



**THE CONTEXTUAL RELATIONSHIP BETWEEN EARNINGS  
MANAGEMENT AND CORPORATE SOCIAL  
RESPONSIBILITY: MANAGERIAL MYOPIA VERSUS MYOPIA  
AVOIDANCE PERSPECTIVES**

By

**Salmin Mostafa**

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## ABSTRACT

This study provides an in-depth investigation of the relationship between corporate social responsibility (CSR) and earnings management (EM), two contemporary issues in academic research. While CSR and EM are linked both empirically and theoretically, prior studies suggest conflicting results on the effect of CSR on EM. The present study addresses this existing debate by examining the CSR-EM relationship more closely through answering *why*, *how* and *when* CSR affects EM. I investigate the CSR-EM relationship using two contrasting managerial behaviour perspectives, namely managerial myopia and myopia avoidance hypotheses. The managerial myopia hypothesis suggests that managers engaged in CSR are short-term oriented, and therefore are more likely to manage earnings. CSR can create more opportunities for EM (opportunity-driven myopia) and/or greater incentives for EM (incentive-driven myopia). In contrast, the myopia avoidance hypothesis suggests that managers engaged in CSR are long-term oriented, and therefore are less likely to manage earnings. This is because managers have genuine concern about their relationships with stakeholders (relationship-driven myopia avoidance), and/or strong ethical and moral values (value-driven myopia avoidance).

The study makes a number of contributions to knowledge and practice, by providing a framework for understanding the CSR-EM relationship through the lens of managerial behaviour perspectives and underlying motives under various contexts. To this end, I undertake three individual research studies.

The first research study examines organisation capital (OC) as a mediating channel via which CSR indirectly affects EM. OC refers to a firm-specific, non-imitable set of intangibles that include the integration of organizational design, process, managerial quality practices and culture. Using structural equation modelling (SEM) and 2 stage least squares (2SLS) estimation on a sample of 46,816 firm-year observations from USA between 2002 and 2017, I find that that in general CSR has a negative direct effect on EM, consistent to the myopia avoidant perspective (long-term orientation). However, the results also show that CSR has a positive indirect effect on EM via OC. This suggests, consistent with the managerial myopia perspective (short-term orientation), that managers engaged in CSR may take advantage of their firm's unique abilities (that is, OC) to manage more earnings.

The second research study examines the direct CSR-EM relationship and the indirect CSR-EM relationship via OC, in a crisis context. Specifically, the study examines the moderated mediation effect of financial distress (FD), a very relevant concept in present times as businesses around the globe are still struggling from the social and economic restrictions imposed by the Covid-19 pandemic. Using SEM and 2SLS estimation on a sample of 36,811 firm-year observations from USA between 2002 and 2017, I find that when firms experience FD, the positive indirect CSR-EM relationship via OC becomes weaker, that is managerial myopia behaviour (short-term orientation) weakens. The result highlights an important role of OC in financially distressed firms. During crisis managers are more likely to divert their efforts and their firms' resources to assist the firm's recovery. When firms with high OC experience crisis, managers are less likely to use CSR opportunistically to manage earnings.

The third research study examines the effects of country-level collectivist culture, corruption and investor protection on the CSR-EM relationship. Using hierarchical linear modelling on a sample of 3,472 firm-year observations from 10 emerging market countries between 2012 and 2016, I find that in emerging market countries, the CSR dimensions have contrasting effects on EM. While the environmental (ENV) dimension has a negative effect on EM, the social dimension has a positive effect on EM. The findings reveal that managers may have different underlying motives behind their engagement in different CSR initiatives. In particular, managers engaged in ENV initiatives tend to be myopia avoidant, whereas managers engaged in SOC initiatives tend to be myopic. The results also show that both collectivism and investor protection separately affect the CSR-EM relationship. Additionally, while collectivism and corruption have a joint effect, collectivism and investor protection do not have a joint effect on the CSR-EM relationship. The findings highlight that cultural background has a stronger influence on the CSR-EM relationship than corruptive practices or institutional framework of a country.

The findings of this study have important implications to theory and practice, particularly for investors, policymakers, regulators, and academics. The findings show that the CSR-EM relationship is contextual. Rather than taking CSR as a reflection of management's ethical disposition, it is important to understand how various contexts may affect managerial behaviour and motives. By examining mediating and moderating factors on the CSR-EM relationship, the study provides an initial foundation to understand the CSR-EM relationship from a managerial behaviour perspective.

## DECLARATION

I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Signed: .....  .....

Date: 12 October, 2021

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## LIST OF THESIS PRESENTATIONS

The proposal and main chapters of this thesis have been presented at and/or submitted to the following conferences and/or seminars:

### ***Presentations***

1. A paper titled “The role of Corporate Social Responsibility on Earnings Management: Evidence from the Asian Economies” was presented at the College of Business Government and Law and College of Humanities, Arts and Social Sciences Higher Degree Research Spring Conference in November 2017.

2. A paper titled “The role of Corporate Social Responsibility on Earnings Management: Evidence from Asia Pacific Countries” was presented at Flinders Business Research Seminar series in March 2018.

3. A paper titled “The role of Corporate Social Responsibility on Earnings Management: Evidence from Asia Pacific Countries” was presented at the 2018 Accounting and Finance Association of Australia and New Zealand (AFAANZ) conference in July 2018 in New Zealand.

4. A paper titled “Earnings Management and Corporate Social Responsibility: The mediating role of Organization Capital” was presented at Flinders Business Research Seminar series in September 2019.

5. A progress report was presented on Chapters 4 and 6 at a Flinders University seminar, organised by the College of Business, Government and Law, Flinders University, in June 2019. The presentation involved an outline of the papers titled:

- i. “The Influence of Culture and Corruption on the Earnings Management and Corporate Social Responsibility Relationship”; and
- ii. “Earnings Management, Corporate Social Responsibility and the Mediating Role of Organization Capital”.

6. A progress report was presented on Chapters 4, 5 and 6 at a Flinders University seminar, organised by the College of Business, Government and Law, Flinders University, in July 2020. The presentation involved an outline of the papers titled:

- i. “Earnings Management, Corporate Social Responsibility and the Mediating Role of Organization Capital”;
- ii. “Earnings Management, Corporate Social Responsibility and Organisation Capital: The Role of Financial Distress as a Moderated Mediator”; and
- iii. “The Influence of Culture and Corruption on the Earnings Management and Corporate Social Responsibility Relationship”.

### ***Submission***

A paper titled “Earnings Management and Corporate Social Responsibility: Investigation of the Direct and Indirect Relationship via Organisation Capital” has been submitted to the Journal of Contemporary Accounting & Economics (JCAE 2022) Annual Symposium and Doctoral Consortium conference in October 2021 (the outcome of the submission is pending).

### ***Upcoming Presentation***

A paper titled “Earnings Management, Corporate Social Responsibility and Organisation Capital: The Impact of Financial Distress” is scheduled to be presented at Flinders Business Research Seminar series in November 2021.

## LIST OF ACRONYMS

ADJROA	Industry-Adjusted Return on Assets
AEM	Accruals Earnings Management
CEO	Chief Executive Officer
COLL	Collectivism
CORR	Corruption
CSR	Corporate Social Responsibility
DV	Dependent Variable
EM	Earnings Management
ENV	Environmental dimension of CSR
EQ	Earnings Quality
FD	Financial Distress
FO	Future Orientation
GDP	Gross Domestic Product
GMM	Generalised Method of Moments
GOV	Corporate governance dimension of CSR
HLM	Hierarchical Linear Modelling
HR	Human Resource
IC	Intellectual Capital
IV	Independent Variable
IFC	International Finance Corporation
INVPRO	Investor Protection
MB	Market to Book Ratio
MED	Mediating variable
ML	Maximum Likelihood

MOD	Moderating variable
MSCI	Morgan Stanley Capital International
OC	Organization Capital
OLS	Ordinary Least Squares
PD	Power Distance
PR	Physical Resources
RBV	Resource-Based View
RD	Research and Development intensity
REM	Real Earnings Management
ROA	Return on Assets
R&D	Research and Development (expenses)
SEC	Securities and Exchange Commission
SEM	Structural Equation Modelling
SG&A	Selling, General and Administrative expenses
SOC	Social dimension of CSR
SOX	Sarbanes-Oxley
TBL	Triple Bottom Line
UAE	United Arab Emirates
USA	United States of America
VIF	Variation Inflation Factor
WEF	World Economic Forum
WGI	Worldwide Governance Indicators
2SLS	2 stage least squares

# INTRODUCTION TO THE STUDY

## 1.1 Introduction and Background

Financial reporting is the key tool through which corporate insiders (managers) communicate information to external stakeholders (such as, shareholders and creditors) (Hong & Andersen, 2011; Mankin et al., 2017). Stakeholders often make important decisions based on the financial reporting information (Mankin et al., 2017; Staubus, 2013). It is therefore critical that financial reporting information is relevant and faithfully represented (International Accounting Standards Board [IASB], 2018). Incorrectly reported information may mislead stakeholders, leading to sub-optimal decisions (Bushman et al., 2011; Healy & Palepu, 2001). Within financial statements, the reported earnings figure is important, as it is a key indicator of financial performance. The reported earnings figure is often used as a basis for: 1) determining compensation plans for executives (including bonuses), 2) assessing debt contracts, and 3) a variety of other decision-making by investors and creditors (Dechow, 1994). Stakeholders expect the quality of reported earnings (also known as, Earnings Quality (EQ)) to be high to enhance their likelihood of making optimal decisions. High EQ refers to an earnings figure that provides an accurate reflection of a firm's current operating performance, a useful prediction of its future operating performance, and a suitable basis for evaluating firm value (Dechow & Schrand, 2004). However, managers may have self-serving motivations to deliberately manipulate the reported earnings, which in turn may lower EQ (Dechow & Schrand, 2004). This is known as Earnings Management (EM) (Dechow & Schrand, 2004; Schipper, 1989). The presence of EM may reduce the relevance and faithful representation of financial information quality, potentially resulting in resource misallocation decisions by stakeholders (Healy & Wahlen, 1999). The first main theme of the present study is EM.

Managers' engagement in EM may be explained from the traditional agency theory perspective introduced by Jensen & Meckling (1976). Agency theory is based on the assumption that due to the separation of ownership (by shareholders) and control (by managers), there may be information asymmetry (agency problem) between shareholders and managers (Gerged et al., 2021; Jensen & Meckling, 1976). Managers may use their greater knowledge and access to the firm's resources, and manage earnings for their private gain, such as, to enhance compensation-based bonuses (Buerthey et al., 2020; Dechow & Schrand, 2004). However, EM may provide misleading information to the shareholders, resulting in negative consequences, such as resource misallocation decisions (Gerged

et al., 2021; Leuz et al., 2003; Martínez-Ferrero et al., 2015; Prior et al., 2008; Wang et al., 2018). Thus, EM is considered an agency cost (Mohmed et al., 2020; Prior et al., 2008; Scholtens & Kang, 2013). Shareholders' responses to the agency problem may include increased monitoring, restructuring of management's compensation plans or even withdrawal of their investments (Chen et al., 2016; Leung et al., 2019). To avoid these negative consequences, managers often take additional initiatives to mitigate the agency problem with shareholders (Gerged et al., 2021). In recent times, a popular initiative that managers have been undertaking is their engagement in Corporate Social Responsibility (CSR) practices (for example, see Almahrog et al., 2018; Calegari et al., 2010; Chen & Hung, 2021; Gras-Gil et al., 2016; Jones, 1995; Martínez-Ferrero et al., 2015; Prior et al., 2008). CSR is defined as a firm's broader responsibilities and obligations towards environmental and societal values, beyond their fundamental obligations of value creation for shareholders (Bowen, 1953; Henderson et al., 2011). Through CSR engagement, managers appear more transparent and ethical not only to shareholders, but also to broader stakeholders, thus instilling trust regarding managerial practices and enhancing reliability on the reported earnings figure (Chih et al., 2008; Gras-Gil et al., 2016; Kim et al., 2012). The second theme of the present study is CSR.

This section provides a brief introduction and background on EM and CSR to set the premise of the present study. More detailed backgrounds of these two issues are discussed in Chapter 2.

### **1.1.1 Earnings Management (EM)**

EM is generally viewed from two perspectives – 1) opportunistic perspective; and 2) information perspective (Lin et al., 2016b). The opportunistic perspective suggests that managers may opportunistically use EM to mislead stakeholders (Healy & Wahlen, 1999; Lewellyn & Bao, 2017; Schipper & Vincent, 2003). In contrast, the information perspective suggests that managers may use EM with a signalling purpose to inform stakeholders of managements' expectations regarding the firms' future cash flow and/or profitability prospects (Burgstahler et al., 2006; Guay et al., 1996). Following an expanse of prior studies, the present study assumes the first perspective, that is, the opportunistic perspective of EM (for example, see Almahrog et al., 2018; Bozzolan et al., 2015; Buertey et al., 2020; Calegari et al., 2010; Chen & Hung, 2021; Cho & Chun, 2015; Chun & Cho, 2017; Faisal et al., 2018; Gao & Zhang, 2015; García-Sánchez et al., 2020; Gerged et al., 2020; Gerged et al., 2021; Gras-Gil et al., 2016; Habbash & Haddad, 2020; Hickman et al., 2021; Hong & Andersen,

2011; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Litt et al., 2013; Martínez-Ferrero et al., 2015; Palacios-Manzano et al., 2019; Patten & Trompeter, 2003; Pratiwi & Siregar, 2019; Riahi-Belkaoui, 2003; Scholtens & Kang, 2013; Sial et al., 2019; Wang et al., 2018).

According to the opportunistic perspective, EM is defined as “a purposeful intervention in the external financial reporting process, with the intention of obtaining some private gain” (Schipper, 1989, p. 92). While this is one of the earliest definitions of EM, a more recent definition, proposed by DeFond (2010), is that EM is the management of accounting numbers without violating the Generally Accepted Accounting Principles (GAAP). Although EM is not a violation of the law or accounting standards, it is considered an unethical act, as it provides misleading information to stakeholders (Lewellyn & Bao, 2017; Schipper & Vincent, 2003), and may lead to severe consequences, such as damaging investor confidence (Dechow et al., 1995), and harming share prices in the long-term<sup>1</sup> (Teoh et al., 1998). Furthermore, it is reported that firms engaged in EM are more likely to commit fraud in subsequent years (Perols & Lougee, 2011). This suggests that EM may be among the initial steps leading to more severe forms of corporate fraud. Thus, it is critical to detect and prevent EM in its early stages, before it extends to accounting fraud (Chih et al., 2008; Cho & Chun, 2015; The Economist, 2014).

To understand EM, it is essential to understand managerial motives and opportunities to engage in EM. The underlying motives for managers’ engagement in EM may include, avoiding violations of debt covenants (Dechow & Schrand, 2004; Jaggi & Lee, 2002), exploiting compensation-based management bonuses (Dechow & Schrand, 2004), inflating stock prices (Healy & Wahlen, 1999; Levitt Jr, 1998), and aligning reported earnings with targeted and forecasted earnings (Dechow & Schrand, 2004; Dechow & Skinner, 2000; Levitt Jr, 1998). EM opportunities may arise for two main reasons. First, the accounting standards provide some flexibility in determination of estimates and judgements in the financial reporting process, creating opportunities for managers to manage these numbers for opportunistic motives (Chung et al., 2002; Gargouri et al., 2010; Healy & Wahlen, 1999). Second, asymmetric information between managers and other stakeholders may also create EM opportunities. Since managers often have better information about the firm than the external stakeholders, including shareholders (Asrori et al., 2019), they may take the opportunity to

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<sup>1</sup> Although EM may boost share prices in the short-term (Healy & Wahlen, 1999; Levitt Jr, 1998), it may harm share prices in the long-term.

deliberately manage earnings for opportunistic motives (Dechow & Schrand, 2004).

