society, the responsibilities and social expectations of an entity are often explored, defined and refined (Deegan, 2013). Legitimacy theory, which is derived from the political economy paradigm, focuses on the concept of organisational legitimacy, assuming that the actions of firms should be consistent with the prevailing system of beliefs, rules and values (Dowling and Pfeffer, 1975, Suchman, 1995, Deegan, 2013). Legitimacy theory itself is based on the idea that an entity operates in society through a 'social contract', in that it gains approval to implement various socially desirable and accepted activities in return for rewards and survival (Patten, 1992, Gray et al., 1995). Basically, the 'social contract' is considered to be an implicit and explicit contract between society and the organisation, by which the community gives the organisation permission to act in line with societal expectations about its behaviour (Guthrie and Parker, 1989). Gaining legitimacy can be managed effectively by management strategies and attitudes (Reverte, 2009). Consequently, social assessment of the firm will be affected by these adopted policies and practices, which in turn may enhance or diminish this legitimacy (DiMaggio and Powell, 1983, Suchman, 1995).

In the case of incongruence between the two value systems, a 'legitimacy gap' emerges and companies therefore need to find a strategy to fix the gap. The remedy introduced by Lindblom (1994) suggests four approaches that can be followed by the entity to gain or preserve legitimacy. One of these strategies is to manipulate stakeholders' perceptions in order to shift or deflect attention from an issue which is being focused on by society, to other related but perhaps peripheral issues. The literature thus argues that the issuance of sustainability assurance reports can be employed effectively to implement these strategies (see Casey and Grenier, 2015). In summary, managers could use SA reports in the case of ethical misconduct or ESG controversies in order to deviate or manipulate stakeholders' attention, thus helping them to keep their jobs by avoiding close scrutiny by stakeholder activists (Cespa and Cestone, 2007, Casey and Grenier, 2015).

Empirically, Casey and Grenier (2015) find that not only are CSR strengths positively associated with the issuance of SA, but also that CSR concerns increase the demand for SA. They argue that these companies tend to benefit from SA reporting through the credibility that it lends to how they address their CSR concerns alongside other positive aspects of CSR initiatives (Cho and Patten, 2007). However, it is plausible that firms commission SA with inaccurate, misleading, or incomplete CSR reports for impression management (Gray, 2001, Merkl-Davies and Brennan, 2007), which is considered a greenwashing. Casey and Grenier (2015) further found that firms

with CSR concerns tend not to select the higher assurance quality provided by accounting firms (see Pflugrath et al., 2011). This behaviour may not only be positively associated with the demand for SA, but also the choice of assurance level, scope and assurance provider.

Based on the above discussion, it appears that there is no consensus on whether SA reports are issued substantially to reflect the ethical commitments of a company, which is the main purpose of SA, or whether they are also obtained symbolically by companies facing ESG scandals as a greenwashing strategy since SA remains not very regulated and gives management a degree of control over the assurance process. Accordingly, we respond to the call by Boiral et al. (2019b) of the necessity to further examine how such symbolism can be converted into practice and how the ethical issues could shape it, and extend the work of Clarkson et al. (2019) and Casey and Grenier (2015) by examining the influence of both CSR performance and controversies on sustainability assurance, taking into account the type of assurance provider, assurance scope and level, and assurance standards, to further understand the tendencies of both companies facing ESG controversies and highly committed ones.

Considering the competing arguments above , we propose the following hypothesis:

Hypothesis 1a. There is a positive relationship between CSR performance and SA.

Hypothesis 1b. There is no relationship between CSR controversies and SA.

Since the reporting company, namely management, has a direct influence on the assurance level, scope, standards and providers, the behaviour of both committed and less committed companies could be reflected in these aspects of the process. Therefore, we also propose the following hypotheses:

Hypothesis 2a. ESG performance score is positively associated with the type of assurance provider, level of assurance and assurance scope.

Hypothesis 2b. ESG controversies are negatively associated with the type of assurance provider, level of assurance and assurance scope.

4.3 RESEARCH DESIGN

4.3.1 Sample Selection and Data Sources

The study sample consists of European companies listed on the STOXX Europe 600 over the period 2011 to 2018. This index represents large, medium and small companies in terms of capitalisation across 17 countries of the European region, covering around 90% of free-float market capitalisation in Europe. The countries that make up the index are Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland and the United Kingdom. The highest proportion corresponds to the UK, with around 28 percent of the index, followed by France, Germany and Switzerland, with around 15 percent each. Financial companies are excluded from the sample because of their different nature and regulations related to reporting social and environmental disclosures (Peasnell et al., 2000, Marrakchi Chtourou et al., 2001, Macve and Chen, 2010, Hong and Andersen, 2011). The reason for choosing this sample is that previous studies show that European companies are the leaders in issuing external SA reports (Hasan et al., 2003, Kolk, 2008; CorporateRegister, 2008; Simnett et al., 2009). KPMG (2013) reports European countries to have long experience of CSR reporting. Using a sample of 130 global assured CSR reports from 2002 to 2004, Mock et al. (2007) also found that around 67% of SA reports were issued in the European Union.

Data were collected from several sources and in different stages. First, based on the Global Reporting Initiative (GRI) database, the sample companies were identified whether they had issued an external SA report during the study period or not. If so, we then collected data about the assurance provider, level of assurance and assurance scope for companies that issued SA reports in a given year. Please refer to Table 4.9 for further details about the sample structure and distribution over the years, countries and industries. Data on ESG performance, controversies and corporate governance elements were collected from ASSET4-Thomson Reuters, whereas all the financial data were collected from DataStream.

4.3.2 Variable Measurement

4.3.2.1 ESG Performance

Following Aouadi and Marsat (2018), Cheng et al. (2014), Clarkson et al. (2019), Ioannou and Serafeim (2012), Fuhrmann et al. (2017) and Simoni et al. (2020), this study used ESG performance scores provided by the ASSET4-Thomson Reuters database. This database

provides ESG performance scores for more than 9,000 companies around the world, including 2,100 from the European region. It consists of more than 450 company-level ESG performance metrics, including a subset of 186 comparable measures from several data sources comprising firms' annual reports and their websites, CSR/sustainability reports, NGO websites, news sources and stock exchange filings. The metrics are developed by considering their comparability, industry relevance and data availability.

These measures and scores were then classified into ten groups, based on three main pillars, namely environment, social and governance (ESG) pillars. The environmental pillar consists of emissions, innovation and resource use; the social pillar comprises human rights, product responsibility, the workforce, and the community; and the governance pillar consists of management, shareholders and CSR strategy. The ESG score is the relative sum of the group weights, which varies by the industry for social and environmental groups, whereas the weight for governance remains the same in all industries. Substrate weights are normalised to a range between 0 and 100 percent. This study uses the combined ESG score as a continuous variable scale from 0 to 100.

4.3.2.2 ESG Controversies

ESG controversies are considered to be a company's environmental, social and governance controversies and negative events (e.g. product harm scandals, business ethics and fraud controversies) which are reflected in the global media, and are collected by ASSET4-Thomson Reuters from various media sources, including NGOs (e.g. trade unions, human rights watch and Transparency International) and news outlets reported in English. According to ASSET4-Thomson Reuters, ESG controversies are categorised into 23 topics which are attributed across ten ESG categories, and then finally formulated into three major pillars: environmental, social and governance. Following the procedure adopted by Aouadi and Marsat (2018), this study uses ESG controversies as a dummy variable with a value of 1 if the company in a given year has faced at least one controversy, and 0 otherwise. ESG controversies were considered as a continuous variable, with different deciles and specific controversial elements related to business ethics as a robustness check.

4.3.2.3 Sustainability Assurance

The GRI Sustainability Disclosures database "data legend" stores and tracks critical reporting and related company data. Each company that has published CSR/integrated reports that is included in the database has an accompanying profile, including the company's name, logo, size, status, sector, country, description, and other useful data that facilitate the interaction between the reporting company and different types of stakeholders. More importantly, all the sustainability, CSR, or integrated reports that are publicly available, as well as registered with GRI, have a report profile page. Such profiles provide high-level reporting information.

With respect to SA, the GRI Sustainability Disclosures database provides a wide range of information extracted from SA reports if the reporting company has issued SA in a given year. To test the study hypothesis, data about external assurance on whether the reporting company has issued an SA report in a given year, or otherwise, the type of assurance provider, assurance scope and level of assurance[35] were retrieved from the GRI database.

Assurance provider (assurer)

The term 'assurance provider' refers to independent external experts who provide SA services. While the GRI categorises them into three main groups: accounting firms; small consultancy or professional services firms; and engineering firms. This study followed Manetti and Toccafondi (2012), O'Dwyer et al. (2011) and Power (1996) in which assurance providers divided into two groups: accounting companies, which take a value 1, and non-accounting companies, which take a value 0. Another classification is made as to whether the accounting company is one of the Big 4 or not.

Assurance Scope

Assurance scope refers to the extent of the information included in CSR/sustainability disclosures (e.g. company operations, data, text, etc.) and covered by the assurance. Coverage could include the whole of the SA, specific section(s), and greenhouse gas emissions (GHG) only or not specified. Based on Clarkson et al. (2019), this study uses assurance scope as an indicator variable equal to 1 if the CSR/sustainability disclosures were fully assured, and 0 otherwise.

[35] The ASSET4-Thomson Reuters database also provides data on whether companies issued an SA report in a given year or not. These data are also used as a robustness check (see model 11 in Table 4.5).

Level of Assurance

The level of assurance indicates the depth and extent of work undertaken by the assurance provider with regards to SA. Assurance providers usually provide two levels: "reasonable assurance" (i.e. high but not absolute) or "limited assurance" (i.e. moderate); the higher the level, the more rigorous the assurance process. This study uses the level of assurance as an indicator variable equal to 1 if the level of assurance was reasonable/high, and 0 otherwise.