EM has become a quite common practice by corporate managers (for example, see Dichev et al., 2013). Several infamous corporate scandal and fraud cases during the last decade, such as, Enron, WorldCom and Xerox, highlight the growing importance of detecting EM, and call for the need for further in-depth research on EM. As a response to the growing number of corporate scandals, the United States Congress implemented the Sarbanes-Oxley (SOX) Act in 2002. The SOX set out guidelines for more effective audit committee, particularly focusing on stricter internal controls and procedures, to curtail EM opportunities (Dechow & Schrand, 2004; Zhang et al., 2013). However, EM and corporate scandals have continued even after the introduction of SOX (Zhang et al., 2013). Thus, it is essential to look beyond accounting standards, legal requirements, and internal control systems, when examining EM. To this end, the present study examines how managerial behaviour and motives, linked to their CSR engagement, affect EM.

### **1.1.2 Corporate Social Responsibility (CSR)**

CSR has become a very familiar concept today. Although the concept of CSR can be traced back to as early as 1920s, the concept did not gain much attention until the 1950s (Smith, 2011). One of the earliest definitions of CSR, coined by Bowen (1953), referred to CSR as the obligations of businesses to pursue policies, decisions and actions that are consistent to the societal values and objectives. More recently, CSR is viewed as the responsibility that firms have on the overall societal welfare, in addition to their prevailing responsibilities of financial gain for the shareholders (Henderson et al., 2011). The concept of CSR is tied to the stakeholder view of firms. Traditionally, in the 1980s, firms were viewed as having responsibilities to only add value to the shareholders/owners (Hubbard, 2009). However, from the 1990s, the stakeholder view gained momentum, as the world became increasingly aware of firms' responsibilities to their stakeholders (Hubbard, 2009). Stakeholders include a wider group alongside the shareholders of the firm, such as, consumers, government, suppliers, employees, debtors, investors and lenders (Ackoff, 1999). Thus, consistent with the stakeholder view, CSR focusses on how a firm's performance and actions affect a wide group of stakeholders, as opposed to merely the shareholders. In the late 1990s, Elkington (1997) introduced the concept of the Triple Bottom Line (TBL) that viewed the CSR framework as composed of three dimensions – namely, economic (or financial), environmental and social initiatives. A noteworthy development in the CSR framework since the TBL is the inclusion of corporate governance as the

fourth dimension. While the economic dimension refers to the financial information, today, CSR is most commonly categorised into the three other dimensions, namely, Environmental, Social and Governance initiatives, also referred to as ESG.

In more recent times, CSR has become more of a norm, as a variety of stakeholders now expect firms to actively incorporate CSR practices into their business operations (Ho et al., 2012). Recent corporate scandals, coupled with environmental concerns (such as, global warming and resource sustainability), and social concerns (such as, human rights issues and working conditions of employees of multinational companies in developing countries) have led to increased attention to the environmental and social responsibilities of firms (Yip et al., 2011). The last few decades have seen a prominent rise in CSR initiatives by firms (Almahrog et al., 2018) and a growing attention by researchers (Cho & Chun, 2015; Ho et al., 2012). By actively engaging in CSR, firms gain a manifold of benefits, such as, positive firm reputation (Branco & Rodrigues, 2006; Epstein & Roy, 2001; Hur et al., 2014; Prior et al., 2008), brand image and loyalty (Chung et al., 2015; Pivato et al., 2008; Werther & Chandler, 2005), reduced agency costs and enhanced trust from stakeholders (Arthur et al., 2015; Pivato et al., 2008; Scholtens & Kang, 2013), boost in employee motivation and retention (Epstein & Roy, 2001; Sprinkle & Maines, 2010; Wagner & Schaltegger, 2004), revenue growth (Sprinkle & Maines, 2010; Wagner & Schaltegger, 2004), tax advantages (Sprinkle & Maines, 2010), and lower cost of capital through reduced perceived risk (Epstein & Roy, 2001; Fombrun et al., 2000).

### **1.1.3 Linking CSR and EM**

Both CSR and EM are two popular but debated contemporary issues in accounting research<sup>2</sup>. These two topics are closely related both theoretically and empirically. These issues seem to have been brought into the spotlight by some notorious corporate scandals, such as the cases of Enron, WorldCom and Xerox (Calegari et al., 2010; Cho & Chun, 2015). Such corporate scandals led to controversies surrounding managerial practices and increased skepticism regarding transparency in financial reporting process. As a result, it has become ever-more important for managers to focus on building reputation and public image. This has led managers across the globe to incorporate CSR activities into their business practices to gain stakeholder support (Calegari et al., 2010; Chih et al.,

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<sup>2</sup> While EM is an accounting and finance issue, CSR is a multi-disciplinary issue that is widely popular in other disciplines, including marketing and management, in addition to Accounting and Finance.

2008; Cho & Chun, 2015; Gao & Zhang, 2015; Kim et al., 2012; Martínez-Ferrero et al., 2015).

Firms with CSR activities are generally presumed to have a higher commitment to ethical values and practices (Jones, 1999), enhancing credibility and reducing agency problem (Pivato et al., 2008; Scholtens & Kang, 2013). However, CSR is also often viewed with skepticism, as managers may have ulterior motives behind their CSR engagement, which may exacerbate the agency problem. For example, managers may use their CSR practices as ‘window-dressing’ to make the firm more appealing to stakeholders, such as consumers, investors and creditors (Fatma & Rahman, 2015). A relevant example is evidenced in the Enron case, a well-known case of corporate fraud and the biggest corporate failure to date (MacCarthy, 2017). While the company was allegedly involved in fraudulent accounting practices, they were actively involved in CSR initiatives. Enron had spent millions of dollars on local charities, won numerous national awards for its CSR initiatives (Smale, 2006), and held a high ranking in the Fortune Magazine due to their CSR engagement (Culpan & Trussel, 2005). This behaviour contradicts the ethical theories that imply that firms with CSR initiatives should behave ethically in their accounting practices, and refrain from the unethical practices, such as EM.

These conflicting views have led numerous researchers to examine the relationship between CSR and managers’ opportunistic activities, that is, EM. However, the findings remain inconclusive, as there are two contrasting perspectives. One perspective suggests that managers engaged in CSR tend to be long-term oriented (myopia avoidant), and are therefore less likely to manage earnings (Chih et al., 2008). Managers’ intrinsic ethical and moral values, and their greater concern for stakeholders may lead them to avoid EM, since EM is considered an unethical act (Kim et al., 2012; Litt et al., 2013; Yip et al., 2011) and an agency problem (Prior et al., 2008; Scholtens & Kang, 2013). A contrasting perspective suggests that managers engaged in CSR may be short-term oriented (myopic), and are therefore more likely to manage earnings for short-term benefits while using CSR as a shield to conceal their EM practices (Hemingway & Maclagan, 2004; Kim et al., 2012; Laux & Leuz, 2009; Prior et al., 2008).

The main objective of the present study is to address this debate on the CSR-EM relationship by providing a more comprehensive and in-depth understanding of this relationship from a managerial behaviour perspective. In doing so, I examine the CSR-EM relationship closely, to address *how*, *why* and *when* CSR affects EM by looking at the issue from a developed country context as well as an

emerging market context. Specifically, I examine a sample of firms from: 1) USA between 2002 and 2017, and 2) 10 emerging market countries, between 2012 and 2016. The next section presents a brief discussion on the gaps in the CSR-EM literature, followed by the research objectives and research questions addressed in this study.

## 1.2 Research Objectives and Questions

The main purpose of the present study is to examine the CSR-EM relationship in-depth by addressing *how*, *why* and *when* CSR affects EM. Prior studies suggest conflicting findings regarding the effect of CSR on EM. To address this debate, the present study examines the *direct* effect of CSR on EM. While prior studies have examined various contexts affecting the CSR-EM relationship, providing insights on *when* (that is, under what situations or contexts) CSR affects EM, the questions ‘*why* or *how* CSR affects EM’ remain unaddressed to date. Thus, the present study fills this gap in the literature by examining the indirect relationship between CSR and EM. An indirect relationship exists when an independent variable (CSR in the present study) affects another variable (known as the mediator), and the mediator in turn affects the dependent variable (EM in the present study) (Baron & Kenny, 1986).

Different streams of literature show that CSR enhances various forms of intangible resources (known as intellectual capital of firms) (for example, see Altuner et al., 2015; Hawn & Ioannou, 2016; Massaro et al., 2018), and some components of intellectual capital may create more EM incentives (for example, see Bhandari et al., 2018; Francis et al., 2008; Malmendier & Tate, 2009; Shust, 2015). This suggests that the intellectual capital component may be an indirect channel through which CSR affects EM. Furthermore, prior studies have found that CSR indirectly affects firm performance via intellectual capital (for example, see Jain et al., 2017; Surroca et al., 2010). However, the role of intellectual capital in the CSR-EM relationship has not been examined. The present study looks at Organization Capital (OC), a specific component of intellectual capital, as a mediating channel in the CSR-EM relationship. OC is defined as a firm-specific, non-imitable set of intangibles that include an integration of organizational design, process, managerial quality practices and culture (Attig & Cleary, 2015; Lev et al., 2009). Examining the indirect CSR-EM relationship via OC will provide an understanding on *why* or *how* CSR may affect EM, by embedding within the organizational design,

process, practices, and culture (that is, OC). To this end, the first objective for this study is as follows:

*Research Objective 1:* To investigate *why* and *how* CSR affects EM, by examining the direct CSR-EM relationship and indirect CSR-EM relationship via OC.

Research objective 1 is addressed by answering the following two research questions:

*Research Question 1.1:* Does CSR have a significant *direct effect* on EM?

*Research Question 1.2:* Does CSR have a significant *indirect effect* on EM via OC?

As discussed earlier, prior studies have examined various contexts (moderating effects) on the CSR-EM relationship, providing insights into the question *when* CSR affects EM. However, the effect of crisis situations on the CSR-EM relationship has not gained research attention. I focus on a specific firm-level crisis event, namely Financial Distress (FD). FD is a situation when firms do not have sufficient assets to fulfill their outstanding financial obligations (Baldwin & Mason, 1983). Prior studies suggest that FD creates more incentives for EM (for example see Charitou et al., 2007, 2011; Chen et al., 2010; DeAngelo et al., 1994; DeFond & Jiambalvo, 1994; Habib et al., 2013; Jacoby et al., 2019; Jaggi & Lee, 2002; Li et al., 2020; Rosner, 2003; Sweeney, 1994). In crisis situations, managers' priorities and actions may become more opportunistic, making EM more prominent as managers may try to conceal or delay the distressed state of their firms from stakeholders (Charitou et al., 2007). This suggests that FD may change the CSR-EM relationship. To address this, I examine the effect of FD on the direct CSR-EM relationship, as well as the indirect CSR-EM relationship via OC. This will provide insights on *when* CSR affects EM directly, and *when* CSR affects EM indirectly via OC. To this end, the second objective for this study is as follows:

*Research Objective 2:* To investigate *when* CSR has a *direct effect* on EM, and when CSR has an *indirect effect* on EM via OC, by examining the context FD.

Research objective 2 is addressed by answering the following two research questions:

*Research Question 2.1:* Does FD have a significant effect on the *direct* CSR-EM relationship?

*Research Question 2.2:* Does FD have a significant effect on the *indirect* CSR-EM relationship via OC?

Research on CSR-EM has traditionally focussed on developed countries, with emerging market countries gaining interest only recently. The unique cultural, political and legal characteristics of emerging market countries make them more susceptible to EM (for example, see Ernst & Young, 2016; Leuz et al., 2003; Lin & Wu, 2014; Lourenço et al., 2018; Viana Jr et al., 2021). However, the effect of these challenges on the CSR-EM relationship has not gained much research attention. To capture these unique challenges that emerging markets face, I focus on how the CSR-EM relationship is affected by: 1) collectivism (COLL) culture - for social and demographic challenges, 2) corruption (CORR) - for political challenges, and 3) investor protection (INVPRO) - for legal and policymaking challenges. Since political and legal challenges co-exist with the cultural background of the country, I also examine the joint effects of COLL and CORR, and COLL and INVPRO on the CSR-EM relationship. This will provide further insights on *when* CSR affects EM in emerging market countries. To this end, the third objective for this study is as follows:

*Research Objective 3:* To investigate *when* CSR affects EM, by examining the contexts COLL, CORR and INVPRO in emerging market countries.

Research objective 3 is addressed by answering the following three research questions:

*Research Question 3.1:* Does CSR have a significant effect on EM in emerging market countries?

*Research Question 3.2:* Do COLL and CORR, *individually and jointly*, have significant effects on the CSR-EM relationship in emerging market countries?

*Research Question 3.3* Do COLL and INVPRO, *individually and jointly*, have significant effects on the CSR-EM relationship in emerging market countries?

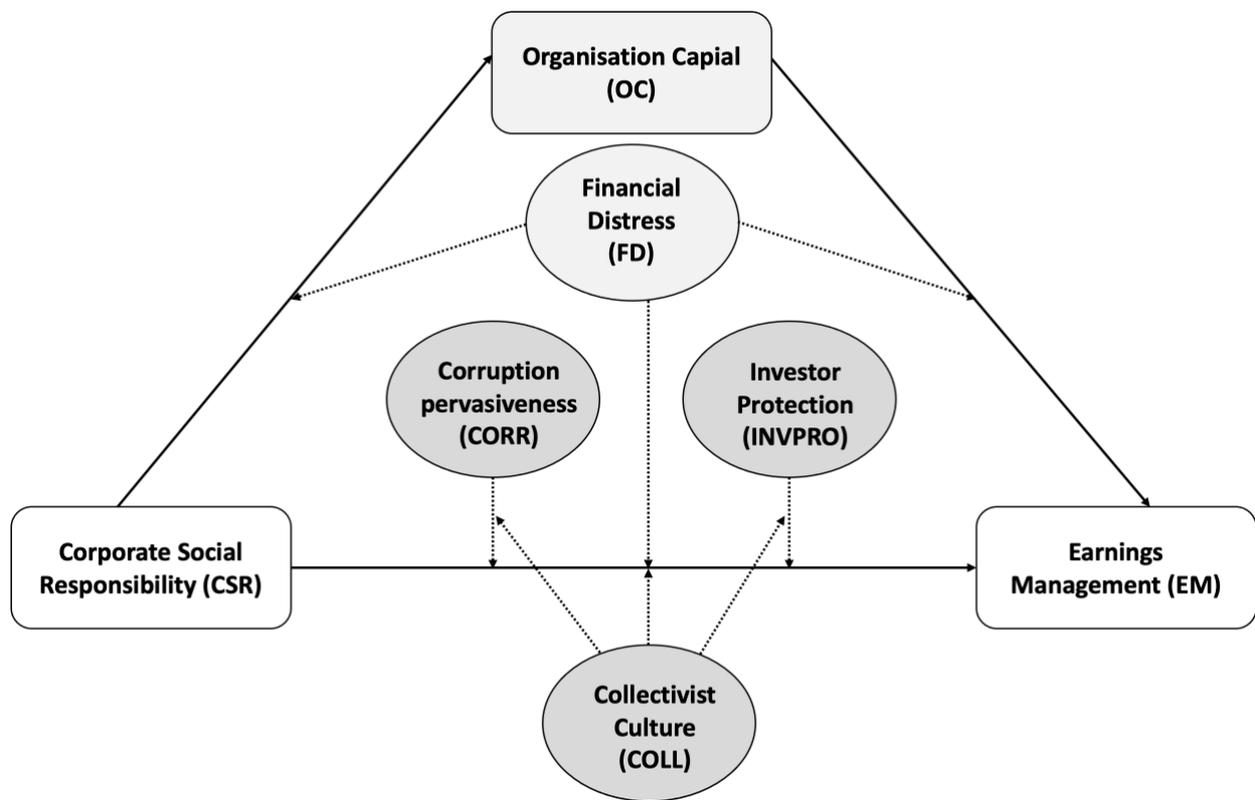
Table 1.1 summarises the three research objectives and the research questions for each. To address the research objectives, I undertake three research studies. The next section discusses the three research studies.

**Table 0.1 Research Objectives and Research Questions**

Research Objectives	Research Questions
<p>1. To investigate <i>why</i> and <i>how</i> CSR affects EM, by examining the direct CSR-EM relationship and indirect CSR-EM relationship via OC.</p>	<p>1.1. Does CSR have a significant <i>direct</i> effect on EM?                      1.2. Does CSR have a significant <i>indirect</i> effect on EM via OC?</p>
<p>2. To investigate <i>when</i> CSR has a direct effect on EM, and <i>when</i> CSR has an indirect effect on EM via OC, by examining the context FD.</p>	<p>2.1. Does FD have a significant effect on the <i>direct</i> CSR-EM relationship?                      2.2. Does FD have a significant effect on the <i>indirect</i> CSR-EM relationship via OC?</p>
<p>3. To investigate <i>when</i> CSR affects EM, by examining the contexts COLL, CORR and INVPRO in emerging market countries.</p>	<p>3.1. Does CSR have a significant effect on EM in emerging market countries?                      3.2. Do COLL and CORR, <i>individually and jointly</i>, have significant effects on the CSR-EM relationship in emerging market countries?                      3.3. Do COLL and INVPRO, <i>individually and jointly</i>, have significant effects on the CSR-EM relationship in emerging market countries?</p>

### 1.3 Research Studies and Conceptual Framework

As outlined in the previous section, this study has three main research objectives. To answer these research objectives, I undertake three research studies, discussed in depth in Chapters 4 to 6. In this section, I provide a brief overview of the three research studies. Figure 1.1 below shows the conceptual framework for the thesis. More detailed versions of the conceptual framework, broken down for each research study, are presented in Chapters 4, 5 and 6.



**Figure 0.1 The Conceptual Framework for the Thesis**

To answer the first research objective, I use a sample of 46,816 firm-year observations from USA between 2002 and 2017. As discussed earlier, there are two contrasting views on the CSR-EM relationship. The first view suggests that managers engaged in CSR tend to be long-term oriented, and thus they avoid myopic (or short-term) actions, such as EM. This is consistent to the myopia avoidance hypothesis (Chih et al., 2008). The contrasting view suggests that managers engaged in CSR are more likely to manage earnings for short-term objectives, such as, to meet quarterly earnings targets (for example, see Chih et al., 2008; Nikolov, 2018). This view is consistent with the managerial myopia hypothesis. To understand whether the CSR-EM relationship is driven by managers' myopia avoidance behaviour or managerial myopic behaviour (that is, long-term orientation or short term-orientation), I examine how CSR affects EM directly, and indirectly via OC. In the process of examining the indirect CSR-EM relationship via OC, I also examine the two indirect paths involved – 1) the relationship between CSR and OC, explained from the perspectives of the resource-based view (RBV) theory, and 2) the relationship between OC and EM, explained from the perspectives of the managerial myopia hypothesis. This constitutes my first research study and is

discussed in Chapter 4.

To address the second research objective, I use a sample of 36,811 firm-year observations from USA between 2002 and 2017. The literature suggests that FD creates various incentives for managers to manage earnings, such as, to enhance short-term remuneration (Altman, 1984), to avoid debt covenants violations or obtain waivers for violations (Charitou et al., 2011; Dichev & Skinner, 2002; Jaggi & Lee, 2002; Sweeney, 1994) to safeguard their employment (Charitou et al., 2011), or to conceal the firm's distressed state and obtain better renegotiation terms (Burgstahler & Dichev, 1997; DeAngelo et al., 1994; Rosner, 2003). Arising from the notion that FD may change managerial incentives, I test whether FD may change managerial behaviour and motives in terms of the CSR-EM relationship. Specifically, my second objective is to understand whether managerial behaviour (specifically managerial myopia and myopia avoidance) changes when the firm experiences FD. Thus, I examine the effect of FD on the direct CSR-EM relationship and the indirect CSR-EM relationship via OC. In the process of examining the effect of FD on the indirect CSR-EM relationship, I also examine the effect of FD on each of the indirect paths involved – 1) the effect of FD on the relationship between CSR and OC, explained from two contrasting perspectives, namely the RBV and the slack resources theory, and 2) the effect of FD on the relationship between OC and EM, explained from the perspectives of the managerial myopia hypothesis. This constitutes my second research study, discussed in Chapter 5.

To answer the third and final research objective, I use a sample of 3,472 firm-year observations, from 10 emerging market countries, between 2012 and 2016. The 10 emerging market countries include Brazil, China, India, Indonesia, Malaysia, Russia, South Africa, South Korea, Taiwan and Thailand. The literature suggests that the unique challenges (or characteristics of emerging markets, specifically, cultural, political and legal characteristics, play an important role in determining managerial behaviour and EM incentives and opportunities (for example, see DeFond et al., 2007; Leuz et al., 2003; Lourenço et al., 2018). To understand how these characteristics play a role in determining managerial behaviour (specifically, whether managerial myopia or myopia avoidance are more prevalent), I examine the CSR-EM relationship and the effects of COLL, CORR and INVPRO on the CSR-EM relationship. Consistent with the informal institutions perspective, COLL and CORR, are expected to escalate managerial opportunistic behaviour (Lyu et al., 2016; Zhang et al., 2013), while, consistent with the social norm theory, INVPRO is expected to inhibit opportunistic behaviour

(Chen et al., 2016). Examining the role of these factors on the CSR-EM relationship will provide an understanding of the CSR-EM relationship in a broader context (emerging market countries) and also explain *when* CSR affects EM in emerging market countries. Additionally, I disintegrate overall CSR and examine the effects of the individual CSR dimensions (economic, social and governance) on EM, to obtain an understanding on whether managerial motives and behaviour may vary based on the CSR dimensions. To address the third research objective and investigate *when* CSR affects EM, I examine the individual effects of COLL, CORR and INVPRO as well as the joint effects of COLL and CORR, and COLL and INVPRO on EM. This constitutes my third research study, discussed in Chapter 6.

This section has introduced the three research studies undertaken to address the research objectives outlined earlier. The next section presents the justification of the study.

#### **1.4 Justification and Motivation of the Study**

There is a lack of consensus in the literature regarding the relationship between CSR and EM. While some studies suggest that CSR has role in inhibiting EM (for example, see Almahrog et al., 2018; Calegari et al., 2010; Cho & Chun, 2015; Kim et al., 2012; Kumala & Siregar, 2020; Litt et al., 2013; Palacios-Manzano et al., 2019; Scholtens & Kang, 2013), others provide a contrasting opinion by suggesting that CSR has a role in escalating EM (for example, see Buerthey et al., 2020; Habbash & Haddad, 2020; Hickman et al., 2021; Pratiwi & Siregar, 2019; Riahi-Belkaoui, 2003). The mixed findings in the literature regarding the CSR-EM relationship warrant further in-depth investigation into this issue to identify various contexts and factors that may contribute to the CSR-EM relationship. The main purpose of this research is to examine the CSR-EM relationship in-depth by examining various firm-level and country-level contexts to provide further insights into this important issue. Specifically, I address the questions *why*, *how* and *when* CSR may affect EM, using managerial behaviour perspectives.

To this end, my first research objective is to examine the direct relationship between CSR and EM, and the indirect relationship via OC. By examining the direct relationship between CSR and EM, the study addresses the existing debate in the literature. By examining the indirect relationship, the study investigates the CSR-EM issue more intensively and addresses *why* and *how* CSR affects EM.

An indirect relationship (that is, mediation effect) will explain whether the independent variable (CSR) affects the dependent variable (EM) through a channel or tool. Thus, I posit that, to understand the effect of CSR on EM, it is crucial to go beyond just moderating effects (that address *when* CSR affects EM) and start examining the questions *why* and *how* CSR affects EM, by examining mediating channels.

The mediating channel used in this study is OC, an important component of intellectual capital. The motivation for considering OC as a mediating channel primarily originates from the growing importance of intellectual capital for firms. While CSR and EM have been in the spotlight of academic research for some years now, on a parallel continuum, research on intellectual capital and OC have also gained significant momentum. The growth of intangible industries, such as, internet, software, and biotech, since the mid-1980s has contributed to the increase of attention to intellectual capital (Nakamura, 1999). In most first world economies, the primary sources of gross domestic product (GDP) have shifted from manufacturing-based industries and traditional commodities to services and intangible outputs (Petty & Guthrie, 2000), making intellectual capital very significant. As a result of the growing significance of intellectual capital, particularly in the USA economy (see Srivastava, 2014), OC is also becoming a trending research topic among contemporary accounting researchers (for example, Attig & Cleary, 2014, 2015; Black & Lynch, 2005; Bloom et al., 2010; Brynjolfsson et al., 2002; Carlin et al., 2012; Eisfeldt & Papanikolaou, 2013; Hasan & Cheung, 2018; Lev et al., 2009).

While firms are progressively shifting towards more knowledge based investments, this intellectual capital information is not reported in the balance sheet (Canibano et al., 2000). As a result, financial statements are losing their efficiency and informativeness by being unable to provide all the relevant information regarding firm value (Canibano et al., 2000; Toorchi et al., 2015). This loss of relevance of financial information is best proved by the increasing gap between market value and book value of equity as suggested by some studies (for example, see Amin & Lev, 1996; Canibano et al., 2000; Lev & Zarowin, 1999; Roslender & Fincham, 2001). Thus, when examining the quality of financial information and the possible factors like CSR and EM that affect financial information quality, it is essential to not overlook intellectual capital. The present study looks at OC, a specific component of intellectual capital. I argue that since intellectual capital is a broad concept, not all components of intellectual capital (such as, human capital and relational capital) may be directly

relevant to managerial practices. Thus, the broader issue of intellectual capital may not be appropriate for examining CSR and EM, both of which are results of managerial practices and actions. Therefore, I examine OC, a component of intellectual capital that is relevant to managerial quality practices (Attig & Cleary, 2015), and is referred to as the unique managerial culture imprinted on the organisations (Bloom et al., 2010).

My second research objective is to examine the effect of FD on the direct CSR-EM relationship, and the indirect CSR-EM relationship via OC. This will address the questions *when* CSR directly affects EM, and *when* CSR indirectly affects EM via OC. To gain a more comprehensive understanding on the direct and indirect CSR-EM relationship, I examine whether the relationship holds when specific firm-level events change, in particular when the firm experiences a crisis situation. The motivation for choosing a crisis situation comes from the current worldwide Covid-19 pandemic outbreak. The years 2020 and 2021 have seen businesses suffer worldwide, resulting from country-wide restrictions, as well as international border restrictions (Barua, 2020). Thousands of businesses have shut down, and thousands are still struggling financially. A news report from CNBC stated that as of August 31, 2020, 97,966 businesses in USA alone have shut down permanently due to the pandemic (see Sundaram, 2020). I have therefore chosen to focus on FD, as this is a firm-level crisis event that is relevant in the current era where the struggle to overcome the pandemic, as well as the struggle for economic recovery continues. Since the CSR-EM relationship is explained using managerial behaviour theories and perspectives, it is important to look at how managers' behaviour and motives may change in reaction to crisis or pressure situations resulting from FD.

My third research objective is to examine the CSR-EM relationship in a broader context, focussing on 10 emerging market countries, and examine how COLL, CORR and INVPRO affect the CSR-EM relationship. Research on CSR-EM have traditionally been popular in developed countries, with emerging market countries gaining interest only since 2015 (see Cho & Chun, 2015). Emerging markets are characterised as markets with high potential for economic growth (Kaymak & Bektas, 2015). However, due to the instability of policymaking in these markets, emerging market countries experience social, economic, political and demographic challenges (Kaymak & Bektas, 2015). The unique cultural, political and legal characteristics of emerging market countries make them more susceptible to EM (for example, see Ernst & Young, 2016; Leuz et al., 2003; Lin & Wu, 2014; Lourenço et al., 2018; Viana Jr et al., 2021). Thus, it is imperative to conduct further CSR-EM research in

emerging market countries more susceptible to EM, to gain a more comprehensive understanding of the CSR-EM relationship. To capture the unique social, demographic, political and legal challenges that emerging markets face, I focus on the effect of COLL culture (for social and demographic challenges), CORR (for political challenges) and INVPRO (for legal and policymaking challenges) on the CSR-EM relationship. I posit that in an emerging market context, rather than examining an indirect CSR-EM relationship (as I have done to address the first two research objectives), it is more relevant to examine how these unique challenges (COLL, CORR and INVPRO) affect the relationship between CSR and EM. This will address *when* CSR affects EM in an emerging market context.

## 1.5 Contribution of the Study

The present study makes important contributions to literature and theory. The study addresses the existing debate on the CSR-EM relationship, by providing in-depth examination of various factors that may explain the relationship. First, to explain *why* and *how* CSR may affect EM, I examine the indirect relationship between CSR and EM via a mediating channel. To the best of my knowledge, this is the first study to examine the indirect CSR-EM relationship. Several prior studies have examined factors that may moderate the CSR-EM relationship. While moderating effect looks at contexts that may explain *when* CSR affects EM, it does not address *why* and *how* CSR affects EM. By incorporating OC as a mediator in the indirect CSR-EM relationship, the study also contributes to the literature on OC (and to intellectual capital in general) by linking the concepts CSR, OC and EM. To explain the CSR-EM relationship, the study uses two contrasting managerial behaviour perspectives (the managerial myopia hypothesis and the myopia avoidance hypothesis) to explain *why* and *how* managers' engagement in CSR may have a constraining role on EM, or *why* and *how* managers' engagement in CSR may have an opportunistic role in covering up EM.

Second, to further examine *when* the direct and indirect CSR-EM relationships hold, the study examines a firm-level context, namely FD. In doing so, the study contributes to the FD literature, by linking FD with the key concepts, CSR, OC and EM. Prior studies have examined the effect of various contexts on the CSR-EM relationship. However, to the best of my knowledge, the effect of FD on the CSR-EM relationship has not been examined yet. As discussed earlier, FD has become a relevant issue for firms since the outbreak of the Covid19 pandemic. The literature suggests that in crisis situations, such as FD, managers' priorities and actions may become more opportunistic, making

EM more prominent (Charitou et al., 2007). This suggests that FD may have an effect on the CSR-EM relationship. I examine the effect of FD on the direct and indirect CSR-EM relationship, using the two contrasting managerial behaviour perspectives (the managerial myopia hypothesis and the myopia avoidance hypothesis) to provide better understanding on managerial behaviour during crisis. This will provide an understanding of – 1) *when* CSR has a direct effect on EM, and 2) *when* CSR has an indirect effect on EM via OC, in the context of FD. The study also provides several methodological contributions. First, to the best of my knowledge, this is the first study to examine a *moderated mediation effect* on the CSR-EM relationship. In the process of examining the effect of FD on the indirect CSR-EM relationship via OC (that is, the moderated mediation effect), the study makes two further methodological contributions – 1) examination of the effect of FD on the CSR-OC relationship (first-stage moderation), 2) examination of the effect of FD on the OC-EM relationship (second-stage moderation). To the best of my knowledge, these two relationships have also not been examined by prior studies.