4.3.3 Empirical Model(s)

Based on Clarkson et al. (2019) Fuhrmann et al. (2017) and Simnett et al.(2009) this study uses four variants of the following logit regression models to test the hypothesis. The first model tests the influence of ESG performance and controversies on the decision to obtain SA reports. Subsequently, the decisions about the choice of assurance provider, level of assurance and assurance scope are then tested respectively.

$$
\begin{aligned}
Assurance_{Report} &= \beta_0 + \beta_1 ESG_{\text{Controversies}_{it-1}} + \beta_2 ESG_{Performance_{it-1}} \\
&+ \beta_3 CSR_{Committee_{it-1}} + \beta_4 SIZE_{it-1} + \beta_5 ROE_{it-1} + \beta_6 LEV_{it-1} \\
&+ \beta_7 AUDITFEES_{it-1} + \beta_8 BSIZE_{it-1} + \beta_9 Separation_{it-1} \\
&+ \beta_{10} FOREIGNOWN_{it-1} + \beta_{11} IO_{it-1} \\
&+ [Industry, Country, Year\ Indicators] + \varepsilon_{it}
\end{aligned}
$$

$$
\begin{aligned}
Assurance_{Provider} &= \beta_0 + \beta_1 ESG_{\text{Controversies}_{it-1}} + \beta_2 ESG_{Performance_{it-1}} \\
&+ \beta_3 CSR_{Committee_{it-1}} + \beta_4 SIZE_{it-1} + \beta_5 ROE_{it-1} + \beta_6 LEV_{it-1} \\
&+ \beta_7 AUDITFEES_{it-1} + \beta_8 BSIZE_{it-1} + \beta_9 Separation_{it-1} \\
&+ \beta_{10} FOREIGNOWN_{it-1} + \beta_{11} IO_{it-1} \\
&+ [Industry, Country, Year\ Indicators] + \varepsilon_{it}
\end{aligned}
$$

$$Assurance_{Level} = \beta_0 + \beta_1 ESG_{\text{Controversies}_{it-1}} + \beta_2 ESG_{Performance_{it-1}} + \beta_3 CSR_{Committee_{it-1}} + \beta_4 SIZE_{it-1} + \beta_5 ROE_{it-1} + \beta_6 LEV_{it-1} + \beta_7 AUDITFEES_{it-1} + \beta_8 BSIZE_{it-1} + \beta_9 Separation_{it-1} + \beta_{10} FOREIGNOWN_{it-1} + \beta_{11} IO_{it-1} + [Industry, Country, Year\ Indicators] + \varepsilon_{it}$$

$$Assurance_{Scope} = \beta_0 + \beta_1 ESG_{\text{Controversies}_{it-1}} + \beta_2 ESG_{Performance_{it-1}} + \beta_3 CSR_{Committee_{it-1}} + \beta_4 SIZE_{it-1} + \beta_5 ROE_{it-1} + \beta_6 LEV_{it-1} + \beta_7 AUDITFEES_{it-1} + \beta_8 BSIZE_{it-1} + \beta_9 Separation_{it-1} + \beta_{10} FOREIGNOWN_{it-1} + \beta_{11} IO_{it-1} + [Industry, Country, Year\ Indicators] + \varepsilon_{it}$$

In these models, Assurance_Report is a dummy variable equal to 1 if the firm issued a SA report in a given year, and 0 otherwise; Assurance_Provider is a dummy variable equal to 1 if the SA was provided by an accountancy firm, and 0 otherwise; Assurance_Scope is a dummy variable equal to 1 if the CSR/sustainability disclosures were fully assured, and 0 otherwise; Assurance_Level is a dummy variable equal to 1 if the level of assurance was Reasonable/High, and 0 otherwise; ESG_Controversies is a dummy variable equal to 1 if the company had at least one ESG controversy, and 0 otherwise; and ESG_Performance is the total CSR performance score of the three dimensions (environment, social and governance). Consistent with previous literature (Cho et al., 2014; Casey and Grenier; 2015, Fuhrmann et al., 2017; Clarkson et al., 2019), the study controls for a number of factors that could influence the decision to obtain SA report. Casey and Grenier (2015) and Cho et al. (2014) show that firm size is considered a key input factor of SA which positively influences managers' decisions to obtain SA reports. Accordingly, it is expected that firm size to be positively associated with SA reports. SIZE is measured as the natural logarithm of total assets. Moreover, it is assumed that firms' financial situation may influence the decision to obtain an SA report. Castelo Branco et al. (2014) and Sierra et al. (2014) found that profitability was positively associated with the decision to obtain SA reports. Moreover, greater leverage will reduce the chance to obtain reports (Castelo Branco et al., 2014). Accordingly, profitability and leverage are expected to have a positive and negative

relationship with SA reports, respectively. Return on equity (ROE) is a profitability ratio measure expressed as the ratio of net income to total equity; Leverage (LEV) is measured as the ratio of total debt to total assets; CSR_Committee is a dummy variable equal to 1 if the company had a CSR committee, and 0 otherwise.

Previous studies find that the decision to obtain SA report is also conditioned by companies' corporate governance attributes (e.g. ownership structure, board composition and audit characteristics) (Martinez-Ferrero et al., 2017, Zhou et al., 2013), in which both firm and country factors justify the assurance decision (Francis et al., 2011, Castelo Branco et al., 2014, De Beelde and Tuybens, 2015, Kend, 2015, Liao et al., 2016, Ruhnke and Gabriel 2013). Corporate governance balances the wellbeing of all stakeholders and alleviates business risks (Martinez-Ferrero et al., 2017). After carefully reviewing previous literature (Castelo Branco et al., 2014, De Beelde and Tuybens, 2015, Kend, 2015, Liao et al., 2016, Ruhnke and Gabriel 2013), this study uses audit fees, the board size, CEO-Chairman separation, foreign ownership and institutional ownership as control variables[36]. AUDITFEES is the natural logarithm of the audit fees paid by the reporting company in a given year; BSIZE is the natural logarithm of total board size; SEPARATION is a dummy variable equal to 1 if there was the separation between the CEO and Chairman, and 0 otherwise. FOREIGNOWN is total foreign ownership in percentage terms; IO is total institutional ownership in percentage terms.

The study applies different regression models to the panel data, for which the decision about the method of analysis to be used relies on the nature of the dependent variable. Because the dependent variables used in this study are dummy variables taking values on 1 and 0, it is important to use a suitable panel data methodology for dummy variables. Frías-Aceituno et al. (2013) are that it is not appropriate to use linear regression for categorical variables that because the response values are not measured on a ratio scale and other error terms are not normally distributed. Accordingly, the analytical technique used in this study is a logit regression model. This binary probability model broadly used by previous studies in sustainability assurance (Fernandez-Feijoo et al., 2014; Herda et al., 2014; Peters and Romi, 2014; Simnett et al., 2009).

[36] Refer to section 4.5.7 for more details about the role of corporate gatekeepers.

4.4 EMPIRICAL RESULTS AND DISCUSSIONS

4.4.1 Descriptive Statistics and Univariate Analysis

Table 4.1 summarises the study sample and reports the descriptive statistics of all the variables used in the analysis. It shows that approximately 23% of the 5,832 firm-year observations issued SA reporting and that around 82% of these reports were issued by accounting firms. The figures also show that the mean value of ESG performance is 0.55, ranging between 0.0124 and 0.943.

Furthermore, Table 4.9 shows the distribution of external assurance reports across years, geographic zones, and industries. Throughout the study period, the figures show an upward trend for the number of SA reports obtained. In 2011, the number of such reports was 154, hitting a peak in 2015 with 202, then starting to decline, falling to 114 in 2018. In terms of the geographical distribution, the UK reported the highest number of sustainability assurance reports throughout the study period, at 238, followed by Germany, France, Spain, Italy and Sweden with 184, 153, 121, 118 and 108, respectively. The external assurance reports across industries show that the industrial sector reported the highest number of SA reports, followed by basic materials, consumer discretionary and energy, at 227, 192 and 139, respectively.

4.4.2 Correlation Analysis

To check multicollinearity among the study variables, Pairwise correlation of all the independent variables are calculated and reported in Table 4.2. The values show that the highest correlation of 0.7458 is between SIZE "total assets" and AUDITFEES "audit fees", followed by 0.5141 between BSIZE "board size" and Size "total assets". According to Gujarati and Porter (2003) and Hair et al. (2006), if the correlations are lower than 0.80, there is no multi-collinearity concern that may threaten the regression analysis. Moreover, Table 4.10 presents the outcomes of the Variance Inflation Factor (VIF) test for the study variables. Based on Gujarati and Porter (2003), VIF is considered acceptable, when the level is less than 10; the highest VIF values are 2.83 and 2.34 for SIZE and AUDITFEES respectively, meaning that there is no multi-collinearity.

4.4.3 Multivariate Analysis

CSR Performance, Controversies and SA

Table 4.3 presents the results of all the study regressions that were tested using logit regression. All explanatory variables are lagged to account for endogeneity issues. The results in Model (1) show that ESG_Performance "strengths" has a positive and significant influence on the

Assurance_Report variable (0.05; P<.01). This finding supports Hypothesis 1a, which proposes that highly CSR-committed firms are expected to be more active in having their CSR disclosures assured, seeking to signal their commitment to stakeholders via such reporting. This result is consistent with Clarkson et al. (2019) and Simoni et al. (2020). Moreover, the results in Model (1) also show that ESG_Controversies "concerns" have a positive and significant influence on the Assurance_Report variable (0.409; $p < .01$). This finding supports Hypothesis 1b, which posits that companies facing ESG scandals tend to divert stakeholder attention and preserve their legitimacy through SA reporting since CSR assurance plays a vital role in shaping public image and reputation (Birkey et al., 2016). In this context, Casey and Grenier (2015) provide an empirical examination of the SA market in the US, arguing that companies tend to enjoy advantages from SA it lends to how they deal with their CSR concerns alongside other positive aspects of CSR initiatives (see Cho and Patten, 2007). However, it is possible that firms commission SA with inaccurate, misleading or incomplete CSR reports for impression management purposes (see Gray, 2001, Merkl-Davies and Brennan, 2007). In other words, reports that are issued symbolically could differ from the ones that are issued by ethical companies; such a difference could be related to the type of assurance provider, level of assurance or assurance scope.

Accordingly, to understand the characteristics of SA reports, as well as the behaviours of both companies with superior ESG performance and others facing ESG controversies, Models 2, 3 and 4 test the influence of ESG performance "strengths" and controversy "concerns" on the choice of assurance provider, level of assurance, and assurance scope, respectively. Model 2 therefore tests the influence of ESG performance and controversies on the type of assurance provider. The results in Table 4.3 show that there is no significant relationship between the explanatory variables and the type of assurance provider. Model 3, which tests the influence of ESG performance and controversies on the level of assurance, shows that the higher the level, the more rigorous the assurance process. The results indicate that CSR performance has a positive and significant influence on the level of assurance, at (0.0359; $p < .01$). This implies that CSR-committed companies choose higher assurance levels, which is an indicator of their confidence in their CSR disclosures. CSR controversies do not show any significant association with the level of assurance. Model 4 examines the influence of ESG performance and controversies on assurance scope. The outcomes present similar results to the previous model, showing that ESG performance positively affects the assurance scope (0.0138; $p < .05$), a finding

which is consistent with Clarkson et al. (2019). On the other hand, ESG controversies do not have a significant influence on the assurance scope.

In terms of the control variables, SIZE has a positive and significant influence on the Assurance_Report variable (0.421; $p < .01$), which is consistent with Castelo Branco et al. (2014), DeBeelde and Tuybens (2015) and Sierra et al. (2013). LEV shows a negative and significant association with Assurance_Report (-0.136, $p < .01$), which is consistent with the finding reported by Casey and Grenier (2015) and DeBeelde and Tuybens (2015). AUDITFESS is positively associated with Assurance_Report (.153, $p < .05$) and SEPARATION and FOREIGHNOWN have a positive and significant influence on the decision to obtain SA reports (0.265, $p <.1$) and (0.011, $p < .01$), respectively.

4.5 ROBUSTNESS CHECKS AND ADDITIONAL TESTS

In order to check the robustness of the study's results and gain further understanding of the reasons for adopting the SA report, the following sections provide additional tests and robustness checks for hypotheses H1a and Hb1.

4.5.1 Additional Analysis - ESG Controversy Scores at Several Levels

Based on ASSET4-Thomson Reuters, this study uses ESG controversies as a dummy variable equal to 1 if there is at least one controversy reflected in the media in a given period, and 0 otherwise. In addition to the dummy variable, ASSET4-Thomson Reuters provides scoring for ESG controversies from 0 to 100%; the lower the percentage, the larger the controversies and the lower the transparency level in reporting ESG data to the public. This score is also graded by ASSET4-Thomson Reuters into four major groups: A, B, C and D. Generally, a score of between 74% - 100% (i.e. Group A) shows an excellent degree of ESG performance and reporting transparency; Group B (49% - 75%) indicates good ESG performance and an above-average transparency level in disclosing ESG data publicly; Group C (a score of 24% - 50%) shows satisfactory ESG performance and a moderate transparency level of disclosing material ESG data to the public; and Group D (0% - 25%) indicates poor ESG performance and an insufficient transparency level in reporting ESG data to the public (see Appendix 4.3). Accordingly, the hypothesis was retested using ESG controversies as a continuous variable and different scoring declies of 90%, 80%, 70%, 60%, 50% and 40%.

The results in Table 4.4 show that the relationship between ESG controversies and assurance reports is significantly negative across all models implying that companies with low ESG controversy scores, an indicator of poor reporting quality and other ESG scandals, use SA as a tool to gain legitimacy. The results also show that the influence of ESG performance on the decision to obtain SA is positive and significant across all models. These findings are consistent with the main findings that support Hypotheses H1a and H1b.

4.5.2 Additional analysis - Specific ESG controversy element

Earlier, the study considered ESG controversies as a single "generic" variable that combines 23 different controversial ESG topics (please refer to Appendix 4.2 for more details). This variable shows a positive and significant relationship with the decision to obtain SA reports. From this finding, it can be perceived that such reports could be used opportunistically by managers to deflect stakeholders' attention from irresponsible behaviour, since they have been described as less regulated and allow reporting companies a level of control over the assurance process (see Boiral et al., 2019b). To obtain further reasoning for managerial incentives towards obtaining SA reports, the generic measure of ESG controversies was replaced by a specific ESG controversial topic related to corruption and bribery, improper lobbying, political contributions, money laundering, or tax fraud. This variable was also taken as a dummy variable with a value of 1 if the company had faced this kind of scandal in a given year, and 0 otherwise. Model 13 in Table 4.5 shows that when there is a controversy related to corruption and bribery, improper lobbying, political contributions, money laundering, or tax fraud, companies tend to issue SA reports as a way to gain or repair stakeholder legitimacy.

4.5.3 Additional Analysis - SA Data from Different Sources

As previously noted, this study relies on the GRI database to collect all the data related to SA, including assurance provider, level of assurance and assurance scope. ASSET4 is another database that provides data on whether the company issued a SA report or not. Accordingly, data from GRI were compared with comparing the number of SA reports using the two data sources, and it appeared that there were differences in the number of SA reports issued by the sample companies during the study period. Therefore, Hypotheses H1a and H1b were retested using ASSET4 data. Model (11) in Table 4.5 shows that the relationships remain similar to the main findings.

4.5.4 Additional Analysis - Countries with High SA Reports

Based on the sample distribution of SA reports across years, countries and industries (see Table 4.5), we used a sample consisting of countries with more than 15 SA reports during the study period; we then took the highest seven countries and finally the UK sample, as it had the largest number of SA reports during the study period. The regression figures are presented in Table 4.5 and show that the direction is similar and significant across suggested samples.

4.5.5 Additional Analysis - Control for Sector-Specific Effects

To control for the impacts of each sector, we differentiated between companies that were or were not classified as social or environmental industries. Based on Patten (2002) and Simnett et al. (2009), firms in the petroleum, chemical (excluding pharmaceuticals), metal, and paper industries were classified as environmentally-sensitive industries, while the financial industry is categorised as socially-sensitive industries. According, the first hypothesis retested after controlling for sector-specific effects. The findings in Model 12 Table 4.5 still show similar results as the main findings.

4.5.6 Additional Analysis – Earnings Management as an Alternative Variable

Since sustainability assurance report can play an effective role in boosting a firm's CSR reputation (Birkey et al., 2016), managers could use it as a tool to cover-up such misconducts (e.g. earnings management), especially that SA described to be less regulated and allows reporting companies a level of control over the assurance process (see Boiral et al., 2019b). Accordingly, to robust the main results, this study retested all the hypothesis using earnings management (EM)[37] as an alternative variable of ESG controversies, since both of them are related to such negative conducts that my effect on stakeholders perceptions and make a legitimacy gap so that managers use SA as greenwashing tool.

Theoretically, it is argued that gaining legitimacy can be achieved effectively by management strategies and attitudes (Reverte, 2009). The sole purpose of management strategies and attitudes is the creation of perception. The ultimate goal is congruence between perception(s) and expectation(s). Consequently, social assessment (the congruence between perception and expectation) regarding the firm will be affected by the adoption of these policies and practices,

[37] This variable represents the absolute value of discretionary accruals calculated through modified Jones model adjusted for performance KOTHARI, S. P., LEONE, A. J. & WASLEY, C. E. 2005. Performance matched discretionary accrual measures. *Journal of accounting and economics,* 39**,** 163-197. (source: Bloomberg)

which in turn may increase or decrease this legitimacy (DiMaggio and Powell, 1983, Suchman, 1995). In this vein, organizational legitimacy might be undermined when managers deviate from accepted financial reporting practices in pursuit of their interests (Jones, 2011a); this occurs as a consequence of the separation between managers (agents) and owners (principals); the former has the authority to make decisions on behalf of the latter, as the existence of information asymmetry encourages them to advance their self-interest when it is inconsistent with the interests of the company (Jensen and Meckling, 1976). Preceding research shows that managers tend to manipulate earnings in a way that induces pursuance of personal incentives by improving the degree of profitability (Rangan, 1998, Teoh et al., 1998, Healy and Wahlen, 1999, Shrieves and Gao, 2002, Jones, 2011a, Walker, 2013).

That is, earnings management can be used opportunistically by managers for personal gain, thus creating negative consequences for shareholders' investments (Rangan, 1998, Teoh et al., 1998a), which results in shareholders making non-optimal investment decisions; such opportunistic behaviour will impact not only owners but also have consequences for other stakeholders who will share some risk as a result of their capital, financial, human (Clarkson et al., 1994: p5).

Is this case, the value system between the firm and other related parties will be divergent, giving rise to the so-called legitimacy gap, which arises when previously unknown information is made public (Sethi, 1975); revealing this divergence causes many inverse consequences and reactions by society, as Deegan (2006: p. 277) mansions: "Failure to comply with societal expectations (that is, comply with the terms of the 'social contract') may lead to sanctions being imposed by society". Moreover, managers will be under the threat of adverse reactions by employees, pressure by owners, misunderstanding from customers, legal action from regulators, boycotts and lobbies from activists, more exposure from the media, and withdrawal of legitimacy from the community at large (Prior et al., 2008).

The incongruity between the two value systems causes the "legitimacy gap", compelling companies to find a strategy to solve this problem. The remedy as introduced by Lindblom (1994) who suggests four approaches by which to gain or preserve legitimacy; one of these strategies is a manipulation of stakeholders' perception in order to deflect societal focus and attention by concentrating instead on other related but perhaps peripheral issues. Thus, extant literature argues that CSR reporting can be employed effectively to implement these strategies. Deegan et al. (2002) and Deegan et al. (2000), through a comprehensive overview of legitimacy theory and a variety of motives regarding corporate social disclosures, find that firms tend to choose annual report

disclosures as an instrument for maintaining, preserving and gaining legitimacy. They also consider that the higher the possibility of adverse shifts in community perceptions, the higher the need to impact the process through corporate social disclosure. Moreover, Patten (1992) claims that threats to the firm's legitimacy stimulate activity toward CSR reporting in annual reports.

Therefore, pursuance of CSR activities and providing SA reports can help managers to secure their jobs by avoiding scrutiny by stakeholder activists (Cespa and Cestone, 2007). Empirically, Prior et al. (2008) investigated the impact of earnings manipulation on CSR using an international sample of 593 firms during the period 2002 to 2004. They find that managers who manipulate earnings for personal purposes will be able to protect themselves through engagement in CSR activities. This finding is supported by Martínez-Ferrero et al. (2016).

The findings in Table 4.7 show that there is a significant and positive relationship between AEM and sustainability assurance, which is consistent with the main findings. Moreover, Models (3 and 4) in Table 4.7 show that ESG performance is significantly positive with the level of assurance, whereas ESG controversy variable is significantly negative with the level of assurance. These results show that while both ESG performance and Controversies are positive, there is heterogeneity among them in term of the level of assurance that each company select. In other meaning, companies that have higher ESG strengths tend to assure the entire CSR system. These results are also consistent with the result of the main regressions.

4.5.7 Additional Analysis - The Role of Corporate Gatekeepers

The term "gatekeepers" refers to independent professionals who mediate the link between investors (principals) and managers (agents), acting as "watchdogs" to monitor and even discipline the behaviour of managers (Coffee, 2001). According to Ronen and Yaari (2008), gatekeepers could be boards of directors (BODs), auditors or owners. This study focuses mainly on the role of board characteristics, namely board size, CEO-Chairman separation and board gender diversity. BODs fulfil two functions: first, performing monitoring duties, and second insisting on establishing suitable connections and expert assistance (Coffee, 2001). The former implies that the board plays an integral role in corporate governance (CG) (MacAvoy and Millstein, 1999, Adams and Ferreira, 2009), by ensuring that the company is guided by the long-term interests of shareholders (Monks and Minow, 2004). The role of the BOD is not only limited to monitoring management activities, but also to achieving ethical and legal compliance for the entity (BRC, 1999). Therefore, its responsibility

extends to playing a crucial role in determining the organisation's socially- responsible behaviours and level of accountability to stakeholders at large (Michelon and Parbonetti, 2012, Rupley et al., 2012).

4.5.7.1 Board Size

It is argued that board size represents one of the fundamental factors that influences its efficiency since a large board provides more knowledge, demographics and cognitive diversity, as well as greater experience (Lipton and Lorsch, 1992, Yermack, 1996). Liao et al. (2018) mention that larger boards can include different perspectives from different stakeholders and dedicate resources and efforts to fulfil their duties Sustainability assurance, therefore, considers one possible way to address the needs of stakeholders and thus increases disclosure transparency and credibility (Liao et al., 2018). Liao et al. support their argument empirically by examining the relationship between board characteristics and SA using a sample of Chinese-listed firms from the period 2008 to 2012. They found that board size had a positive and significant influence on the decision to obtain SA.