Third, to gain further in-depth insights on the CSR-EM relationship, the study uses a regional sample of 10 emerging market countries, to examine how the CSR-EM relationship may be affected by the unique challenges (specifically, COLL, CORR and INVPRO) that emerging market countries face. CSR-EM research have gained attention in emerging market countries only recently. Prior studies have looked at emerging market countries, such as, Korea (see Cho & Chun, 2015; Choi et al., 2018; Chun & Cho, 2017), Egypt (see Mohamed et al., 2020), India (see Hickman et al., 2021), Indonesia (see Faisal et al., 2018; Kumala & Siregar, 2020; Pratiwi & Siregar, 2019), Kuwait (see Gerged et al., 2020), Saudi Arabia (see Habbash & Haddad, 2020), South Africa (see Buertey et al., 2020; Jordaan et al., 2018), Taiwan (see Chen & Hung, 2021) and United Arab Emirates (UAE) (see Kolsi & Attayah, 2018). China has also gained quite substantive interest in recent years (for example, see Gong & Ho, 2018; Kim et al., 2019; Li & Xia, 2018; Liu & Lee, 2019; Rezaee et al., 2020; Sial et al., 2019; Wang et al., 2018; Zhang et al., 2021). However, to the best of my knowledge, a regional emerging market context (containing multiple emerging market countries) has not been examined. Examining a regional sample enhances the relevance of the results to an entire region (multiple countries with similar cultural and institutional frameworks), as opposed to being restricted to a single country. Furthermore, by examining the effects of COLL, CORR and INVPRO on the CSR-EM relationship, the study links managerial behaviour perspectives to the formal and informal institutions perspectives of the institutional theory, that discuss opportunities and incentives for EM. In particular, the study

explains the two contrasting perspectives of managerial behaviour (managerial myopia and myopia avoidance) in an emerging market context, in light of differences in COLL, CORR and INVPRO. Prior studies have examined how each of these factors individually effect EM. For example, many prior studies suggest that COLL has a positive effect on EM (for example, see Callen et al., 2011; Doupnik, 2008; Nabar & Boonlert-U-Thai, 2007; Zhang et al., 2013), CORR also has a positive effect on EM (for example see Lourenço et al., 2018; Riahi-Belkaoui, 2004; Riahi-Belkaoui & AlNajjar, 2006), while INVPRO has a negative effect on EM (for example, see Cahan et al., 2008; Francis & Wang, 2008; Haw et al., 2011; Leuz et al., 2003; Persakis & Iatridis, 2016; Shen & Chih, 2005). However, to the best of my knowledge, the effects of COLL and CORR on the CSR-EM relationship are yet to be explored. Although some studies have also examined the effect of INVPRO on the CSR-EM relationship, suggesting that INVPRO strengthens (weakens) the negative (positive) relationship between CSR and EM (for example, see Chih et al., 2008; Martínez-Ferrero et al., 2015; Scholtens & Kang, 2013), the present study is different, as it examines the *individual* moderating effects of COLL, CORR and INVPRO, as well as the *joint* moderating effects of COLL and CORR, and COLL and INVPRO, on the CSR-EM relationship. I posit that it is important to examine the joint effects of these factors because the country-level political and legal factors (CORR and INVPRO) co-exist with the cultural background (COLL), as opposed to existing individually. Examining the moderating effect of these factors shows whether or not the CSR-EM relationship changes with the unique characteristics of emerging market countries, thus explaining *when* CSR affects EM in these countries. By examining the CSR-EM relationship using a regional sample, the study also makes an important methodological contribution. The study uses the Hierarchical Linear Modelling (HLM) technique to examine the multi-level variables. To the best of my knowledge, the test of the joint effect of country level variables and the use of multi-level analysis techniques have not been adopted in the CSR-EM literature.

## **1.6 Thesis Structure**

The thesis is organised into seven chapters to address the research objectives and research questions outlined earlier.

### **Chapter 1: “Introduction to the Research Study”**

Chapter 1 has introduced the two main issues – CSR and EM, outlining the research objectives and

research questions, followed by a background and justification of the CSR-EM relationship. Chapter 1 also discusses the contributions of the study.

## **Chapter 2: “Corporate Social Responsibility and Earnings Management – Background and Literature Review”.**

Chapter 2 begins with a detailed examination of the background of CSR, outlining the various definitions of CSR, followed by a discussion on the motives behind CSR engagement, the various CSR dimensions, and a comparison of CSR in developed versus emerging markets. The chapter then provides a detailed examination of the background on EM, discussing the managerial motives and opportunities that lead to EM engagement, the different types of EM and a comparison of EM engagement in developed versus emerging markets. The chapter then links the concepts of CSR and EM together theoretically, discussing the theoretical background explaining the CSR-EM relationship, specifically from two contrasting perspectives – the managerial myopia hypothesis and the myopia avoidance hypothesis. Next, a detailed literature review is presented, discussing prior studies examining the CSR-EM relationship.

## **Chapter 3: Corporate Social Responsibility and Earnings Management – Measurement of Variables.**

Chapter 3 discusses the measurements of CSR and EM. For all three research studies undertaken in this study, CSR and EM are the main independent and dependent variables, respectively. The Chapter begins with a discussion on the data source for CSR, followed by a discussion on the primary measure and alternate measures of CSR used in this study. Next, the chapter discusses the measurement of EM, outlining the primary and alternate EM measures used.

## **Chapter 4: Earnings Management and Corporate Social Responsibility: Investigation of the Direct and Indirect Relationship via Organisation Capital.**

Chapter 4 reports on my first research study, undertaken to address research objective 1, and research questions 1.1 and 1.2. Chapter 4 examines the direct relationship between CSR and EM, and the indirect relationship between CSR and EM via the mediating effect OC. The chapter begins with a background and introduction to OC, a component of intellectual capital. The chapter then discusses the theoretical background, explaining the key relationships. The direct and indirect

relationship between CSR and EM are based on two opposing perspectives, explained by the managerial myopia hypothesis, and the myopia avoidance hypothesis. The relationship between OC and EM is explained by the same two opposing perspectives. The relationship between CSR and OC is explained by the RBV theory. Following the theoretical background, Chapter 4 then presents the literature review, hypothesis development and the conceptual framework. Next, the methodology and findings are discussed, followed by a conclusion.

#### **Chapter 5: Earnings Management, Corporate Social Responsibility and Organisation Capital: The Impact of Financial Distress.**

Chapter 5 discusses the second research study, undertaken to address research objective 2, and research questions 2.1 and 2.2. Chapter 5 examines the moderating effect of FD on the direct relationship between CSR and EM, and on the indirect relationship between CSR and EM via the mediating effect OC. The chapter begins with a background and introduction to FD. The chapter then discusses the theoretical background explaining the key relationships. The effect of FD on the direct and indirect relationships between CSR and EM is explained by the two contrasting perspectives of the managerial myopia hypothesis and the myopia avoidance hypothesis. The effect of FD on the relationship between OC and EM is also explained by the same two contrasting perspectives. The effect of FD on the relationship between CSR and OC is explained by two other contrasting perspectives – the RBV theory and the slack resources theory. Following the theoretical background, Chapter 5 then presents the literature review, hypothesis development and the conceptual framework. Next, the methodology and findings are discussed, followed by a conclusion.

#### **Chapter 6: Earnings Management and Corporate Social Responsibility: The Impact of Collectivist Culture, Corruption and Investor Protection in Emerging Markets**

Chapter 6 discusses the third research study, undertaken to address research objective 3, and research questions 3.1, 3.2 and 3.3. Chapter 6 examines the relationship between CSR and EM in emerging markets, and the moderating effect of COLL, CORR and INVPRO on the CSR-EM relationship. The chapter begins with a background on emerging markets, discussing its unique context in terms of COLL, CORR and INVPRO. The chapter then discusses the theoretical background explaining the key relationships. The relationship between CSR and EM is explained by the two contrasting perspectives of the managerial myopia hypothesis and the myopia avoidance

hypothesis. The effect of COLL and CORR on the relationship between CSR and EM is explained by the informal institutions perspective, while the effect of INVPRO is explained by the social norm theory. Following the theoretical background, Chapter 5 then presents the literature review, hypothesis development and the conceptual framework. Next, the methodology and findings are discussed, followed by a conclusion,

## **Chapter 7: Discussion and Summary**

Chapter 7 is the final chapter of this thesis. The chapter re-visits the research objectives and research questions discussed earlier, addressing them with the findings obtained from the three research studies. The chapter then discusses the implications of the findings, followed by a discussion on the scope and limitations of the study, and an outline on some future research directions.

### **1.7 Chapter Summary**

This chapter introduces the research study. The research concerns the relationship between CSR and EM. Addressing the widely debated issue on the direction of the relationship between CSR and EM, the research aims to provide more in-depth understanding of CSR-EM by addressing *why, how and when* CSR affects EM. The study outlines three main research objectives, and seven research questions. The research objectives are addressed by undertaking three research studies. The first two research studies use samples of firms from USA. The first study examines the direct relationship between CSR and EM, and the indirect relationship between CSR and EM via the mediating channel OC. The second research study examines a moderated mediating effect of FD on the CSR and EM relationship. The third research study uses a sample from 10 emerging market countries and examines the effects of three macro level factors, namely COLL, CORR and INVPRO on the relationship between CSR and EM. The study makes several important contributions to literature, theory and methodology.

## **CHAPTER 2 CORPORATE SOCIAL RESPONSIBILITY AND EARNINGS MANAGEMENT – BACKGROUND AND LITERATURE REVIEW**

### **2.1 Introduction**

The main purpose of this research is to examine the relationship between Corporate Social Responsibility (CSR) and Earnings Management (EM) in various contexts. This chapter outlines the background of the two key issues examined in this study, that is, CSR and EM. Both CSR and EM issues have individually gained significant momentum in academic research in the last several years. This chapter considers these two issues, CSR and EM, individually and together (that is, the relationship between CSR and EM).

The rest of this chapter is organized as follows: Section 2.2 provides a discussion on CSR, including the different CSR definitions, and incentives behind engaging in CSR, the CSR dimensions and some background discussion on CSR activities in emerging and developed markets. Section 2.3 discusses EM, including the various definitions of EM, incentives for undertaking EM, and different forms of EM, and outlines the background of EM in emerging and developed markets. Sections 2.4 and 2.5 provides the theoretical background and the literature review, respectively, of the relationship between CSR and EM. The chapter ends with a summary in Section 2.6.

### **2.2 Corporate Social Responsibility (CSR)**

This section discusses CSR, beginning with its various definitions as suggested in the literature, followed by the incentives for managers to practice CSR and its various dimensions.

#### **2.2.1 Definition**

The term Corporate Social Responsibility (CSR) has gained prominence in the last few decades (Cho & Chun, 2015; Ho et al., 2012; Ringov & Zollo, 2007; Stanny & Ely, 2008). However, its existence has been traced back to the 19<sup>th</sup> century during the Industrial Revolution in the United Kingdom (Solomon & Solomon, 2006).

CSR is considered to be an indicator of corporate values and conduct (Aguinis & Glavas, 2012). One of the earliest definitions of CSR is that CSR is “the firm’s considerations of, and response to, issues beyond the narrow economic, technical and legal requirements of the firm to accomplish social (and

environmental) benefits along with the traditional economic gains which the firm seeks” (Davis, 1973, p. 312). Over the years, several other definitions of CSR have evolved. For example, the World Business Council for Sustainable Development (2002, p.229) defines CSR as “the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life”. Henderson et al. (2011, p. 89) define CSR as “the impact of a company’s activities on the welfare of society”. Aguinis (2011, p. 855) defines CSR as a set of “context specific organizational actions and policies that take into account stakeholders’ expectations and the triple bottom line of economic, social and environmental performance”.

A few interchangeable terms are often used in the existing literature to represent CSR, such as, corporate social performance (example, see Gargouri et al., 2010; Ho et al., 2012; Ioannou & Serafeim, 2012), organisational responsibility (Aguinis, 2011), corporate sustainability (Sprinkle & Maines, 2010), or simply corporate responsibility (Ralston et al., 2015).

### **2.2.2 CSR Motives**

It is argued that firms currently have two streams of responsibility. The first is a narrow vision of compliance with the legal requirements and maximising profits by providing goods and services (Quazi & O’Brien, 2000). The second is a broader vision of meeting various societal expectations, ranging from environmental protection and resources conservation to community development and philanthropic contributions (Ho et al., 2012; Quazi & O’Brien, 2000). Traditionally, it was only governments who were seen responsible for improvements of the society (Jamali & Mirshak, 2007). However, this responsibility is increasingly shifting to businesses in recent times (Jamali & Mirshak, 2007). Today, a wide range of stakeholders expect firms to have socially responsible practices (Ho et al., 2012; Principles for Responsible Investment, 2017). Thus, CSR is considered important for organisations of all sizes, sectors and locations as evidenced by a diverse range of corporates supporting CSR. In present times, CSR is not just concerned with meeting the societal expectations of businesses, but is also considered to be an avenue that addresses financial and ethical objectives of the business, while minimising business risks (State Street Global Advisors, 2017).

The motives behind engaging in CSR initiatives is explained by two contrasting perspectives. As discussed in Chapter 1, the first perspective is the normative case, suggesting that managers’ engagement in CSR is driven by their moral values. However, the second perspective, the business case perspective suggest that managers may have self-serving motives behind their CSR

engagement. This section discusses the various motives behind CSR engagement.

Consistent to the normative case perspective, CSR may simply result from ethical values and altruistic purposes of managers (Sprinkle & Maines, 2010). Firms often make philanthropic donations without publicising these actions. For example, Procter and Gamble, and Walmart and Honda donated millions of dollars to the relief effort causes after the 9/11 incident in the United States, with no intention of publicising these donations (Alsop, 2002). However, the business case perspective suggests numerous motives behind engaging in CSR.

Several studies explain CSR from the perspectives of the stakeholder theory (Freeman, 1984; McWilliams & Siegel, 2001). Stakeholder theory assumes that entities must maintain good relationships with their critical stakeholders and ensure minimal agency costs in order to survive and prosper in the long term. Thus, involvement in CSR practices facilitates stakeholder contentment (Prior et al., 2008), enabling the firm to build better relation with key stakeholders such as investors, regulators and customers (Carroll & Shabana, 2010).

Strong alignment with stakeholders has a number of advantages for managers. For example, by gaining support from stakeholders, managers may be protected from hostile takeovers (Pagano & Volpin, 2005). Furthermore, the firms gain competitive advantage through minimizing agency costs (Scholtens & Kang, 2013), and through gaining stakeholders' trust (Pivato et al., 2008; Porter & Kramer, 2002). In addition to financial information, investors and credit ratings agencies often consider the environmental, social and governance factors of firms in analysing credit risks (Principles for Responsible Investment, 2017). Investors are particularly concerned with CSR because they are mainly interested in maximising their returns while ensuring minimum risks, including risks arising from CSR issues (Principles for Responsible Investment, 2017). Investors are increasingly evaluating their investments based on environmental, social and governance criteria as CSR issues gain growing exposure now, owing to increased media exposure and the prominence of social media as a platform exposing good and bad corporate conduct and highlighting issues such as child labour (State Street Global Advisors, 2017).

Additionally, firms engaging in CSR activities may gain a competitive advantage through differentiation from competitors (Branco & Rodrigues, 2006). The differentiation arises because, in most countries, socially responsible practices are not a legal requirement, and therefore, such practices are appreciated by stakeholders (Anderson & Landau, 2006). Such practices may help the firm avoid negative publicity, as well as provide positive media exposure for the firm in local and

national news broadcasts (Sprinkle & Maines, 2010). Increased trust from customers helps to strengthen the brand image and loyalty of the business (Pivato et al., 2008; Waldman et al., 2006; Werther & Chandler, 2005), and also the overall reputation of the business (Epstein & Roy, 2001; Prior et al., 2008). These in turn may result in revenue growth (Sprinkle & Maines, 2010; Wagner & Schaltegger, 2004).

Internal implications of CSR include employee motivation and retention, by showing greater concern for employees (Epstein & Roy, 2001; Sprinkle & Maines, 2010; Wagner & Schaltegger, 2004). Moreover, CSR activities are likely to enhance employee's morale (Godfrey, 2005). CSR also has capital market implications. It reduces perceived risk of the business and therefore results in lower cost of capital (Epstein & Roy, 2001; Fombrun et al., 2000). CSR practices may also provide tax advantages in several ways. For example, charity and donations provide tax credits (Sprinkle & Maines, 2010).

Given the plethora of diversity in the intentions behind CSR, it is often difficult to distinguish the true motive behind CSR. Advocates of CSR claim that CSR is crucial for firms as it enables firms to shift their focus on wider social considerations rather than focussing solely on financial returns. On the other hand, cynics argue CSR to be opportunistic and involving anti-ethical practices merely as a façade to influence customers (Fatma & Rahman, 2015).

### **2.2.3 CSR Dimensions**

Traditionally, CSR has focused on three dimensions of corporate actions, more commonly referred to as the Triple Bottom Line (TBL), namely, economic, environment (ENV) and social (SOC) (Elkington, 1997). Conventionally, the three dimensions included in the TBL framework have been given equal weight (Hussain et al., 2016). The focus has now expanded to include a fourth dimension namely, corporate governance (GOV) initiatives (Anderson & Landau, 2006).

The economic dimension refers to the traditional view of firms' having the primary responsibility of producing their goods and services to meet customer needs and regulatory standards with the objective of making a profit (Hubbard, 2009). It includes corporate actions necessary to meet the basic needs of various stakeholders involved with the business, primarily through fulfilling financial responsibilities (Ralston et al., 2015). For example, the economic dimension of CSR focusses mainly on the firm's responsibilities to reward stakeholders. Among other things, it includes aspects, such as, income growth, profit margin, return on equity, shareholder loyalty, accounting litigations

(Ralston et al., 2015; Thomson Reuters, 2013a).

The ENV dimension of CSR includes the firm's impact on and responsibility towards the environment. This CSR dimension focusses on protecting the environment through addressing any harmful corporate actions and developing strategies to address these issues (Banerjee, 2001). These strategies may address issues like pollution prevention, energy emissions and conservation of resources (e.g., energy, water, and materials), the ecological footprint of the firm, and environmental innovations (e.g. development of eco-friendly products) (Banerjee, 2001; Goel, 2010; Hubbard, 2009; Thomson Reuters, 2018).

The SOC dimension of CSR focusses on the firm's impact on and responsibility towards the society (or community), as well as employees (Hubbard, 2009; Slaper & Hall, 2011). This dimension includes aspects such as, charitable contributions by the firm, the number of training hours provided for staff development, workplace safety issues, equal opportunities and fair treatment of employees and human rights issues (Elkington, 1997; Slaper & Hall, 2011; Thomson Reuters, 2018). Ralston et al. (2015) categorize the three dimensions of Carroll (1991) namely, legal, ethical and philanthropic dimensions, as part of the SOC dimension of CSR.

More recently, a fourth CSR dimension has been gaining interest – the GOV dimension. Studies suggest that corporate governance is closely linked to CSR as good corporate governance leads to better CSR performance (Malik, 2015). GOV includes aspects such as effectiveness of corporate governance principles, equal treatment of shareholders, and the incorporation of financial, ENV and SOC practices into the business operations (Thomson Reuters, 2018).

As the economic dimension overlaps with the accounting and financial information provided within financial statements, the contemporary composition of CSR includes the three dimensions – ENV, SOC and GOV, often referred to as ESG. This is evident as popular secondary databases, such as KLD and Thomson Reuters, now exclude the economic dimension, and provide CSR scores on the three ESG dimensions. Based on this contemporary view of CSR, the present study defines CSR as a firm's performance on the ESG dimensions, that is Environmental, Social and Governance dimension.

#### **2.2.4 CSR in Practice – Developed and Emerging Market Countries**

With the growing momentum of CSR, an increasing number of stakeholders, including, investors, customers and the broader society, now demand the inclusion of environmental, social and governance activities of businesses within the financial statements, in addition to the economic

(financial) activities (Beattie, 2014; Cho & Chun, 2015; Eccles et al., 2011; Kim et al., 2012; Rao et al., 2012). As such, the last few decades have seen a prominent rise in CSR initiatives by firms (Almahrog et al., 2018) and a growing attention by researchers (Cho & Chun, 2015; Ho et al., 2012). Renowned global brands, with their CSR activities, have set notable examples for others to follow. Some examples of CSR in practice are listed below:

- In 2006, Walmart started a program that aimed to reduce packaging by its suppliers by 5% during the years 2008 to 2013 (Sprinkle & Maines, 2010).
- Since 2010, the Body Shop has banned animal testing as part of its movement towards avoiding cruelty towards animals (Sprinkle & Maines, 2010).
- Since 2015, Starbucks is known to be sourcing 99% of their coffee supply ethically (Gavin, 2019).
- Sony has been attempting to limit its greenhouse gas emissions by setting targets for carbon emissions in its operational activities, such as production and shipping (Sprinkle & Maines, 2010).
- McDonalds have a code of conduct regarding fair and safe working conditions for employees working at all McDonalds franchise outlets. Independent auditors ensure that the working conditions adhere to the code of conduct (Sprinkle & Maines, 2010).
- Ben & Jerry's have formed a foundation under their brand name that contributes approximately \$2.5 million dollar in grants annually to organizations across USA, including the United Workers Association and Clean Air Coalition (Gavin, 2019).
- The spike of the Covid-19 pandemic saw a significant shortage in the supply of hand sanitizers in 2019. Prompted by the communities' needs, several beer and spirits manufacturers, particularly in USA and Australia, commenced manufacturing them (Furnari, 2020).

In response to this growing awareness, organisations across the globe have started publishing Sustainability Reports (Ahmed & Sundaram, 2012). A sustainability report is an extension of the traditional financial reporting, where organisations report their environmental and social activities and effects (Moneva et al., 2006). A survey by KPMG (2020) shows that 80% of firms worldwide report on CSR issues.

CSR is traced to have begun in USA, with its globalisation in other countries coming much later

(Matten & Moon, 2008). CSR research have also mainly focussed on developed countries (particularly USA), with very little focus on emerging market countries (Doh et al., 2018), possibly owing to limitations in data availability in emerging markets (Baskin & Gordon, 2005). The CSR performance by firms is contextually dependent on the country of origin and its institutional framework (Chih et al., 2008). Using the ESG index from Thomson Reuters Asset4 database, Boubakri et al. (2021) compare the CSR performance, and the performance on environmental and social dimensions of CSR between emerging market countries and developed countries.<sup>3</sup> Figure 2.1 (sourced from Boubakri et al., 2021) presents a comparison of CSR performance between emerging market and developed countries.

### **Figure 2.1 CSR Performance - Emerging Market Countries Versus Developed Countries**

*This image has been removed due to copyright restriction. Available online from:*

*[<https://www.sciencedirect.com/science/article/pii/S1566014120303307>]*

As shown in Figure 2.1, developed market countries outperform emerging market countries in terms of overall CSR performance as well as the individual Environmental and Social CSR dimensions. However, emerging market countries are not too far behind. In fact, Boubakri et al. (2021) note a 30% surge in the CSR performance by emerging market countries over the period 2002 to 2015.

Overall, the literature suggests that although CSR became significant in emerging markets much later than in developed markets, in recent times, CSR is considered significant in both emerging market countries and developed market countries. While CSR disclosures remain largely voluntary in most parts of the world, some emerging market countries, specifically, China, India and Indonesia have mandated CSR disclosures for specific firms (Lin, 2020).

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<sup>3</sup> Similar to the present study, Boubakri et al. (2021) also use the MSCI market classification to classify emerging market countries and developed market countries. The emerging market countries referred to in the study include Brazil, Chile, China, Colombia, Egypt, Greece, India, Indonesia, Malaysia, Mexico, Philippines, Poland, Qatar, Russian Federation, Saudi Arabia, South Africa, South Korea, Taiwan, Thailand, Turkey, and United Arab Emirates. The developed market countries include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the UK, and the USA (Boubakri et al., 2021).

## **2.3 Earnings Management (EM)**

This section outlines the various definitions of EM proposed by prior studies, followed by a discussion on the incentives and opportunities that lead managers to engage in EM. The section then proceeds to discuss the various types or measures of EM.

### **2.3.1 Definition of EM**

One of the earliest definitions of EM states that EM is “a purposeful intervention in the external financial reporting process, with the intention of obtaining some private gain” (Schipper, 1989, p.92). However, there still seems to be no single universally accepted definition for EM. For example, Levitt Jr (1998) proposes a unique definition of EM by stating that managed earnings are a reflection of management’s desires rather than an indicator of firm performance. Levitt Jr (1998) characterizes EM to be a widespread yet inadequately challenged game that is capable of having negative consequences on the financial reporting system unless properly addressed. Levitt Jr (1998) also points out that EM is not a purely new phenomenon, but it has gained increased momentum because the financial community is undergoing a situation where financial quality is on the decline, while EM is on the rise. According to Healy & Wahlen (1999), EM is a result of managers’ “judgment in financial reporting and structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers” (p. 368). DeFond (2010) defines EM as the management of accounting numbers without violating Generally Accepted Accounting Principles (GAAP).

### **2.3.2 EM Incentives and Opportunities**

As discussed above, EM primarily arises as managers can use their discretion and judgments in preparing the financial reports. Healy & Wahlen (1999) proposes that managers’ use of judgements has advantages and disadvantages. On one hand, managers can use their judgments to make the reports more informative for users, improving resource allocation decisions. On the other hand, when these judgments are used in an opportunistic manner, the financial information may lose credibility and become too distorted (Healy & Wahlen, 1999).

Managers may engage in EM due to several incentives. Positive accounting theory explains managers’ accounting choices and incentives for EM created by transaction costs, such as agency

costs, political costs and debt contracting costs (Watts & Zimmerman, 1990). For instance, several authors suggest that debt contracts may provide incentives for managers to manage earnings (for example, see Dechow et al., 2010; Dechow, 1994; Dechow & Schrand, 2004; Sweeney, 1994). According to Sweeney (1994), while lending covenants may often lead managers to make accounting changes, such as income-increasing changes or cutting dividends. Managers may have reasons to manage earnings to avoid violation of debt covenants as these covenants are often based on accounting ratios (Dechow & Schrand, 2004; Jaggi & Lee, 2002). This is particularly true for firms facing financial difficulties (Dechow et al., 2010). Jaggi & Lee (2002) suggest that financially distressed firms may have both income-increasing and income-decreasing EM strategies. For instance, if the financially distressed firm can obtain a debt covenant waiver, they appear to conduct income-increasing EM (Jaggi & Lee, 2002). However, if they are unable to obtain such a waiver, they are more likely to conduct income-decreasing EM in attempts to restructure the contract (Jaggi & Lee, 2002).

Several authors discuss the role of compensation plans in creating incentives for management to conduct EM (for example, see Dechow & Schrand, 2004; Guidry et al., 1999; Harris & Bromiley, 2007; Schipper, 1989; Zhang, 2008). These authors propose that managers' compensation plans may often lead them to manage earnings in periods where the actual earnings fail to meet the target earnings. However, that does not necessarily imply that earnings will not be managed if targets are met. As Dechow & Schrand (2004) suggest, EM may be conducted merely as means to maximize the compensation-based bonuses for management.

A third frequently cited EM incentive arises from capital market incentives, such as, inflating short-term stock prices (for example, see Dechow & Schrand, 2004; Dechow & Skinner, 2000; Healy & Palepu, 2001; Levitt Jr, 1998; Schipper, 1989).

A fourth EM incentive, as proposed by Leuz et al. (2003), arises from the conflict of interest between corporate insiders (such as owners and/or managers) and outsiders (i.e. other stakeholders). Since insiders have control over the firm, they may often misuse this position to opportunistically benefit themselves at the cost of other stakeholders (Leuz et al., 2003; Shleifer & Vishny, 1997). Such extraction of private benefits arising from the control of the firm is popularly referred to as private control benefits. These private control benefits are enjoyed solely by the controlling insiders, without being shared with the non-controlling outsiders (Leuz et al., 2003). Thus, insiders may have incentives to disguise the firm's actual performance to hide their private control benefits. Such

actions are attempts to protect themselves from disciplinary actions that outsiders may take upon detecting the private control benefits (Leuz et al., 2003). Thus, insiders may be enthused to overstate or understate actual earnings to report more favourable outcomes (Leuz et al., 2003).

Researchers also suggest that earnings can be managed in order to align the reported earnings with forecast earnings (Dechow & Schrand, 2004; Dechow & Skinner, 2000; Levitt Jr, 1998). Missing target earnings or reporting earnings that are lower than forecasted may displease investors. Thus, managers may have incentives to manage earnings to please investors (Dechow & Schrand, 2004). Furthermore, managers may also manage the timing of revenue and expense recognitions to ensure targets are consistently met by transferring recognition of revenues from periods with high sales to periods when sales are lower (Dechow & Schrand, 2004; Dechow & Skinner, 2000).

In general, EM may arise from fraud motives and opportunities (Ndofor et al., 2015; Noor et al., 2015). Noor et al. (2015) find that EM may arise from personal fraud motives, such as dividend payments, or from fraud opportunities available in firms with high leverage and low audit independence. In contrast, Ndofor et al. (2015) report that EM may result from opportunities provided by information asymmetry between shareholders and CEOs.

Opportunities for EM may arise from the flexibilities allowed by accounting standards, particularly in areas concerning judgements and estimates. For example, managers can classify certain expenses into other items or into research and development, as a strategy to overstate or understate current period earnings (Levitt Jr, 1998). Levitt Jr (1998) points out that this strategy of expense misclassification is quite common during corporate restructuring and in times of mergers and acquisitions. Managers can also create cookie jar reserves as attempts to manage earnings (Levitt Jr, 1998). This means that firms can make unrealistic assumptions about some contingent liabilities, such as warranties and loan losses (Levitt Jr, 1998). This is an attempt to hide accruals in cookie jars in good times and use these to manage reported earnings and make them look better in bad times (Levitt Jr, 1998). The concept of materiality also allows some room for EM, as firms can misuse this concept and exclude items from their financial report claiming that they are immaterial (Levitt Jr, 1998). The Economist, 2010 reports a recent case of the use of cookie jar reserves by Dell. It is reported that Dell has been charged with accounting shenanigans by the American Securities and Exchange in 2010. Dell was accused of dipping into its cookie jar reserves for several years to ensure it did not miss analysts' earnings expectations. The SEC claimed that Dell should have disclosed this activity to investors. As a result of SEC's allegations, Dell had to pay a penalty of \$4 million (The

Economist, 2010).

The revenue recognition principle also provides scope for some EM. When firms recognize revenues before the sale is complete, the customer has the option to terminate or delay the sale (Levitt Jr, 1998). Thus, revenue may be overstated if recognised too early. However, managers may continue recognizing risky unrealized revenue as a means of overstating revenue (Levitt Jr, 1998). According to a more recent study by Dechow et al. (2010), revenue overstatement appears to be the most common form of EM.

Prior studies have explained EM through the lens of the agency theory (Prior et al., 2008; Sun et al., 2010). According to the agency theory, managers are the agents working on behalf of the principal (that is, the owners or shareholders of firms) (Jensen & Meckling, 1976). The misalignment of interests of the two parties gives rise to agency problems, while the costs resulting from agency problems refer to agency costs (Prior et al., 2008). EM is considered to be a form of agency cost, as managers practice EM to serve their self-interest (Prior et al., 2008; Scholtens & Kang, 2013; Sun et al., 2010). EM may come at a cost to shareholders, as it may result in incorrect investment decisions by the shareholders (Prior et al., 2008).

### **2.3.3 Types of EM**

In order to detect EM, it is important to first understand the ways that earnings can be managed. EM is most commonly classified into 1) accruals earnings management (AEM); 2) real earnings management (REM); and 3) earnings misclassification (McVay, 2006). The present study focusses on AEM, using discretionary accruals as the EM measure. This section discusses AEM, and then provides a brief overview of the other two types of EM.