Based on the above discussion, if a larger board truly exerts a higher degree of monitoring, as well as increasing transparency, then the significant positive relationship between ESG controversies and SA will disappear, or at least weaken. The results in Table 4.6 show that board size plays a role in increasing the issuance of SA, and also minimises any opportunistic objectives behind this process.

4.5.7.2 Duality

Firth et al. (2007) show that when a board chairman also holds the CEO position, the effectiveness of the board in monitoring management activities will weaken due to the dominating power and authority of the dual position that the chairman holds. In such cases, the private interests of management tend to have a negative influence on the way it participates in CSR (Jizi et al., 2014). For instance, since the chairman has the authority to set the board's agenda, a CEO who also acts as the chairman may conceal important information from independent directors, as s/he may be reluctant to be involved in ethical behaviour, in which CSR activities are perceived as hurting private interests. In line with this argument, Galbreath (2010) found that the separation of CSR and chairman positions would lead to better governance regarding climate change. Besides, Liao et al. (2018) found that such separation increased the possibility of issuing SA reports.

Based on the above discussion, if the separation of CEO and chairman positions plays an effective role in increasing the efficiency of CG, then the significant positive relationship between ESG controversies and SA will disappear or at least weaken. The results in Table 4.6 show that CEO-chairman separation has a direct influence on the issuance of SA reports.

4.5.7.3 Gender Diversity

Males and females have different types of cognition, thus have different manners, beliefs, perspectives and norms (Pelled et al., 1999). Based on Deng et al. (2009), the role and behaviour of women on boards can be justified using two different theories: resource dependence theory and agency theory. The former proposes that a company is an open system that relies on the external environment, and that boards are charged with reducing environmental uncertainties, lowering transaction costs and managing external dependency (Davis and Cobb, 2009). An entity needs advice and channels through which to communicate information to the external environment, as well as legitimacy from the board (Davis and Cobb, 2009). In this context, women seem to be a desirable element within the board structure due to the broad base of resources they can add, for instance, skills, connections, prestige and knowledge.

From the agency theory perspective, managers act on behalf of investors, so they may exploit their positions by making decisions that serve their private interests (Jensen and Meckling, 1976, Agrawal and Knoeber, 1996). One of the board's tasks is to mediate the link between investors (principals) and managers (agent) in order to monitor the behaviour of the management and thus reduce the agency problem (Coffee, 2001). Gender diversity on boards is argued to be more effective in this context. This tendency has been discussed by Carter et al. (2003) and Erhardt et al. (2003), who mentions that firms with a high percentage of females on the board tend to outperform those with less gender diversity. In terms of CSR, female directors show a substantial difference in their moral discernment compared to male directors (Ibrahim et al., 2009). Stakeholders usually view gender diversity on boards as a positive indicator, which promotes higher social and environmental orientation. Empirically, Williams (2003) found that companies with more female directors tend to be involved in more philanthropic activities than those with fewer women. Bear et al. (2010) also found that the presence of females on the board would not only contribute ethically, but also send positive signals to stakeholders that the firm was socially responsible. The results in Table 4.6 show that the percentage of females on the board increases the possibility of obtaining SA reports, as it reduces the opportunistic tendency behind using them.

4.6 CONCLUSIONS

Previous studies that have attempted to understand the intrinsic motivation for obtaining SA have reported mix results on whether it is exclusively acquired as a signal of CSR commitment, or whether it could be used symbolically as a smokescreen to repair, maintain or gain legitimacy by companies that have ESG concerns (Casey and Grenier, 2015, Clarkson et al., 2019, Simoni et al., 2020). Clarkson et al. (2019), for instance, show that SA reports are mainly issued by companies with higher CSR commitment and that it could be costly for less CSR-committed companies to commission SA. Casey and Grenier (2015), however, found that not only did companies with superior CSR performance tend to issue SA reports, but also those with greater CSR concerns would assure their CSR disclosures.

Following the calls in the contemporary literature to further examine the relationship between the factors influencing the quality of SA reporting and companies' decisions to obtain SA, this study tests the influence of ESG strengths and controversies over the adoption of SA reports. The study further provides insight into the impact of ESG performance and the controversies over the choice of assurance provider, and the level and scope of assurance. Contextually, this is achieved using a sample of European companies listed on the STOXX 600 index over the period 2011-2018. ESG controversies are used as a proxy for CSR concerns and refer to questionable ESG conduct and negative events (e.g. product harm scandals, tax fraud controversies, business ethics controversies) that are reflected in the global media.

The results for the main model show that not only do highly ESG-committed companies issue SA reports signalling their commitment but also that companies facing ESG scandals and negative events, that are reflected in different media sources, become involved in SA reporting as a way of deviating or shifting stakeholders, attention from these scandals. This outcome supports the concerns that SA reports are less well developed in terms of assurance guidance or standards, and that managers have an influence on the assurance process, thus reducing the credibility and quality of assurance reports. This finding is consistent with Casey and Grenier (2015), who made an empirical examination of the SA market in the US, arguing that companies tended to take advantage of SA reporting by lending its credibility to the way they addressed their CSR concerns, alongside other positive aspects of CSR initiatives. The results for the subsequent models reveal that, unlike irresponsible companies, highly CSR-committed ones choose higher assurance levels and scopes of assurance, which is consistent with Clarkson et al.

(2019). This implies that SA reports are heterogeneous in terms of the level of scope of assurance between ESG strengths and concerns.

These findings reveal the tendencies towards issuing SA reports and address several concerns noted in prior studies that the quality and process of SA reporting can be affected by opportunistic managerial behaviour. Therefore, future studies on CSR and SA reporting should not tacitly assume that SA reports are issued only by socially responsible companies, but also that irresponsible companies could obtain SA reports as a camouflaging strategy. Moreover, the findings of this study could also assist stakeholders and decision-makers in differentiating between such symbolic and substantial reports. For standard-setters and policymakers, it is important to pay more attention to the independence of assurance providers and to ensure that the management does not influence SA process.

This study has some limitations that could be taken into consideration by future research. Firstly, it uses combined ESG performance as a single indicator; future studies could test the influence of each pillar (environment, social and governance), or even the ten ESG categories independently, to obtain a clearer insight on the impacts of these on management behaviour. Secondly, in this study, we attempted to test how SA would face quality issues as a result of less regulated standards and allowing managers a level of control over the assurance process. We also developed our analysis by testing whether companies with superior CSR show different tendencies towards choosing the assurance provider, and the level and scope of assurance, compared with companies facing ESG controversies. We finally attempted to assess the role of gatekeepers in mitigating the opportunistic use of SA. Future research could address the consequences 'stakeholders' reaction' of symbolic SA; in other words, the impact of SA on information asymmetry or market value, taking into consideration the moderating role of ESG controversies. Finally, this study uses ESG controversies as a dummy variable equal to 1 if any of the 23 ESG topics[39] occur in a given year and 0 otherwise. Future studies could address the influence of specific types of ESG controversy on SA.

[39] See Appendix 4.2.

Table 4.1: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Assurance Report	5,832	0.2298	0.4207	0.0000	1.0000
Assurance_Provider	1,340	0.8202	0.3842	0.0000	1.0000
Assurance_Level	1,315	0.1392	0.3462	0.0000	1.0000
Assurance_Scope	1,303	0.5027	0.5002	0.0000	1.0000
ESG_Controversies	4,858	0.2669	0.4424	0.0000	1.0000
ESG_Performance	4,863	0.5500	0.1794	0.0124	0.9430
CSR_Committee	5,832	0.6365	0.4811	0.0000	1.0000
SIZE	5,486	15.2786	1.5071	5.8944	19.7826
ROE	5,309	14.7567	22.4824	-65.4200	124.2700
LEV	5,486	0.5777	0.2131	0.0054	2.8289
AUDITFEES	5,016	7.5913	1.2767	4.5643	10.5062
BSIZE	4,845	2.3291	0.3487	0.6931	3.3673
FOREIGNOWN	5,450	10.3894	17.4641	0.0000	100.0000
INSTIOWN	5,389	0.4596	0.2360	0.0000	123.0000
SEPARATION	4,863	0.7650	0.4241	0.0000	1.0000

The table presents the descriptive statistics for the sample European companies listed on the STOXX 600 index over the period 2011-2018. Refer to Table 4.9 and Figure (1) for further descriptive statistics.

Table 4.2: Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) ESG_Controversies	1.000										
(2) ESG_Performance	0.060*	1.000									
(3) CSR_Committee	0.174*	0.463*	1.000								
(4) SIZE	0.463*	0.418*	0.411*	1.000							
(5) ROE	-0.017	-0.016	-0.030	-0.103*	1.000						
(6) LEV	0.130*	0.108*	0.056*	0.258*	0.078*	1.000					
(7) AUDITFEES	0.420*	0.342*	0.346*	0.749*	-0.063*	0.290*	1.000				
(8) BSIZE	0.255*	0.281*	0.242*	0.512*	-0.015	0.204*	0.409*	1.000			
(9) Separation	-0.023	-0.072*	-0.090*	-0.130*	0.020	-0.008	-0.118*	-0.213*	1.000		
(10) FOREIGNOWN	-0.034	-0.021	-0.088*	0.004	-0.029	0.009	-0.046*	0.062*	0.007	1.000	
(11) INSTIOWN	-0.053*	-0.022	0.120*	-0.155*	0.079*	0.009	-0.110*	-0.265*	0.221*	-0.195*	1.000

This table presents the correlation coefficients of the independent variables. All variables are as defined in Appendix 4.1.
* shows significance at the .01 level

Table 4.3: The influence of ESG performance and controversies on SA and its attributes

	1	2	3	4
Variable	**Assurance _Report**	**Assurance_Provider**	**Assurance_Level**	**Assurance_Scope**
ESG_Controversies (t-1)	0.409***	0.144	0.297	0.0848
	(0.125)	(0.255)	(0.28)	(0.192)
ESG_Performance (t-1)	0.0501***	-0.0018	0.0359***	0.0138**
	(0.0038)	(0.00813)	(0.0104)	(0.00619)
CSR_Committee (t-1)	1.065***	-0.00531	1.223	0.0401
	(0.177)	(0.33)	(0.797)	(0.338)
SIZE (t-1)	0.421***	0.22	-0.332*	-0.118
	(0.0709)	(0.151)	(0.182)	(0.124)
ROE (t-1)	0.00101	0.00273	0.0035	0.00323
	(0.000661)	(0.00237)	(0.00241)	(0.00212)
LEV (t-1)	-1.136***	0.004	0.109	1.808***
	(0.345)	(0.698)	(0.759)	(0.562)
AUDITFEES (t-1)	0.153**	0.028	0.00213	-0.0502
	(0.0661)	(0.143)	(0.174)	(0.112)
BSIZE (t-1)	0.239	0.628	1.567***	-0.00933
	(0.211)	(0.495)	(0.539)	(0.355)
SEPARATION (t-1)	0.265*	-0.467	0.928***	0.305
	(0.14)	(0.316)	(0.337)	(0.223)
FOREIGNOWN (t-1)	0.0111***	0.0133*	0.00235	0.00393
	(0.00344)	(0.00759)	(0.0071)	(0.00508)
INSTIOWN (t-1)	-0.0021	0.0107	-0.0134*	-0.0082
	(0.00298)	(0.00693)	(0.00807)	(0.00564)
Constant	-10.45***	-0.358	-3.804	-2.725*
	-0.919	-2.095	-2	-2
Obs.	3,759	1,001	961	1,010
Year indicators	yes	yes	yes	yes
Country indicators	yes	yes	yes	yes
Industry indicators	yes	yes	yes	yes
Pseudo R2	0.3394	0.2159	0.1854	0.177

***, ** and * indicate statistical significance at the 1%, 5% and 10% levels respectively. Given that all the dependent variables are dummies, this table shows the results of the logit regression model. The sample consists of 5,608 firm-year observations of European companies listed on the STOXX 600 index over the period 2011-2018. The dependent variables for Models 1, 2, 3 and 4 represent the existence or otherwise of assurance report, assurance provider, level of assurance and assurance scope, respectively. The independent variables are: ESG performance, a continuous variable considering the performance on a scale from 0 to 100; and ESG controversies, a dummy variable taking a value of 1 if there have been controversies in a given year, or 0 otherwise. The variables are as defined in Appendix 4.1. All explanatory variables are 1-year lagged to account for a possibly endogenous interdependence.

Table 4.4: The influence of ESG performance and controversies on the decision to issue a sustainability assurance report – Using ESG controversies as a continuous variable and different declies.

Variables	1	2	3	4	5	6	7
	Assurance Report	Assurance Report	Assurance Report	Assurance Report	Assurance Report	Assurance Report	Assurance Report
ESG_Controversies % $_{(t-1)}$	-0.0147***	-0.0140***	-0.0115**	-0.0121**	-0.0176***	-0.0131**	-0.0129*
	(0.00226)	(0.00461)	(0.00511)	(0.00529)	(0.00629)	(0.00661)	(0.00759)
ESG_Performance $_{(t-1)}$	0.0609***	0.0514***	0.0492***	0.0481***	0.0544***	0.0464***	0.0426**
	(0.00443)	(0.0108)	(0.0115)	(0.0122)	(0.0146)	(0.0152)	(0.0172)
CSR_Committee $_{(t-1)}$	0.918***	0.49	1.496**	1.710**	1.861**	1.838**	2.551*
	(0.18)	(0.455)	(0.608)	(0.732)	(0.83)	(0.917)	(1.38)
SIZE $_{(t-1)}$	0.334***	0.354**	0.386**	0.483***	0.435**	0.383*	0.559**
	(0.0721)	(0.147)	(0.151)	(0.157)	(0.183)	(0.208)	(0.228)
ROE $_{(t-1)}$	0.00106*	0.00138	0.00151	0.00196	0.00434**	0.00391*	0.00420*
	(0.000635)	(0.00139)	(0.00212)	(0.00245)	(0.002)	(0.00232)	(0.00227)
LEV $_{(t-1)}$	-1.167***	-0.749	-0.686	-1.132	-1.379	-1.446	-1.401
	(0.35)	(0.68)	(0.761)	(0.838)	(0.938)	(1.013)	(1.026)
AUDITFEES $_{(t-1)}$	0.145**	0.241	0.197	0.144	0.0548	0.178	-0.000549
	(0.0667)	(0.152)	(0.16)	(0.168)	(0.198)	(0.232)	(0.255)
BSIZE $_{(t-1)}$	0.21	-0.57	-1.207**	-1.131**	-1.012	-0.737	-0.66
	(0.217)	(0.474)	(0.53)	(0.572)	(0.649)	(0.691)	(0.758)
FOREIGHNOWN $_{(t-1)}$	0.0112***	0.0130*	0.0137	0.0185**	0.0149	0.0161	0.0122
	(0.00349)	(0.00756)	(0.00846)	(0.00913)	(0.0107)	(0.0115)	(0.0143)
INSTIOWN $_{(t-1)}$	-0.00273	-0.00695	-0.00998	-0.0083	-0.00939	-0.0123	-0.0187*
	(0.003)	(0.00588)	(0.00656)	(0.00775)	(0.00856)	(0.00902)	(0.0105)
SEPARATION $_{(t-1)}$	0.245*	-0.0125	-0.00274	-0.158	0.00697	0.166	0.0282
	(0.142)	(0.292)	(0.315)	(0.343)	(0.387)	(0.419)	(0.464)
Constant	-8.072***	-6.516***	-5.847***	-6.925***	-5.184**	-6.034**	-6.965**
	(1.006)	(1.789)	(1.981)	(2.125)	(2.384)	(2.702)	(2.931)
Observations	3,759	927	782	683	562	478	386
Year indicators	yes	yes	yes	yes	yes	yes	yes
Country indicators	yes	yes	yes	yes	yes	yes	yes
Industry indicators	yes	yes	yes	yes	yes	yes	yes
Pseudo R2	0.3465	0.3066	0.33	0.3618	0.3717	0.359	0.3817

***, ** and * indicate statistical significance at the 1%, 5% and 10% levels respectively. The table shows the results of the logit regression model for the sample consisting of 5,784 firm-year observations of European companies listed on the STOXX600 over the period 2011-2018. All the models test the influence of ESG performance and controversies on the issuance of sustainability assurance reports. ESG performance is based on the total CSR performance score of the three dimensions (environment, social and governance). The ESG controversies percentage is the ESG controversies score. Across the models, ESG controversies are first taken as a score out of 100. Models

2 and 7 then take different cut-off points of ESG controversies, starting from 90% in model 2 to 40% in model 7. All the explanatory variables are 1-year lagged to account for possible endogenous interdependence.

Table 4.5: The influence of ESG performance and controversies on the decision to issue sustainability assurance reports.

	8	9	10	11	12	13
	Assurance _Report	**Assurance _Report**	**Assurance _Report**	**Assurance _Report**	**Assurance _Report**	**Assurance _Report**
ESG_Controversies (t-1)	0.412***	0.433***	0.553**	0.516***	0.409***	
	(0.127)	(0.14)	(0.259)	(0.129)	(0.125)	
Bribery and fraud (t-1)						0.514***
						(0.161)
ESG_Performance (t-1)	0.0494***	0.0479***	0.0656***	0.0608***	0.0502***	0.0605***
	(0.00383)	(0.00426)	(0.00779)	(0.00366)	(0.00381)	(0.00372)
CSR_Committee (t-1)	1.096***	0.776***	0.631*	1.049***	1.063***	1.091***
	(0.183)	(0.189)	(0.354)	(0.13)	(0.177)	(0.134)
SIZE (t-1)	0.429***	0.401***	0.276**	0.438***	0.421***	0.462***
	(0.0717)	(0.0807)	(0.135)	(0.0679)	(0.0709)	(0.0691)
ROE (t-1)	0.00101	0.000934	0.000626	0.000617	0.000967	0.000729
	(0.000667)	(0.00058)	(0.000896)	(0.000637)	(0.000656)	(0.00066)
LEV (t-1)	-1.071***	-1.001***	-1.859***	-0.550*	-1.130***	-0.594**
	(0.348)	(0.376)	(0.613)	(0.292)	(0.346)	(0.295)
AUDITFEES (t-1)	0.138**	0.131*	0.242*	-0.00524	0.153**	-0.01
	(0.0673)	(0.0733)	(0.139)	(0.063)	(0.0661)	(0.064)
BSIZE (t-1)	0.245	0.217	1.061**	1.122***	0.251	1.187***
	(0.215)	(0.231)	(0.523)	(0.214)	(0.212)	(0.216)
SEPARATION (t-1)	0.250*	0.194	0.405	0.433***	0.265*	0.449***
	(0.141)	(0.155)	(0.37)	(0.135)	(0.141)	(0.137)
FOREIGNOWN (t-1)	0.0104***	0.0124***	-0.0115	0.00529	0.0112***	0.00626*
	(0.00349)	(0.00381)	(0.00882)	(0.00328)	(0.00344)	(0.00337)
INSTIOWN (t-1)	-0.00294	-0.00461	-0.0162***	0.0015	-0.00201	0.00224
	(0.00302)	(0.00332)	(0.00613)	(0.00295)	(0.00298)	(0.00297)
Constant	-10.42***	-9.328***	-12.07***	-13.39***	-9.912***	-13.81***
	(0.923)	(0.924)	(1.718)	(0.927)	(1.011)	(0.94)
Observations	3,684	2,910	1,173	3,778	3,759	3,685
Year indicators	yes	yes	yes	yes	yes	yes
Country indicators	yes	yes	yes	yes	yes	yes
Industry indicators	yes	yes	yes	yes	yes	yes
Pseudo R2	0.3399	0.321	0.3362	0.4174	0.3396	0.4185

***, ** and * indicate statistical significance at the 1%, 5% and 10% levels respectively. The table shows the results of the logit regression model for a sample of European companies listed on the STOXX600 over the period 2011-2018. All models test the influence of ESG performance and controversies on the issuance of sustainability assurance reports; Model (8) tests a sample of all countries that have more than 15 SA reports during the study period, namely 13 countries; Model (9) tests a sample of the highest seven countries in terms of the number of SA assurance reports issued during the study period; Model (10) tests the a sample of UK companies only that have the highest number of SA reports during the study period[40]; Model (11) tests the influence of ESG performance and controversies on the decision to issue SA reports - dependent variable data were collected from the ASSET4 database instead of the GRI database; Model (12) controls the impacts of each sector, differentiating between companies that are or are not classified as social or environmental industries - firms in the petroleum, chemical (excluding pharmaceutical), metal, and paper industries were classified as environmentally-sensitive industries; finally, Model (13) replaces ESG controversies related to specific topics of corruption and bribery, improper lobbying, political contributions, money laundering, and tax fraud. This variable is also used as a dummy variable having a value of 1 if the company was facing scandal in a given year, and 0 otherwise. ESG performance in all Models is the total CSR performance score of three dimensions (environment, social and governance). All explanatory variables are 1-year lagged to account for possibly endogenous interdependence.

[40] Refer to Table 4.9 for more details.