#### **Accruals Earnings Management (AEM)**

The earnings figure is comprised of cash flows and accruals (Bushman et al., 2016; Schipper, 1989). The cash flow component is more reliable and persistent than the accrual component (Dayanti et al., 2021; Dechow & Schrand, 2004; Jennings, 1990; Schipper, 1989). The accrual component tends to be more volatile in nature since it may be misstated as a result of intentional manipulations, unintentional errors, or situational influences such as, accounting standards (Ines, 2017; Sloan, 1996). AEM is the most frequently studied type of EM (McVay, 2006). Accruals can be classified as normal and discretionary. Normal accruals result from normal business transactions, while discretionary (or abnormal) accruals result from managements' intentional or biased judgments and

estimations (Bozzolan et al., 2015; Ewert & Wagenhofer, 2011; McNichols & Stubben, 2018). Accrual models are based on the premise that managers use discretionary accruals, where they can exert some control and judgment in estimating accruals (Bozzolan et al., 2015). Examples of discretion used in accruals include estimating doubtful debts, capitalizing costs rather than classifying them as expenses, and avoiding asset write-offs (Dechow & Schrand, 2004; McNichols & Stubben, 2018). Such discretionary accruals arise because GAAP allows managers to have some discretion over recognizing accruals (Dechow, 1994; Mohamed et al., 2020). While the use of judgment is an essential part of the financial reporting process, managers may often use this opportunity to use their discretion in a way that is beneficial to themselves (Dechow, 1994; Healy & Wahlen, 1999; Mohamed et al., 2020).

AEM has a number of real and economic consequences. First, when managers opportunistically use discretionary accruals, the accruals may no longer be a credible indicator of firm performance (Dechow, 1994; Klein, 2002; Lewellyn & Bao, 2017). AEM often degrade the quality of accruals and of earnings, often masking the true financial performance of the firm from stakeholders. This in turn may result in resource misallocation decisions by stakeholders who rely on the firms' financial information for decision-making purposes. Second, the use of AEM may have adverse effects on future earnings, and in essence, on long-term financial performance. Since AEM mainly impacts the timing of earnings recognition (Dechow & Schrand, 2004), they tend to reverse in subsequent periods, thus affecting the financial performance of the subsequent periods. For example, an understatement of current period accruals will overstate current period earnings but result in an understatement of earnings in the future period (Dechow & Schrand, 2004). Third, AEM may cause stock prices to fluctuate. For example, upward EM may initially increase stock prices, but the stock prices may drop in subsequent years when the reversal of AEM causes a decline in earnings (Teoh et al., 1998). Fourth, AEM may damage corporate reputation (Rodriguez-Ariza et al., 2016). Since AEM negatively affects stakeholders, such as investors, creditors, customers and local communities, this may have a spill-over effect on the firms' reputation (Rodriguez-Ariza et al., 2016). Fourth, AEM are also known to have broader economic consequences, distorting the economy's business cycle (Kedia & Philippon, 2009). Firms with AEM tend to over-invest and over-hire during the period of EM, causing an expansion in the business cycle (Cohen & Zarowin, 2008; Kedia & Philippon, 2009; McNichols & Stubben, 2008). However, when their EM activities are discovered and they are obligated to restate earnings, their investments and employment significantly shrivels, reversing the business cycle expansion into a contraction (Cohen & Zarowin, 2008; Kedia & Philippon, 2009;

McNichols & Stubben, 2008). As explained earlier, EM is an unethical practice, but it is not a violation of the relevant accounting standards. Nevertheless, a fifth consequence of AEM is legal consequence. The literature suggests that firms (specifically ones with seasoned equity offerings), involved in income increasing AEM, are more likely to be sued (see Ibrahim et al., 2011).

### **Real earnings management (REM)**

A second frequently cited type of EM is known as REM (for example, see Bozzolan et al., 2015; Chen & Hung, 2021; Cho & Chun, 2015; Choi et al., 2018; Chun & Cho, 2017; Faisal et al., 2018; García-Sánchez et al., 2020; Gong & Ho, 2018; Hickman et al., 2021; Hong & Andersen, 2011; Jordaan et al., 2018; Kim et al., 2019; Kim et al., 2012; Kolsi & Attayah, 2018; Liu & Lee, 2019; Liu et al., 2017; Pratiwi & Siregar, 2019; Rezaee et al., 2020; Sial et al., 2019; Velte, 2019, 2021; Zhang et al., 2021). REM is defined as “departures from normal practices, motivated by managers’ desire to mislead at least some stakeholders into believing certain financial reporting goals have been met in the normal course of operations” (Roychowdhury, 2006, p. 337). REM takes the form of real transactions (Caruso et al., 2016), and includes activities where managers change the timing or structuring of an activity, expense or investment (Gunny, 2010). Examples of REM include reduction or delay in research and development (R&D) expenses, increasing sales through discounts, and shifting accruals (Dechow & Schrand, 2004).

Prior studies suggest that post the introduction of the Sarbanes-Oxley (SOX) Act, managers are increasingly shifting to manage earnings via REM in contrast to AEM (for example see Cohen & Zarowin, 2008; Graham et al., 2005). One reason behind this is that AEM is likely to induce greater scrutiny from auditors and regulators. This is particularly true after the introduction of the SOX that have led to increased likelihood of AEM to be detected (Cohen & Zarowin, 2008). Since REM has lower detection risk, Ibrahim et al. (2011) find that firms engaged in REM are less likely to have legal consequences, particularly litigations, in contrast to those engaged in AEM. Despite REM having a lower chance of detection than AEM (see Cohen & Zarowin, 2008), the former is considered to be a more costly type of EM since it includes changes to real operations of the business (Li et al. 2020). Firms engaged in REM appear to have deterioration in their future financial performance (Tabassum et al., 2015). For example, a reduction in discretionary costs, such as R&D expenses in the present year, may lead to lower future income resulting from the missed R&D opportunities (Cohen & Zarowin, 2008). Similar to AEM, one of the consequences of REM is also overinvestment in the period of EM (that is, current period), followed by under-investment in subsequent periods (Cohen

& Zarowin, 2008).

## **Earnings Misclassification**

Earnings misclassification, also known as classification shifting, is a third type of EM that involves “the deliberate misclassification of items *within* the income statement” (McVay 2006, p. 501). Since individual items in the income statement do not hold the same level of importance in decision-making by stakeholders, managers may intentionally misclassify certain expenses to fulfill self-serving motives (McVay, 2006). Some real-world examples of earnings misclassification include: 1) Borden INC was found by the SEC to have misclassified \$192 million of selling, general and administrative (SG&A) expenses as part of restructuring costs (Hwang, 1994); 2) AmeriServe Food Distribution was also found to have classified significant operating expenses as restructuring costs in an attempt to hide their declining financial performance. The company later filed for bankruptcy in the year 2000 (Sherer, 2000); 3) IBM used SG&A expenses to calculate net gains on asset disposal, instead of breaking the gains out as special items. This resulted in higher reported core earnings for the company (Bulkeley, 2002).

Earnings misclassification is presumed to have less costly consequences than the other two EM types, that is AEM and REM. While both AEM and REM have negative consequences of future earnings (as discussed earlier), classification shifting does not have this problem, as this form of EM does not change the reported earnings (McVay, 2006). Unlike AEM and REM, earnings misclassification does not involve subsequent reversal of accruals or decline in revenue resulting from missed opportunities (McVay, 2006). Due to no change in earnings, this type of EM tends not to draw too much scrutiny by auditors and regulators (Nelson et al., 2002). As a result, the legal consequences for earnings misclassification are also less severe in contrast to the other EM types.

### **2.3.4 EM in Practice – Developed and Emerging Market Countries**

Some examples of EM and its consequences can be evidenced in several recent corporate cases, discussed below.

In 2010, Dell was charged with accounting shenanigans by the American Securities and Exchange Commission (SEC) (The Economist, 2010). Dell was accused of dipping into its cookie jar reserves<sup>4</sup>

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<sup>4</sup> Cookie jar is a term used when managers use unrealistic estimations on liabilities such as provisions and warranties. By making such assumptions, “they stash accruals in cookie jars during the good times and reach into them in the bad times” (Levitt Jr, 1998, p. 16).

for several years to ensure it did not miss analysts' earnings expectations. As a result of SEC's allegations, Dell had to pay \$4 million in penalty.

Between 1997 and 2001, Xerox Corporation was also alleged to be using cookie jar reserves, along with several other accusations of EM (Dechow & Schrand, 2004)<sup>5</sup>. In the year 2000, several managers were fired, and the company faced penalties of approximately \$120 million, in addition to experiencing a 60 percent drop in its stock price (Bandler & Hechinger, 2003).

Royal Ahold, the third biggest food retailer in the world, was reported to be involved in EM. The company was accused of overstating profits and understating debt in its financial statements (The Economist, 2003). Once these issues were revealed, Ahold lost the confidence of its investors and analysts, as it was suspected that their accounting problems were far worse than what was revealed (The Economist, 2003).

In July 2002, the pharmaceutical company, Merck, admitted to overstating its revenues and costs over the past three years by approximately \$14 million. Although the incident was not classified as fraud, such management of earnings resulted in the loss of investors' confidence and unstable stock market conditions (The Economist, 2002).

The most significant corporate case of EM is the Enron case. In all the cases discussed above, EM was evident, and the negative impacts of EM were highlighted. However, the Enron (2001) case is a more severe case, as Enron clearly crossed the line of EM and stepped into corporate fraud, leading to the collapse of the firm. However, the initial steps were merely improper EM, which turned worse over time, until the case was classified as a corporate fraud case (The Economist, 2014). It was revealed that Enron's earnings and stock prices had been artificially inflated, and its true performance had been concealed through accounting tactics<sup>6</sup> (Healy & Palepu, 2003). Inquiries by the SEC led Enron to restate their financial figures, and their reported earnings declined by \$591 million and debt increased by \$658 million (Healy & Palepu, 2003, p. 4). Soon after, the business was declared bankrupt (Healy & Palepu, 2003). The collapse of Enron is considered the biggest corporate failure to date (MacCarthy, 2017; Silverstein, 2013).

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<sup>5</sup> The Xerox Corporation was accused of manipulating their revenue recognition timing to avoid reporting losses, and capitalizing items that should have been expensed (Dechow & Schrand, 2004).

<sup>6</sup> The Enron collapse highlights the most severe consequences of EM. From the 1990s to 2000s, Enron's stock price was on a constant rise (Healy & Palepu, 2003). However, by the end of 2001, the stock price dropped from \$83.13 to nearly zero (Healy & Palepu, 2003, p. 3)

While EM in itself is not fraudulent, the literature suggests that firms engaged in EM are more likely to commit fraud in subsequent periods (Perols & Lougee, 2011). Thus, EM may be among the initial steps leading to more severe forms of corporate fraud. Research on EM has traditionally gained more interest in developed market countries. However, in recent times, emerging market countries have also been showing increased interest in EM studies. A study conducted by Ernst & Young (2016) highlights that managers in several Asian firms are likely to engage in EM by deliberate manipulations and shortcut implementations to meet targets, particularly during difficult economic times. Figure 2.2 illustrates the percentages of corporate management who are likely to implement shortcuts to achieve targets, as reported by Ernst & Young (2016).

**Figure 2.2 Likelihood of EM in Asia-Pacific countries (Source: Ernst & Young, 2016)**

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The literature suggests evidence that EM incentives vary across developed and emerging market countries (for example, see Lin & Wu, 2014; Lourenço et al., 2018). Such differences may arise as there are several institutional and economic circumstances that distinguish emerging market countries from developed market countries, particularly in terms of investor protection (INVPRO), corruption (CORR) levels and national culture (Viana Jr et al., 2021). Even as the world is converging to the International Financial Reporting Standards (IFRS), ensuring more harmony in accounting standards worldwide, country-level institutional factors play an even more important role in determining EM incentives (Jeanjean & Stolowy, 2008). Thus, the present study examines the CSR-EM relationship in both developed markets (specifically USA) and emerging market countries (specifically, Brazil, China, India, Indonesia, Korea (South), Malaysia, Russia, South Africa, Taiwan and Thailand).

## **2.4 Theoretical Background – CSR and EM**

There is no defined or consistent theoretical framework explaining the CSR-EM relationship. Several

studies have explained the CSR-EM relationship from the perspectives of traditional accounting theories, such as the *positive accounting theory* (for example, see Gargouri et al., 2010), *stakeholder theory* (for example, see Cho & Chun, 2015; Chun & Cho, 2017; García-Sánchez et al., 2020; Gerged et al., 2020; Gerged et al., 2021; Grougiou et al., 2014; Hong & Andersen, 2011; Kumala & Siregar, 2020; Mohmed et al., 2020; Muttakin et al., 2015; Rezaee et al., 2020; Sial et al., 2019; Velte, 2019), *institutional stakeholder theory* (for example, see Scholtens & Kang, 2013), *agency theory (or principal-agent)* (for example, see Almahrog et al., 2018; Buerterey et al., 2020; Calegari et al., 2010; Chen & Hung, 2021; Faisal et al., 2018; García-Sánchez et al., 2020; Gerged et al., 2021; Kumala & Siregar, 2020; Kyaw et al., 2017; Litt et al., 2013; Mohmed et al., 2020; Sial et al., 2019; Velte, 2021), *stewardship theory* (for example, see (Mohmed et al., 2020; Rezaee et al., 2020)), *legitimacy theory* (for example, see García-Sánchez et al., 2020; Gerged et al., 2020; Gerged et al., 2021; Grougiou et al., 2014; Kumala & Siregar, 2020; Pratiwi & Siregar, 2019; Rezaee et al., 2020; Riahi-Belkaoui, 2003), and *signalling theory* (for example, see Amar & Chakroun, 2018; Grougiou et al., 2014; Riahi-Belkaoui, 2003; Wang et al., 2018).

Stakeholder theory explains that managers engage in CSR as a result of their obligation towards a wide range of stakeholders (Hubbard, 2009). However, the theory does not predict managerial behaviour in practical terms (Almahrog et al., 2018; Deegan, 2002). Legitimacy theory explains that managers may choose CSR to address social pressures and boost their reputation, that is, to obtain legitimacy (Gray, 1988). Signalling theory suggests that managers may use CSR to reduce information asymmetry and signal (inform) the firm's performance to stakeholders (Álvarez et al., 2008; Mohmed et al., 2020).

Agency theory explains that EM may arise due to managers' self-fulfilling motives, while CSR may be undertaken to reduce agency problems (Almahrog et al., 2018). While these popular theories provide a useful basis for understanding managers' engagement in CSR and EM, they do not necessarily explain how the two issues are related. To understand *when, why and how* CSR affects EM, it is essential to understand managerial behaviour, attitude and motives. Thus, several studies have explained the CSR-EM relationship using theories that explain managerial opportunities and motives, such as, the *multiple objectives hypothesis* (for example, see Bozzolan et al., 2015; Chih et al., 2008; Gargouri et al., 2010; Habbash & Haddad, 2020; Heltzer, 2011; Kyaw et al., 2017; Martínez-Ferrero et al., 2015), *predictable earnings hypothesis* (for example, see Chih et al., 2008; Gargouri et al., 2010; Habbash & Haddad, 2020; Heltzer, 2011), *ethical perspective or transparent financial reporting hypothesis* (for example, see Choi et al., 2018; Chun & Cho, 2017; Hickman et al., 2021;

Jordaan et al., 2018; Kim et al., 2019; Kim et al., 2012; Kolsi & Attayah, 2018; Li & Xia, 2018; Liu & Lee, 2019; Liu et al., 2017; Martínez-Ferrero et al., 2015; Pratiwi & Siregar, 2019; Wang et al., 2018; Zhang et al., 2021), *opportunistic perspective or opportunistic financial reporting hypothesis* (for example, see Choi et al., 2018; Gong & Ho, 2018; Hickman et al., 2021; Jordaan et al., 2018; Kim et al., 2019; Kim et al., 2012; Kolsi & Attayah, 2018; Li & Xia, 2018; Liu et al., 2017; Palacios-Manzano et al., 2019; Zhang et al., 2021), *political cost theory* (for example, see Heltzer, 2011; Liu & Lee, 2019; Patten & Trompeter, 2003; Yip et al., 2011), *social norm theory* (for example, see Grougiou et al., 2014), *corporate culture theory* (for example, see Calegari et al., 2010; Litt et al., 2013), *RBV* (for example, see Scholtens & Kang, 2013) and *institutional hypothesis* (for example, see Chih et al., 2008; Gargouri et al., 2010; Heltzer, 2011).