Table 4.6: The role of corporate governance

Variables	1 **Assurance _Report (GRI)**	2 **Assurance _Report (GRI)**	3 **Assurance _Report (ASSET4)**	4 **Assurance _Report (ASSET4)**
ESG_Controversies $_{(t-1)}$	0.391***	0.935	0.476***	-0.672
	(0.126)	(0.93)	(0.129)	(0.946)
ESG_Performance $_{(t-1)}$	0.0486***	0.0487***	0.0593***	0.0595***
	(0.00383)	(0.00387)	(0.00368)	(0.00371)
CSR_Committee $_{(t-1)}$	1.044***	1.053***	1.043***	1.036***
	(0.176)	(0.177)	(0.13)	(0.13)
SIZE $_{(t-1)}$	0.423***	0.415***	0.445***	0.436***
	(0.0714)	(0.0721)	(0.0681)	(0.0685)
ROE $_{(t-1)}$	0.000899	0.00093	0.000515	0.000482
	(0.000638)	(0.000642)	(0.000641)	(0.000641)
LEV $_{(t-1)}$	-1.127***	-1.118***	-0.546*	-0.523*
	(0.35)	(0.352)	(0.295)	(0.295)
AUDITFEES $_{(t-1)}$	0.157**	0.160**	-0.00897	-0.00945
	(0.0667)	(0.0672)	(0.0632)	(0.0632)
BSIZE $_{(t-1)}$	0.206	0.216	1.087***	0.964***
	(0.213)	(0.231)	(0.213)	(0.23)
SEPARATION $_{(t-1)}$	0.269*	0.319**	0.428***	0.450***
	(0.14)	(0.155)	(0.134)	(0.148)
GENDER DIVERSITY $_{(t-1)}$	0.0161***	0.0211***	0.0151***	0.0163***
	(0.00516)	(0.00564)	(0.00505)	(0.00538)
ESG_controversies$_{(t-1)}$*BSIZE $_{(t-1)}$		-0.00447		0.55
		(0.344)		(0.354)
ESG_controversies $_{(t-1)}$*SEPARATION $_{(t-1)}$		-0.171		-0.0495
		(0.258)		(0.302)
ESG_controversies $_{(t-1)}$*GENDER $_{(t-1)}$		-0.0167*		-0.00495
		(0.00864)		(0.00974)
FOREIGNOWN $_{(t-1)}$	0.0128***	0.0127***	0.00620*	0.00632*
	(0.00348)	(0.0035)	(0.00329)	(0.0033)
INSTIOWN $_{(t-1)}$	-0.00252	-0.00226	0.00105	0.00102
	(0.00299)	(0.003)	(0.00295)	(0.00296)
	-10.48***	-10.61***	-13.40***	-13.05***
	(0.921)	(0.982)	(0.931)	(0.98)

Observations	3,759	3,759	3,778	3,778
Year indicators	yes	yes	yes	yes
Country indicators	yes	yes	yes	yes
Industry indicators	yes	yes	yes	yes
Pseudo R2	0.3416	0.3425	0.4191	0.4196

***, ** and * indicate statistical significance at the 1%, 5% and 10% levels respectively. The table shows the results of the logit regression model for the sample consisting of 5,608 firm-year observation of European companies listed on the STOXX600 over the period 2011-2018. Board characteristics, namely board size, gender diversity and CEO-chairman separation, are considered across all models. Models (1) and (3) test the direct influence of these attenuates on the decision to issue SA reports using GRI data for SA in Model 1 and ASSET4 date in Model (3). Models (2) and (4) consider the interaction terms of these characteristics with ESG controversies using SA data from GRI in Model (2) and ASSET4 data in Model (4). ESG performance is the total CSR performance score of the three dimensions (environment, social and governance). ESG controversies is a dummy variable equal to 1 if the company has at least one ESG controversy, 0 otherwise. Board size is the natural logarithm of total number of board members. Gender diversity is the percentage of female directors on the board. SEPERATION is a dummy variable equal to 1 if there is separation between the CSE and chairman positions, and 0 otherwise. All explanatory variables are 1-year lagged to account for possibly endogenous interdependence.

Table 4.7: The influence of earnings management on the issuance of the SA report

Variable	1 **Assurance _Report**	2 **Assurance _Report**
AEM (t-1)	2.660***	1.982***
	(0.771)	(0.725)
ESG_Performance (t-1)	0.0580***	
	(0.00358)	
CSR_Committee (t-1)	1.099***	1.768***
	(0.132)	(0.122)
SIZE (t-1)	0.522***	0.706***
	(0.0659)	(0.0637)
ROE (t-1)	0.000438	0.000995**
	(0.000548)	(0.000498)
LEV (t-1)	-0.517*	-0.375
	(0.292)	(0.291)
AUDITFEES (t-1)	0.0282	0.062
	(0.0628)	(0.0585)
BSIZE (t-1)	1.130***	1.204***
	(0.213)	(0.196)
SEPARATION (t-1)	0.500***	0.592***
	(0.136)	(0.134)
FOREIGNOWN (t-1)	0.00398	0.00562
	(0.00332)	(0.00347)
INSTIOWN (t-1)	0.00228	0.00690**
	(0.00298)	(0.00277)
Constant	-14.99***	-15.89***
	(0.896)	(0.893)
Observations	3,758	3,758
Year indicators	yes	Yes
Country indicators	yes	Yes
Industry indicators	yes	Yes
Pseudo R2	0.4165	0.3567

***, ** and * indicate statistical significance at the 1%, 5% and 10% levels respectively. This table presents the results of the logit regression model. The sample consists of 5,608 firm-year observations of European companies listed on the STOXX 600 index over the period 2011-2018. The dependent variables for Models 1, 2 represent the existence or otherwise of the assurance report. The independent variables are: ESG performance, a continuous variable considering the performance on a scale from 0 to 100; and AEM is Accrual earnings management, which is the absolute value of discretionary accruals calculated using the performance-matched model proposed by Kothari et al. (2005). All explanatory variables are 1-year lagged to account for a possibly endogenous interdependence.

Table 4.8: The influence of EM of the choice of assurance provider, level of assurance and assurance scope

Variable	1	2	3	4	5	6
	Assurance_ Provider	**Assurance_ Provider**	**Assurance_ Level**	**Assurance_ Level**	**Assurance_ Scope**	**Assurance_ Scope**
$AEM_{(t-1)}$	-0.867	-0.815	-4.197*	-4.416*	2.053	1.735
	(1.922)	(1.913)	(2.5)	(2.409)	(1.672)	(1.663)
$ESG\_Performance_{(t-1)}$	-0.00317		0.0322***		0.0135**	
	(0.0079)		(0.01)		(0.00606)	
$CSR\_Committee_{(t-1)}$	0.0596	0.0456	1.411*	1.554*	0.0954	0.196
	(0.326)	(0.329)	(0.825)	(0.878)	(0.338)	(0.344)
$SIZE_{(t-1)}$	0.250*	0.248*	-0.339**	-0.321*	-0.0881	-0.0747
	(0.147)	(0.146)	(0.171)	(0.173)	(0.119)	(0.116)
$ROE_{(t-1)}$	0.00288	0.00288	-0.013	-0.0128	0.0036	0.00382
	(0.00239)	(0.00238)	-0.0169	-0.0158	(0.00227)	(0.00237)
$LEV_{(t-1)}$	-0.0397	-0.061	1.044	1.075	1.754***	1.768***
	-0.701	-0.69	-0.761	-0.743	-0.561	-0.555
$AUDITFEES_{(t-1)}$	0.0249	0.0205	-0.0429	0.0292	-0.043	-0.0331
	-0.141	-0.141	-0.169	-0.177	-0.112	-0.111
$BSIZE_{(t-1)}$	0.609	0.624	1.515***	1.238**	0.00559	-0.0712
	-0.493	-0.497	-0.523	-0.485	-0.354	-0.345
$SEPARATION_{(t-1)}$	-0.487	-0.493	0.934***	0.954***	0.298	0.313
	-0.316	-0.316	-0.335	-0.332	-0.223	-0.223
$FOREIGNOWN_{(t-1)}$	0.0134*	0.0134*	0.0024	0.00211	0.00319	0.00283
	-0.00782	-0.00785	-0.007	-0.00725	-0.00516	-0.00516
$INSTIOWN_{(t-1)}$	0.0104	0.0101	-0.0133*	-0.00931	-0.00804	-0.00721
	-0.00686	-0.00683	-0.00794	-0.00789	-0.00562	-0.00557
Constant	-0.529	-0.658	-2.925	-1.412	-3.448**	-2.749*
	-2.039	-2.061	-2.422	-2.328	-1.665	-1.607
Observations	1,000	1,000	968	968	1,009	1,009
Year indicators	yes	yes	yes	yes	yes	yes
Country indicators	yes	yes	yes	yes	yes	yes
Industry indicators	yes	yes	yes	yes	yes	yes
Pseudo R2	0.2164	0.2162	0.1884	0.1722	0.1779	0.1742

***, ** and * indicate statistical significance at the 1%, 5% and 10% levels respectively. This table presents the results of the logit regression model. The sample consists of 5,608 firm-year observations of European companies listed on the STOXX 600 index over the period 2011-2018. The dependent variable for Models 1 and 2 is the type of assurance provider, a dummy variable equal to 1 if the SA was provided by an accountancy firm, and 0 otherwise; the dependent variable in Models 3 and 4 is the level of assurance, a dummy variable equal to 1 if the level of assurance was reasonable/high, and 0 otherwise; the dependent variable for Model 5 and 6 is the assurance scope, a dummy variable equal to 1 if the CSR/sustainability disclosures were fully assured, and 0 otherwise. respectively. The independent variables are ESG performance, a continuous variable considering the performance on a scale from 0 to 100; and AEM is Accrual earnings management, which is the absolute value of discretionary accruals calculated using the performance-matched model proposed by Kothari et al. (2005). The variables are as defined in Appendix 4.1. All explanatory variables are 1-year lagged to account for a possibly endogenous interdependence.

Table 4.9: Distribution of ESG controversies and external assurance reports across years, geographic zones, and industries.

	ESG Controversies			**Assurance Report**		
	0	1	Percentage of total controversies	0	1	Percentage of total SA reports
Panel A: Year						
2011	385	176	13.72	569	154	11.61
2012	413	159	12.39	547	176	13.27
2013	417	162	12.63	530	193	14.56
2014	446	153	11.93	548	175	13.20
2015	522	95	7.40	521	202	15.23
2016	466	150	11.69	539	184	13.88
2017	485	157	12.24	595	128	9.65
2018	401	231	18.00	609	114	8.60
Panel B: Geographic Zone						
Austria	44	15	1.17	33	31	2.34
Belgium	103	21	1.64	123	37	2.79
Denmark	107	28	2.18	142	18	1.36
Finland	129	31	2.42	82	94	7.09
France	475	210	16.37	639	153	11.54
Germany	413	201	15.67	608	184	13.88
Ireland	38	13	1.01	53	11	0.83
Italy	121	60	4.68	114	118	8.90
Luxembourg	21	5	0.39	48	0	0.00
Netherlands	169	77	6.00	230	90	6.79
Norway	85	30	2.34	129	23	1.73
Poland	19	4	0.31	27	5	0.38
Portugal	22	10	0.78	18	14	1.06
Spain	172	50	3.90	119	121	9.13
Sweden	257	66	5.14	300	108	8.14
Switzerland	272	65	5.07	319	81	6.11
United Kingdom	1,088	397	30.94	1,474	238	17.95
Panel C: Industry						
Basic Materials	387	150	11.69	349	227	17.12
Consumer Discretionary	671	282	21.98	927	193	14.56
Consumer Staples	284	151	11.77	416	104	7.84
Energy	203	104	8.11	205	139	10.48
Healthcare	301	108	8.42	486	66	4.98
Industrial	860	260	20.27	1,022	282	21.27
Real Estate	289	3	0.23	334	66	4.98

Technology	232	35	2.73	335	49	3.70
Telecommunications	163	103	8.03	232	88	6.64
Utilities	145	87	6.78	152	112	8.45
Overall	3,535	1,283		4,458	1,326	

This table presents the distribution of ESG controversies and external assurance reports across years, countries, and industries. ESG controversies is a dummy variable equal to 1 if the company had at least one ESG controversy that was reflected in media sources, and 0 otherwise. Assurance report is a dummy variable equal to 1 if the firm issued a sustainability assurance report in a given year, and 0 otherwise.

Table 4.10: Multicollinearity test

Variable	VIF
SIZE	3.05
AUDITFEES	2.38
BSIZE	1.49
ESG_Performance	1.48
ESG_Controversies	1.37
CSR_Committee	1.33
IO	1.21
LEV	1.2
Separation	1.09
ROE	1.04
FOREIGNOWN	1.04
Mean VIF	**1.52**

Appendix 4.1: Variable Definitions

Assurance Report	Dummy variable equal to 1 if the firm issued a sustainability assurance report in a given year, and 0 otherwise.
Assurance Provider	Dummy variable equal to 1 if the SA was provided by an accountancy firm, and 0 otherwise.
Assurance Scope	Dummy variable equal to 1 if the CSR/sustainability disclosures were fully assured, and 0 otherwise.
Level of Assurance	Dummy variable equal to 1 if the level of assurance was reasonable/high, and 0 otherwise.
ESG Controversies	As provided by ASSET4-Thomson Reuters, equal to 1 if the company had at least one ESG controversy, and 0 otherwise.
ESG Performance	The aggregate ESG performance score was provided by ASSET4 for the firm in question for every year in the sample.
CSR_Committee	Dummy variable equal to 1 if the company had a CSR committee, and 0 otherwise.
SIZE	Natural logarithm of total assets.
Leverage (LEV)	The ratio of total debt to total assets.
Return on Equity (ROE)	The ratio of net income to total equity.
Audit Fees (AUDITFEES)	Natural logarithm of the audit fees paid by the reporting company in a given year.
Board Size (BSIZE)	Natural logarithm of board size.
CEO Chairman separation (SEPARATION)	Dummy variable equal to 1 if there was a separation between CEO and chairman.
Foreign Ownership (FOREIGNOWN)	Total foreign ownership in percentage terms.
Institutional Ownership	Total institutional ownership in percentage terms.

Appendix 4.2: Controversy Measures

List of all controversy measures that make up the ESG controversy category score.

Category	Label (L)	Description (D)
Community	Anti-competition controversy	Number of controversies published in the media linked to anti-competitive behavior (e.g., anti-trust and monopoly), price-fixing or kickbacks.
Community	Business ethics controversies	Number of controversies published in the media linked to business ethics in general, political contributions or bribery and corruption.
Community	Intellectual property controversies	Number of controversies published in the media linked to patents and intellectual property infringements.
Community	Critical countries controversies	Number of controversies published in the media linked to activities in critical, undemocratic countries that do not respect fundamental human rights principles.
Community	Public health controversies	Number of controversies published in the media linked to public health or industrial accidents harming the health and safety of third parties (non-employees and non-customers).
Community	Tax fraud controversies	Number of controversies published in the media linked to tax fraud, parallel imports or money laundering.
Human rights	Child labor controversies	Number of controversies published in the media linked to use of child labor issues.
Human rights	Human rights controversies	Number of controversies published in the media linked to human rights issues.
Management	Mgt compensation controversies count	Number of controversies published in the media linked to high executive or board compensation.
Product responsibility	Consumer controversies	Number of controversies published in the media linked to consumer complaints or dissatisfaction directly linked to the company's products or services.
Product responsibility	Controversies customer health and safety	Number of controversies published in the media linked to customer health and safety.

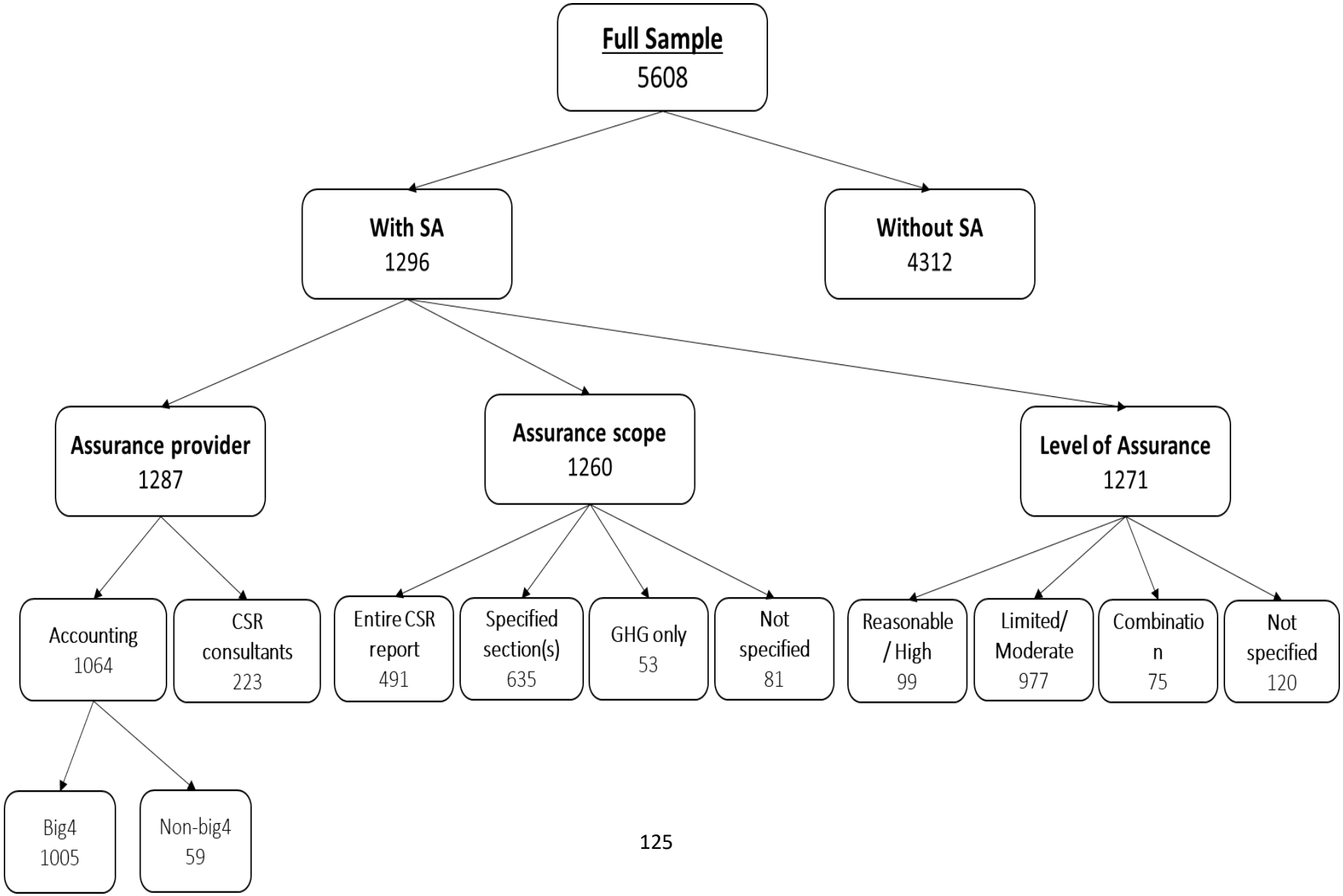
Product responsibility	Controversies privacy	Number of controversies published in the media linked to employee or customer privacy and integrity.
Product responsibility	Controversies product access	Number of controversies published in the media linked to product access.
Product responsibility	Controversies responsible marketing	Number of controversies published in the media linked to the company's marketing practices, such as over-marketing of unhealthy food to vulnerable consumers.
Product responsibility	Controversies responsible R&D	Number of controversies published in the media linked to responsible research and development (R&D).
Resource use	Environmental controversies	Number of controversies related to the environmental impact of the company's operations on natural resources or local communities.
Shareholders	Accounting controversies count	Number of controversies published in the media linked to aggressive or non-transparent accounting issues.
Shareholders	Insider dealings controversies count	Number of controversies published in the media linked to insider dealings and other share price manipulations.
Shareholders	Shareholder rights controversies count	Number of controversies published in the media linked to shareholder rights infringements.
Workforce	Diversity and opportunity controversies	Number of controversies published in the media linked to workforce diversity and opportunity (e.g., wages, promotion, discrimination and harassment).
Workforce	Employee health & safety controversies	Number of controversies published in the media linked to workforce health and safety.
Workforce	Wages or working condition controversies count	Number of controversies published in the media linked to the company's relations with employees or relating to wages or wage disputes.
Workforce	Strikes	Has there has been a strike or an industrial dispute that led to lost working days?

Source: Environmental, Social And Governance (ESG) Scores From Refinitiv, 2020

Appendix 4.3: Grading Criteria of ESG Controversies

Score range	Grade	Description
0.0 <= score <= 0.083333	D -	"D" score indicates poor relative ESG performance and insufficient degree of transparency in reporting material ESG data publicly.
0.083333 < score <= 0.166666	D	
0.166666 < score <= 0.250000	D +	
0.250000 < score <= 0.333333	C -	"C" score indicates satisfactory relative ESG performance and moderate degree of transparency in reporting material ESG data publicly.
0.333333 < score <= 0.416666	C	
0.416666 < score <= 0.500000	C +	
0.500000 < score <= 0.583333	B -	"B" score indicates good relative ESG performance and above average degree of transparency in reporting material ESG data publicly.
0.583333 < score <= 0.666666	B	
0.666666 < score <= 0.750000	B +	
0.750000 < score <= 0.833333	A -	"A" score indicates excellent relative ESG performance and high degree of transparency in reporting material ESG data publicly.
0.833333 < score <= 0.916666	A	
0.916666 < score <= 1	A +	

Figure (1)


Full Sample
5608
With SA
1296
Without SA
4312
Assurance provider
1287
Assurance scope
1260
Level of Assurance
1271
Accounting
1064
CSR consultants
223
Entire CSR report
491
Specified section(s)
635
GHG only
53
Not specified
81
Reasonable / High
99
Limited/ Moderate
977
Combination
75
Not specified
120
Big4
1005
Non-big4
59

CHAPTER 5

5.1 CONCLUSION

This thesis investigated the determinants and consequences of CSR in three essays. The first essay tested the relationship between CSR and EM in family- and non-family-controlled firms, while the second essay examined the impact of CSR on information asymmetry in the same types of firms. The final essay investigated the impact of ESG performance strengths and controversies on the decision to obtain SA reports, the type of assurer, assurance level and scope of assurance. The first and second essays used a sample of UK companies listed on the FTSE all share during the period 2010-2017, given that the UK is described as a leading country in CSR reporting (Beck et al., 2010). The third essay employed a sample of European companies listed on STOXX Europe 600 over the period 2011-2018. This broader sample was chosen in order to select a larger number of SA observations during the study period[41], and European companies were specifically chosen because they are considered leaders in obtaining SA reports (Kolk, 2008, Simnett et al., 2009b).