Among the theories stated above, the multiple objectives hypothesis, predictable earnings hypothesis, opportunistic financial reporting hypothesis and political cost hypothesis suggest a positive relationship between CSR and EM, explaining the positive CSR-EM relationship from the perspective of various motive and/or opportunities. The multiple objectives hypothesis suggests that managers engaged in CSR are burdened with numerous objectives from multiple stakeholders. The added responsibility of pleasing multiple stakeholders create more motives for EM (Bozzolan et al., 2015; Chih et al., 2008; Gargouri et al., 2010). The predictable earnings hypothesis suggests that in firms with high CSR, the motive to reduce volatility and information asymmetry lead managers to manage more earnings to report smooth (or predictable) earnings (Chih et al., 2008; Gargouri et al., 2010). The opportunistic financial reporting hypothesis (or opportunistic perspective) is based on the perspective that managers have opportunistic and self-fulfilling motives behind their participation in CSR initiatives (Choi et al., 2018; Gong & Ho, 2018; Hickman et al., 2021). This perspective suggests that CSR performance creates a positive image for firms, assisting managers in gaining stakeholder support and lowering scrutiny (Choi et al., 2018; Gong & Ho, 2018; Hickman et al., 2021). Thus, managers may opportunistically use their CSR performance to cover up their EM activities (Choi et al., 2018; Gong & Ho, 2018; Hickman et al., 2021). The political cost hypothesis explains that managers often engage in CSR due to political threats, pressures, and unfavourable regulations (Heltzer, 2011; Yip et al., 2011). These firms are more likely to manage earnings downwards to reduce their political costs (Heltzer, 2011; Yip et al., 2011).

In contrast to the above perspectives, the transparent financial reporting hypothesis, social norm theory, corporate culture theory and RBV suggest a negative relationship between CSR and EM. The transparent financial reporting (or ethical) hypothesis suggests that managers engaged in CSR tend

to be more ethical and transparent (Choi et al., 2018; Chun & Cho, 2017; Jordaan et al., 2018). Thus, they are less likely to manage earnings and more likely to report transparent financial reporting to meet the ethical expectations of stakeholders (Choi et al., 2018; Jordaan et al., 2018). Social norm theory is based on the perspective that individual behaviour is shaped by the norms, values, beliefs, and principles of the groups that they belong to. According to this perspective, managers in firms with high CSR are likely to be more ethical due to the ethical stance that CSR creates within the workplace (Grougiou et al., 2014). Thus, according to social norm theory, managers engaged in CSR are less likely to manage earnings (Grougiou et al., 2014). Corporate culture theory presents a similar perspective, suggesting that CSR engagement create an internal corporate culture based on moral and ethical values. This in turn reduces managers' EM engagement (Calegari et al., 2010; Litt et al., 2013). The RBV suggests that CSR creates a competitive advantage for firms not only in the market, but in regard to stakeholders in general, by creating a positive reputation and stronger ties with the stakeholders (Scholtens & Kang, 2013). Thus, according to this perspective, firms engaged in CSR are less likely to manage earnings in order to maintain their positive image.

Contrary to all the theories discussed so far, the institutional perspective suggests that CSR and EM are unrelated, as managers' engagement in EM are more likely to result from other institutional factors (Chih et al., 2008; Gargouri et al., 2010; Heltzer, 2011).

As evidenced by the abundant variety of perspectives, there is no consistent framework that explains managerial motives affecting the CSR-EM relationship. In this study, I posit that to understand when, why and how CSR affects EM, it is essential to understand managerial behaviour, and the motives driving such behaviour. Prior studies focus on theories explaining managerial motives. I look at managerial behaviour driven by motives. The present study explains the relationship between CSR and EM using two contrasting managerial behaviour perspectives. The first one of these perspectives is explained through the lens of the managerial myopia hypothesis, explaining how managers engaged in CSR may focus more on short-term objectives, leading them to manage earnings more. The contrasting perspective is explained through the lens of the myopia avoidance hypothesis, explaining that managers engaged in CSR may focus more on long-term objectives, and are therefore less likely to manage earnings. The next two sub-sections discuss these two opposing perspectives.

#### **2.4.1 Managerial Myopia Hypothesis**

Managerial myopia, also known as managerial short termism, refers to managerial preference

towards actions or behaviour that are focussed on realising short-term objectives, often resulting in unfavourable consequences to the firm's ability to create long-term value (Hayes & Abernathy, 1980). Such short-term preferences may arise due to external factors, such as, managers being exposed to market pressures (Bushee, 1998; Drucker, 1986), pressures to meet earnings targets (Nikolov, 2018; Seo et al., 2020), or lack of a clear performance measurement criteria (Hayes & Abernathy, 1980).

The accounting and finance literature links managerial myopic actions or short-term behaviour to EM (Dallas, 2011; Gonzalez & André, 2014; Nikolov, 2018). Prior studies suggest that myopic or short-term actions involve management's inclination to manage accounting information for short-term value creation (Nikolov, 2018). Based on the evidence of the literature, the positive relationship between CSR and EM may be explained by manager's myopic behaviour.

Some prior studies suggests that CSR may have a role in escalating EM engagement by managers (for example, see Gargouri et al., 2010; Kyaw et al., 2017; Muttakin et al., 2015; Yip et al., 2011). This view is consistent with the managerial myopia hypothesis that suggests that managers practicing CSR activities are more likely to engage in EM in order to meet short-term goals. Managerial myopia may be driven by two main reasons – 1) incentive-driven; and 2) opportunity-driven.

Prior studies suggest numerous opportunistic intentions that may lead managers to engage in EM. For example, managers may manage earnings to avoid debt covenant violations (Dechow & Schrand, 2004; Jaggi & Lee, 2002), to enhance compensation-based bonuses for themselves (Dechow & Schrand, 2004), to inflate stock prices prior to mergers or acquisitions (Dechow & Schrand, 2004; Lehmann, 2016; Levitt Jr, 1998). Managers engaged in CSR may have additional incentives to manage earnings due to market pressures, such as pressure to meet earnings targets (Nikolov, 2018). Managers engaged in CSR may be exposed to greater pressures from multiple stakeholders (Chih et al., 2008; Gargouri et al., 2010). Jensen (2001) proposed the multiple objectives hypothesis to explain this. Managers engaged in CSR practices are expected to meet numerous objectives from government, creditors, customers, employees and communities, in addition to performance-related objectives from shareholders. The presence of numerous stakeholders with multiple objectives may lead to the lack specific performance appraisal criteria for managers, due to misalignment of the objectives (Chih et al., 2008; Gargouri et al., 2010; Habbash & Haddad, 2020; Jensen, 2001). Such pressures from stakeholders' expectations may lead

managers to become short-term oriented (myopic) and lead them to engage in rent-seeking behaviour, such as EM, as they have stronger incentives to meet short-term goals, such as meeting quarterly earnings targets (Nikolov, 2018). The incentives to manage earnings can be further emphasised by managers' willingness to uphold the positive reputation (Francis et al., 2008; Riahi-Belkaoui, 2003). Since CSR engagement creates positive reputation in the market, this may pose to be a further incentive for EM as managers may report favourable accounting information to uphold their positive reputation (Hickman et al., 2021; Pratiwi & Siregar, 2019). Thus, managerial myopia may be more prevalent within firms with high CSR, as a result of managers' short-term behaviour arising from incentives to please multiple stakeholders (Gargouri et al., 2010), incentives to meet short-term targets (Nikolov, 2018) and incentives to uphold their reputation (Francis et al., 2008). I refer to this as *incentive-driven myopia*. It is important to acknowledge that some of these incentives, such as, avoiding debt covenant violations and enhancing compensation-based bonuses may lead managers to reduce their CSR initiatives as a means of cutting expenses. On the contrary, incentives such as upholding reputation may lead managers to increase their CSR initiatives. While I acknowledge that these incentives may have differential effect on the level of CSR, the scope of the present study does not consider the changes in CSR. The present study rather focusses on examining how engagement in CSR may create such incentives, thus affecting managers' EM behaviour.

The second cause of managerial myopic behaviour may be due to greater opportunities for EM. Firms engaged in CSR initiatives are often perceived as doing things the right way, thus reducing stakeholders' scrutiny of managers, opening up more opportunities to manage earnings (Kim et al., 2012; Muttakin et al., 2015). Stakeholders often consider the accounting practices of firms with high CSR performance to be more transparent and reliable (Chih et al., 2008; Gras-Gil et al., 2016; Kim et al., 2012). Managers may take this opportunity to manage more earnings for self-serving motives, while using CSR as a cover-up shield to conceal or 'greenwash' their EM (Mohmed et al., 2020; Muttakin et al., 2015; Prior et al., 2008; Zhang et al., 2021). I refer to this as *opportunity-driven myopia*.

As discussed above, while the managerial myopia hypothesis explains the positive relationship between CSR and EM, the negative relationship between CSR and EM may be explained by the myopia avoidance hypothesis. The next section discusses the myopia avoidance hypothesis, suggesting that managers in firms with high CSR activities, are less likely to manage earnings.

#### **2.4.2 Myopia Avoidance Hypothesis**

Myopia avoidance simply refers to managers being more focussed on the long-term sustainability of their firms, and long-term relationships with stakeholders, as opposed to being driven by only short-term goals. The myopia avoidance hypothesis, introduced by Chih et al., 2008, suggests that managers engaged in CSR are more likely to be long-term oriented and less likely to manage earnings (Chih et al., 2008; Choi & Pae, 2011; Gargouri et al., 2010).

A numbers studies suggest that high CSR has a role in constraining EM engagement by managers (for example, see Almahrog et al., 2018; Bozzolan et al., 2015; Chih et al., 2008; Cho & Chun, 2015; Gao & Zhang, 2015; Hong & Andersen, 2011; Kim et al., 2012; Litt et al., 2013; Liu et al., 2017; Scholtens & Kang, 2013). The myopia avoidance hypothesis suggests that managers practising CSR activities, have long-term perspectives, and are less likely to manage earnings to meet short-term objectives (Chih et al., 2008; Choi & Pae, 2011; Gargouri et al., 2010). Such long-term perspectives, that is myopia avoidance, may be driven by two kinds of managerial motivation – 1) relationship driven (strive to sustain relationships with stakeholders); and/or 2) value-driven (moral and ethical values).

First, managers' avoidance of myopic behaviour may be explained by managers striving to sustain relationships with their stakeholders. One commonly cited reason behind managers' involvement in CSR initiatives is that they genuinely care about establishing and maintaining strong relationships with their stakeholders (Bozzolan et al., 2015; Chih et al., 2008). EM is considered an agency cost that is detrimental to stakeholders, and thus, may hamper the management's relationship with the stakeholders (Prior et al., 2008). Additionally, firms engaged in CSR may have higher risks of EM being exposed. First, firms engaged in CSR are often more exposed to and closely monitored by the society, media, regulators and investors (Litt et al., 2013). Furthermore, CSR reduces information asymmetry between managers and stakeholders, making managerial practices more transparent to stakeholders (Álvarez et al., 2008; Chih et al., 2008; Gras-Gil et al., 2016; Kim et al., 2012; Mohmed et al., 2020). Both of these issues described may make it more difficult for managers to conceal EM. Discovery of EM by stakeholders may result in negative consequences for managers, and damage their relationship with stakeholder irreversibly (for example, see Gerged et al., 2020; Gerged et al., 2021; Litt et al., 2013). Therefore, managers practicing CSR are less likely to manage earnings in order to maintain long-term relationships with stakeholders. I refer to this as *relationship-driven myopia avoidance*.

The second reason behind managers' approach towards a long-term orientation may be purely motivated by their moral obligations and ethical values (Litt et al., 2013). These values are likely to be reflected in their accounting practices, making their accounting information more transparent or faithfully represented (Shen & Chih, 2005; Shleifer, 2004). Managers' ethical values are also likely to discourage them from engaging in EM, as EM is considered an unethical act (Grougiou et al., 2014; Kim et al., 2012; Litt et al., 2013). I refer to this as *value-driven myopia avoidance*.

In this section, I have discussed the two opposing theories, that is, the managerial myopia hypothesis and the myopia avoidance hypothesis, that may explain the frequently debated relationship between CSR and EM. The next section provides a detailed review of the empirical evidence in the literature on the relationship between CSR and EM.

## 2.5 Literature Review - CSR and EM

There is sufficient evidence in the academic literature to establish a relationship between CSR and EM. However, existing literature appears to report somewhat mixed results for the association between CSR and EM. Some studies suggest that managers engaging in CSR may focus more on meeting short-term objectives, such as meeting profit targets, and thus, are more likely to manage earnings. A contrasting perspective is proposed by some studies, suggesting that managers engaged in CSR have genuine concern about long-term objectives, such as relationships with stakeholders and the sustainability of the firm itself, and thus, are less likely to manage earnings. This section provides a comprehensive literature review of the relationship between CSR and EM. The focus of my study is to examine how CSR affects EM in various contexts. Thus, when referring to the relationship between CSR and EM, I am talking about the effect of CSR on EM, not the reverse relationship, as many studies have done (for example, see Prior et al., 2008, Sun et al., 2010, Choi et al., 2013; Martínez-Ferrero et al., 2013).<sup>7</sup> It should be noted that majority of prior studies have examined *CSR performance* (for example, see Amar & Chakroun, 2018; Bozzolan et al., 2015; Buertey et al., 2020; Calegari et al., 2010; Chen & Hung, 2021; Chih et al., 2008; Cho & Chun, 2015;

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<sup>7</sup> A number of recent studies have examined the impact of EM on CSR, reporting fairly mixed results. While some studies suggest a positive relationship between EM and CSR (for example, see Martínez-Ferrero et al., 2016; Prior et al., 2008), others suggest a negative relationship (for example, see Choi et al., 2013; Martínez-Ferrero et al., 2013). Sun et al., 2010 finds that EM has no significant effect on EM.

Choi et al., 2018; Chun & Cho, 2017; Gao & Zhang, 2015; García-Sánchez et al., 2020; Gargouri et al., 2010; Gras-Gil et al., 2016; Grougiou et al., 2014; Heltzer, 2011; Hickman et al., 2021; Hong & Andersen, 2011; Kim et al., 2019; Kim et al., 2012; Kyaw et al., 2017; Li & Xia, 2018; Litt et al., 2013; Liu & Lee, 2019; Liu et al., 2017; Martínez-Ferrero et al., 2015; Mohmed et al., 2020; Palacios-Manzano et al., 2019; Rezaee et al., 2020; Riahi-Belkaoui, 2003; Scholtens & Kang, 2013; Sial et al., 2019; Velte, 2019, 2021), while some prior studies have examined *CSR disclosures* as a proxy for CSR (for example, see Almahrog et al., 2018; Faisal et al., 2018; Gerged et al., 2020; Gerged et al., 2021; Habbash & Haddad, 2020; Kolsi & Attayah, 2018; Kumala & Siregar, 2020; Muttakin et al., 2015; Patten & Trompeter, 2003; Pratiwi & Siregar, 2019; Wang et al., 2018; Yip et al., 2011). CSR performance is a direct measure of CSR activities, while CSR disclosures refer to scores based on the extent (such as number of words/sentences, indices based on keywords, etc.) of disclosures (Nazari et al., 2017). The present study acknowledges the difference between CSR performance and disclosure. However, for the purposes of the present study, this distinction is not essential. As discussed in greater details in Chapter 3, the present study considers CSR performance as a proxy for CSR. Nevertheless, in order to provide a comprehensive literature review, this section discusses prior studies examining either CSR performance, or CSR disclosure, or both.