Overall, after investigating the determinants and consequences of CSR in three essays, it can be concluded that information about CSR contributes positively towards market participants and reduces information asymmetry. However, this kind of information could be symbolically issued by firms that have such real earnings manipulations, meaning that what is disclosed about CSR might not necessarily be congruent with what it is done in reality. Accordingly, some companies that make ethical endeavours and are intrinsically involved in CSR activities tend to audit their CSR information and issue sustainability assurance reports in order to provide a signal to stakeholders about their true commitments. Nevertheless, SA is still less regulated and allows reporting companies, specifically the management, a degree of control over the assurance process, which affects the independence of the assurance provider. Therefore, companies that face ESG scandals and negative events could also use sustainability assurance reports to gain, repair, or maintain legitimacy.

More specifically, the first essay suggests three main hypotheses; the ethical perspective hypothesis, which expects a negative relationship between CSR and the extent of (accrual and/or real) EM,

[41] While the main dependent variable in the third essay is the SA, relying on the UK sample did not give enough observations for this variable. Accordingly, it was necessary to expand the sample to include several Europe companies listed on STOXX Europe 600 (refer to Table 4.9).

opportunistic behaviour hypothesis, which suggests a positive relationship between CSR and (accrual and/or real) EM, and the third hypothesis proposes that family-controlled firms moderate the relationship between CSR and (accrual and/or real) EM.

The findings of the first essay indicate that firms with lower AEM show better CSR ratings, which supports the ethical hypothesis. This means that CSR plays an inspirational role and creates a general atmosphere in which to educate management in adopting a public responsibility-oriented mentality, which consequently constrains EM activities and meets stakeholders' expectations (Kim et al., 2012, Scholtens and Kang, 2013). Alternatively, the findings also show that if the EM stems from real activities, firms use CSR as a camouflaging tool to deviate attention from misconduct, which supports the opportunistic hypothesis, which supports the opportunistic hypothesis (Hemingway and Maclagan, 2004, Prior et al., 2008, Suchman, 1995).

After dividing the sample into family- and non-family-controlled firms, the former showed a stronger relationship between CSR and both RAM and AEM. Further analysis was done by splitting the ESG rating into environmental, social and governance scores. The findings show that the above relationship is no longer consistent when a comparison is made with each dimension, especially for family-controlled firms. Generally, this inconsistency supports the "cherry-picking" strategy that some firms adopt when they apply CSR, as it shows the "dark side" of socioemotional wealth, as discussed by Kellermanns et al. (2012). More specifically, we find that in the case of EM, family-controlled firms pay more attention to activities related to external stakeholders (i.e. the environment) than non-family-controlled firms. Indeed, this motivation can be attributed to the concerns of families to protect and augment their reputation and image, which represents an essential element of SEW (Berrone et al., 2012). Family identity is closely connected to firms, which can be seen by external stakeholders as an extension of the family itself. In many cases, families even link their reputation and name to the products they sell (Bingham et al., 2011a).

Consequently, family-controlled firms are expected to be more willing to support any practices that improve their legitimacy and image to the outside world (Cennamo et al., 2012), especially in the cases of earnings management. In this regard, Berrone et al. (2010) empirically support their premise that family firms are more likely to be responsive towards institutional environmental pressures, discovering that such firms tend to bear the costs involved in applying environmentally-friendly schemes because managers believe that risk is counterbalanced by gains from the social legitimacy derived from conforming to environmental demands.

Generally, the findings of the first essay provide meaningful implications into the CSR strategy that family-controlled firms follow, so would assist British regulators in refining corporate governance rules related to various ownership structures. For policymakers, it is important to confirm that CSR disclosures are congruent with actual activities and not used to mislead stakeholders. In terms of the theoretical and academic implications, the findings provide supporting evidence for the double-edged sword nature of family-controlled firms, which appears in the case of RAM and AEM. Therefore, studies of family firms should consider this issue. Moreover, it has been noticed that considering the CSR components independently can provide further explanation of management behaviour and motivations. Therefore, CSR dimensions should be considered when conducting research related to CSR.

The study has its limitations. At least three aspects should be highlighted. First, SEW was not measured directly, but rather proxied using a dummy variable that takes into consideration both family ownership in the entity and family members on the board. Therefore, it could be difficult to interpret the influence of each SEW dimension, as suggested by Berrone et al. (2012). Future studies could consider the heterogeneity within family-controlled firms by using scales that directly measure SEW (Berrone et al., 2012, Hauck et al., 2016, Debicki et al. 2016, Prügl, 2019). Second, besides the influence of family-controlled firms, future studies could compare these with other ownership types (e.g. institutional ownership and foreign ownership). Third, in spite of the fact that the study period of 2010-2017 was split between the time when CSR disclosures were voluntary, that is prior to 2013, and when they became mandatory after 2013, it tests ESG disclosures without differentiating between voluntary and mandatory ones. Studying the effect of each voluntary and mandatory disclosure separately could provide further explanation of management behaviour. Therefore, future studies could investigate the relationship between CSR and EM before and after the mandating of ESG disclosures in the UK.

The second essay suggests two main hypotheses; the first proposes that CSR disclosures are negatively related to IA, while the second suggests that family-controlled firms moderate the relationship between CSR disclosure and information asymmetry. The findings show that CSR, as an aggregate score, reduces IA. This supports the first hypothesis, which suggests that managers have a fiduciary duty towards all stakeholders, thus meeting the expectations of different stakeholder groups by actively committing to CSR can help improve a company's reputation. Consequently, reputation building is argued to be linked to better quality earnings reporting, which

ultimately reduces IA. This outcome confirms the evidence reported by (Cui et al., 2018, Nguyen et al., 2019).

The second main finding shows that the negative relationship between CSR and IA weakens and even becomes positive in family-controlled firms. This supports the adverse selection perspective of the second hypothesis, in which family-controlled firms take advantage of the information they have access to, to the cost of less-informed investors. Informed investors, with their information advantage, may disguise their trading through small transactions in order to maximise their profit by buying at lower ask prices and selling at higher bid prices. This way of trading can be sustained until any private information is fully disclosed to the public, or as long as the profit from that trading against less-informed investors is adequate to cover any cost of information acquisition (Kyle, 1985). Moreover, Easley and O'hara (2004) suggest that informed investors can adjust their portfolios because of the private information they have, whereas less-informed investors will not be able to do so effectively due to their lack of private information, which will increase IA by raising the risks of less-informed investors, and consequently the bid-ask spread will be widened. Finally, the tests for each ESG pillar (environmental, social and governance scores) show that all components continue to have a negative effect on the bid-ask spread. More specifically, the effect of disclosures related to environmental issues tends to be slightly stronger on IA. However, the moderating role of family-controlled firms in the three models weakens the negative influence of environmental and governance scores but strengthens the negative impact of social scores on IA. This outcome gives an indicator that family-controlled firms follow a cherry-picking CSR strategy rather than applying a holistic approach, and also focus more on information related to social activities.

The findings of this essay could have important implications for regulatory bodies since CSR information helps stakeholders to assess the possible risks of a firm's relationship with its stakeholders. It is necessary to allow investors to have access to such information.

The study has some limitations that could be addressed in future research. First, the variable that represents family-controlled firms is a dummy taking a value 1 if family ownership exceeds 5% and/or there are two or more board members from the family, and 0 otherwise. Relying only on a categorical variable (cut-off point and threshold) (e.g. Anderson and Reeb, 2003, Schulze et al., 2003, Chrisman et al., 2004) may be insufficient, or make it difficult to draw a clear conclusion about family behaviour. Therefore, future studies could use continuous variables, which would better reflect the level of family influence and involvement (e.g. Daily and Near, 2000, Klein et al.,

2005, Chrisman and Patel, 2012), as different cut-off points will be used. Second, the study uses bid-ask spread as a proxy for IA, which is one of the common measures used in previous studies. It would be interesting if future studies verified the findings of this research using different proxies (e.g. stock liquidity (trading volume), price volatility, market to book ratio, the accuracy of analysts' forecasts, and the price impact measure).

The third essay proposes two sets of hypotheses. Hypothesis 1a suggests that there is a positive relationship between CSR performance and SA, while Hypothesis 1b proposes that there is no relationship between CSR controversies and SA. Hypothesis 2a suggests that ESG performance scores are positively associated with the type of assurance provider, level of assurance and assurance scope, while Hypothesis 2b proposes that ESG controversies are negatively associated with the type of assurance provider, level of assurance and assurance scope. The findings in this essay show that not only do highly ESG-committed companies issue SA reports signalling their commitment but also that companies facing ESG scandals and negative events become involved in SA reporting as a way of stakeholders, attention from these scandals. This outcome supports the concerns that SA reports are less well developed in terms of assurance guidance or standards, and that managers have an influence on the assurance process, thus reducing the credibility and quality of assurance reports. Besides, firms with superior ESG performance tend to select higher levels and scopes of assurance, meaning they do not have any material issues to hide and are fully transparent.

The findings of the third essay reveal the tendency to issue SA reports and address several concerns discussed in previous studies. Consequently, it could assist stakeholders and decision-makers in differentiating between symbolic and substantial reports. For standard-setters and policymakers, it is important to pay more attention to the independence of assurance providers and to ensure that management does not influence the SA process.

This study has some limitations that could be taken into consideration by future research. First, it uses combined ESG performance as a single indicator; future studies could test the influence of each pillar (environment, social and governance), or even the ten ESG categories independently, to obtain a clearer insight into the impacts of these on management behaviour. Second, in the study, we attempted to test how SA would face quality issues as a result of less regulated standards and by allowing managers a level of control over the assurance process. We also developed our analysis by testing whether companies with superior CSR show different tendencies towards choosing the assurance provider and the level and scope of assurance,

compared with companies facing ESG controversies. We finally attempted to assess the role of gatekeepers in mitigating the opportunistic use of SA. Future research could address the consequences of 'stakeholders' reaction' of symbolic SA; in other words, the impact of SA on information asymmetry or market value, taking into consideration the moderating role of ESG controversies. Finally, the study uses ESG controversies as a dummy variable equal to 1 if any of the 23 ESG topics[42] occur in a given year, and 0 otherwise. Future studies could address the influence of specific types of ESG controversy on SA.

[42] See Appendix 4.2.

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