I have identified 48 published research studies examining how CSR effects EM. To obtain these research articles, I conducted a search on Google Scholar, using the keywords: *corporate social responsibility, environmental responsibility, earnings management, earnings quality, accounting information*. Additionally, I have also searched for citations of the articles obtained. Finally, I have filtered the downloaded articles based on the content and selected the final 48 studies that have either examined the impact of CSR on EM, or the bi-directional relationship between CSR and EM. Table 2.1 provides a summary of the literature review, presented in chronological order. The table has 6 columns – Column (1) shows the authors and year of application of the research study; Column (2) details the sample, showing the sample country, sample size and years of observation included in the sample; Columns (3) and (4) show the research objective and research method respectively; Column (5) shows the theories discussed by prior studies. As seen in Column (5), several studies propose opposing theories regarding the CSR-EM relationship – Column (5) shows the theories supported, and also the alternate theories proposed but not supported (shown in brackets). Finally, Column (6) shows the key findings of the prior studies. In this section, I discuss Table 2.1 thoroughly, with the exception of Column (5), as the theories have already been discussed in Section 2.4.

**Table 2.1 Summary of Prior Studies Examining the Effect of CSR on EM**

(1)	(2)	(3)	(4)	(5)	(6)
Authors (Year)	Country Sample (Period)	Research Objective	Research method	Theories supported [Alternate theories]	Key findings
Patten & Trompeter (2003)	USA 40 chemical firms (1984)	Examine how pre-event environmental disclosures affect EM	<b>Method:</b> OLS and MLE <b>DV:</b> EM (Han & Wang, 1998) <b>IV:</b> Lagged environmental disclosure (content analysis)	Political cost perspective	Environmental disclosures have a negative effect on income-decreasing EM
Riahi-Belkaoui (2003)	USA 404 observations (1994 – 1998)	Examine how CSR affects earnings informativeness and EM	<b>Method:</b> Multivariate regression <b>DV:</b> Earnings persistence and variability; EM (Jones, 1991a) <b>IV:</b> CSR (Fortune Magazine)	Signalling perspective Legitimacy perspective	CSR has a positive effect on earnings informativeness and EM
Chih et al. (2008)	46 countries 1,653 firms (1993 – 2002)	Examine how CSR affects EM, and the moderating effect of institutional factors	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Bhattacharya et al., 2003; Leuz et al., 2003) <b>IV:</b> CSR – dummy (FTSE4 Good Global Index) <b>MOD:</b> Antidirector rights; Legal enforcement; GDP per capita	Myopia avoidance hypothesis Multiple objectives hypothesis [Predictable earnings hypothesis; Institutional hypothesis]	CSR has a negative effect on earnings smoothing and loss avoidance; but a positive effect on earnings aggressiveness, weakened by legal enforcement
Calegari et al. (2010)	USA 16,232 observations/ 2,467 firms (1991 – 2008)	Examine how CSR affects EM and firm value	<b>Method:</b> OLS and 2SLS <b>DV:</b> Firm value <b>IV:</b> CSR (KLD) <b>MED:</b> EM (Dechow et al., 1995)	Principal-agent theory; Corporate culture theory	CSR has a negative effect on EM, and a positive effect on firm value via EM.
Gargouri et al. (2010)	Canada 180 observations/ 109 firms (2004 – 2005)	Examine how CSR affects EM	<b>Method:</b> Probit <b>DV:</b> EM (Dechow et al., 1995) <b>IV:</b> CSR – overall and dimensions (MJRA-CSID)	Multiple objectives hypothesis [Myopia avoidance hypothesis; Predictable Earnings hypothesis; Institutional hypothesis; Positive accounting theory]	Environmental and employee dimensions have a positive effect on EM; total CSR score and corporate governance has no significant effect
Heltzer (2011)	USA 2,171 observations (2007)	Examine how the environmental dimension of CSR affects EM	<b>Method:</b> Sample split into 3 subsamples based on CSR environmental dimension – strength, neutral and concern subsamples (data from KLD) <b>DV:</b> EM (Dechow et al., 1995; Jones, 1991a; Leuz et al., 2003)	Myopia avoidance hypothesis; Institutional hypothesis [Predictable earnings hypothesis; Multiple objectives hypothesis]	Lower EM in the strength and neutral subsamples; higher EM in the concern subsample

Hong & Andersen (2011)	USA 8,078 observations (1995 – 2005)	Examine how CSR affects EM	<b>Method:</b> OLS <b>DV:</b> EM (Dechow & Dichev, 2002; Francis et al., 2005; Roychowdhury, 2006) <b>IV:</b> CSR (KLD)	Stakeholder management theory	CSR has a negative effect on EM
Yip et al. (2011)	USA 110 observations (2006)	Examine how CSR disclosures affects EM, and the moderating effect of political cost or ethical concern	<b>Method:</b> Multivariate regression; Split sample based on moderator <b>DV:</b> EM (Jones, 1991a) <b>IV:</b> CSR disclosures (content analysis) <b>MOD:</b> Political cost (oil and gas industry); Ethical concern (food industry)	Political cost perspective [Ethical perspective]	CSR disclosures have a positive effect on EM in the food industry; but a negative effect in the oil and gas industry
Kim et al. (2012)	USA 18,160 observations (1991 – 2009)	Examine how CSR affects EM	<b>Method:</b> Multivariate and logistic regression <b>DV:</b> EM (Cohen et al., 2008; Dechow et al., 1995) <b>IV:</b> CSR (KLD)	Transparent financial reporting hypothesis; [Opportunistic financial reporting hypothesis]	CSR has a negative effect on EM
Litt et al. (2013)	USA 2,095 observations (2004-2006)	Examine how the environmental dimension of CSR affects EM	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Kothari et al., 2005) <b>IV:</b> CSR - Environmental dimension (KLD)	Principal-agent theory; Corporate culture theory	Environmental dimension has a negative effect on EM
Scholtens & Kang (2013)	10 Asia-Pacific countries 139 firms (2004 – 2008)	Examine how CSR affects EM, and the moderating effect of INVPRO	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Bhattacharya et al., 2003; Dechow & Dichev, 2002; Dechow et al., 1995; Leuz et al., 2003; Sloan, 1996) <b>IV:</b> CSR (Asia Sustainability Research) <b>MOD:</b> INVPRO	Institutional Stakeholder Theory; Resource-based view	CSR has a negative effect on EM, strengthened by INVPRO
Grougiou et al. (2014)	USA 116 banks (2003 – 2007)	Examine the bi-directional relationship between CSR and EM	<b>Method:</b> 2SLS <b>DV:</b> EM (Beatty et al., 2002; Cornett et al., 2009) <b>IV:</b> CSR (KLD)	Legitimacy theory; Signalling theory [Social norm theory; Stakeholder theory]	EM has a positive effect on CSR, but CSR does not have a significant effect on EM.
Bozzolan et al. (2015)	24 countries 5,863 observations/ 1,141 firms (2003 – 2009)	Examine how CSR affects the trade-off between real activities and AEM and firm performance	<b>Method:</b> 2SLS <b>DV:</b> EM trade-off (Cohen et al., 2008; Dechow et al., 1995; Roychowdhury, 2006) <b>IV:</b> CSR (EIRIS)	Myopia avoidance hypothesis [Multiple objectives hypothesis]	CSR has a negative effect on EM; CSR firms are less likely to engage in real activities than in AEM. CSR has a positive effect on firm performance via the trade-off
Cho & Chun (2015)	Korea 1,432 observations (2005 – 2010)	Examine how CSR affects EM, and the moderating effect of corporate governance	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Roychowdhury, 2006) <b>IV:</b> CSR (KEJI) <b>MOD:</b> Corporate governance	Stakeholder perspective	CSR has a negative effect on EM, strengthened by corporate governance

Gao & Zhang (2015)	USA 10,755 observations/ 2,022 firms (1993 – 2010)	Examine how CSR affects EM and firm value	<b>Method:</b> Multivariate regression and 2SLS <b>DV:</b> Firm valuation <b>IV:</b> CSR (KLD) <b>MOD:</b> EM (Francis et al., 2004; Kothari et al., 2005)	Market efficiency theory	CSR has a negative effect on EM; interaction of CSR and EM increase firm value
Martínez-Ferrero et al. (2015)	26 countries 14,844 observations/ 1,960 firms 2002 – 2010	Examine the bi-directional relationship between CSR and EM, and the moderating effect of institutional factors	<b>Method:</b> GMM <b>DV:</b> EM (Dechow et al., 1995) <b>IV:</b> CSR (EIRIS) <b>MOD:</b> Stakeholder and INVPRO	Transparent financial reporting perspective [Multiple objectives hypothesis]	Negative bi-directional relationship between CSR and EM, strengthened by institutional factors
Muttakin et al. (2015)	Bangladesh 580 observations/ 135 firms (2005 – 2009)	Examine how CSR disclosures affect EM, and the moderating effect of powerful stakeholders	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Dechow et al., 1995) <b>IV:</b> CSR (content analysis) <b>MOD:</b> Export oriented industries (textile)	Stakeholder theory	CSR disclosures have a positive effect on EM in general, but a negative effect in industries with powerful stakeholders
Gras-Gil et al. (2016)	Spain 286 observations/ 100 firms (2005 – 2012)	Examine how CSR affects EM	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Dechow et al., 1995) <b>IV:</b> CSR (MERC0)	Long-term perspective hypothesis	CSR has a negative effect on EM
Chun & Cho (2017)	Korea 659 observations (2005-2010)	Examine how differentiation strategy affects EM, and the moderating effect of CSR	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Cohen et al., 2008; Roychowdhury, 2006) <b>IV:</b> Differentiation strategy <b>MOD:</b> CSR (KEJI)	Ethical perspective; Stakeholder perspective	CSR has a negative effect on EM. Differentiation strategy has a negative effect on EM, and CSR strengthens this.
Kyaw et al. (2017)	European countries 5,937 observations/ 749 firms (2002 – 2013)	Examine how CSR affects EM, and the moderating effect of institutional framework	<b>Method:</b> OLS and GMM; Split sample based on moderator <b>DV:</b> EM (Chih et al., 2008) <b>IV:</b> CSR (Thomson Reuters, Asset4) <b>MOD:</b> Coordinated versus Liberal market economies	Agency theory; Multiple objectives hypothesis	CSR has a positive effect on EM in coordinated market economies, but no significant effect on liberal market economies
Liu et al. (2017)	USA 2,369 observations (2003 - 2010)	Examine how family involvement and CSR affect EM	<b>Method:</b> 3SLS <b>DV:</b> EM (Kothari et al., 2005; Roychowdhury, 2006) <b>IV:</b> Family involvement <b>MED:</b> CSR (KLD)	[Ethical argument; Opportunistic argument]	CSR has no significant effect on EM, when controlled for family firms
Almahrog et al. (2018)	UK 515 observations (2008 – 2010)	Examine how CSR disclosures affect EM	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Dechow et al., 1995) <b>IV:</b> CSR (content analysis and disclosure index)	Agency theory; Long-term perspective	CSR disclosures have a negative effect on EM

Amar & Chakroun (2018)	<i>France</i> 595 observations/ 119 firms (2010 - 2014)	Examine how CSR affects EM	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Dechow et al., 1995) <b>IV:</b> CSR - overall and dimensions (ISO26000)	Signalling theory; Myopia avoidance hypothesis	CSR has a negative effect on EM; corporate governance, human rights, environment and consumer expectations dimensions have Negative effect on EM; labour, fairness of practices and community involvement have no effect.
Choi et al. (2018)	<i>Korea</i> 4,870 observations (2002 – 2010)	Examine how CSR affects EM after controlling for endogeneity	<b>Method:</b> OLS and 2SLS <b>DV:</b> EM (Kothari et al., 2005; Roychowdhury, 2006) <b>IV:</b> CSR (KEJI)	Transparent financial reporting perspective [Opportunistic financial reporting perspective]	CSR has a negative effect on real activities EM, but no significant effect on AEM
Faisal et al. (2018)	<i>Indonesia</i> 479 firms (2012 – 2013)	Examine how CSR disclosures affect EM	<b>Method:</b> 2SLS <b>DV:</b> EM (Roychowdhury, 2006) <b>IV:</b> CSR (content analysis)	Stakeholder agency theory	CSR disclosures have a negative effect on EM
Gong & Ho (2018)	<i>China</i> 3,409 observations (2009 – 2015)	Examine how CSR performance affects EM, and the moderating effect of mandatory CSR disclosures	<b>Method:</b> Multivariate regression, 2SLS, GMM, Split sample based on moderator <b>DV:</b> EM (Cohen et al., 2008; Dechow & Dichev, 2002; Roychowdhury, 2006) <b>IV:</b> CSR (RKS) <b>MOD:</b> Mandatory versus voluntary disclosures	Long-term perspective [Opportunism perspective]	CSR has a negative effect on EM, in firms with mandatory CSR disclosures, but no effect in firms with voluntary disclosures
Jordaan et al. (2018)	<i>South Africa</i> 214 observations (2008, 2011, 2013)	Examine how CSR performance and disclosures affect EM	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Dechow et al., 1995; Roychowdhury, 2006) <b>IV:</b> CSR performance (SRI Index); CSR disclosures (KPMG)	Ethical hypothesis; Opportunistic hypothesis	CSR performance has a positive effect on AEM, but a negative effect on real activities EM; CSR disclosures have a negative effect on AEM
Kolsi & Attayah (2018)	<i>UAE</i> 170 observations/ 34 firms (2010 - 2014)	Examine how CSR disclosures affect EM	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Barton, 2001; Dechow & Dichev, 2002; Pincus & Rajgopal, 2002; Roychowdhury, 2006) <b>IV:</b> CSR (content analysis)	Opportunistic perspective [Transparent financial reporting perspective]	CSR disclosures have a positive effect on AEM and earning smoothing, but no effect on real activities EM.
Li & Xia (2018)	<i>China</i> 8,156 firms (2009 – 2014)	Examine how CSR affects EM, and the moderating effect of controlling shareholders	<b>Method:</b> Multivariate regression; Split sample based on moderator <b>DV:</b> EM (Jones, 1991a; Kothari et al., 2005) <b>IV:</b> CSR (Chinese CSR White Paper) <b>MOD:</b> Privately owned versus State owned (Central versus Local government control)	Transparent financial reporting theory [Opportunistic financial reporting theory]	CSR has a negative effect on EM in privately owned enterprises. Among state owned firms the effect is weakened by central government-control

Wang et al. (2018)	<i>China</i> 11,619 observations/ 1,888 firms (2003 – 2012)	Examine how mandatory CSR reporting affects EM	<b>Method:</b> Difference-in-difference estimation <b>DV:</b> EM (Kothari et al., 2005; Raman & Shahrur, 2008) <b>IV:</b> Mandatory CSR (in accordance with 2008 Notice)	Signalling theory perspective; Transparent financial reporting perspective	Mandatory CSR reporting has a negative effect on EM
Kim et al. (2019)	<i>China</i> 2,640 observations/ 521 firms (2009 – 2014)	Examine how CSR affects EM, and the moderating effect of institutional factors	<b>Method:</b> OLS and 2SLS <b>DV:</b> EM (Kothari et al., 2005; Roychowdhury, 2006) <b>IV:</b> CSR (Rankings CSR Ratings) <b>MOD:</b> State control; regional institutional environment	Ethical perspective; Managerial opportunism perspective	CSR has a negative effect on EM in general; but positive effect in firms with state-control and in institutionally developed regions
Liu & Lee (2019)	<i>China</i> 1,374 observations (2010 – 2014)	Examine how government guided CSR implementation affects EM	<b>Method:</b> Multivariate regression; Sample split based on moderator <b>DV:</b> EM (Cohen et al., 2008; Dechow et al., 1995; Roychowdhury, 2006) <b>IV:</b> CSR (RKS) <b>MOD:</b> Government guidance (State owned versus private firms)	Political cost perspective; Ethical perspective	CSR has a negative effect on EM in general and among state owned firms, but no significant effect in private firms
Palacios-Manzano et al. (2019)	<i>Spain</i> 452 observations/ 100 firms (2011 – 2015)	Examine how CSR affects EM	<b>Method:</b> 2SLS <b>DV:</b> EM (Dechow et al., 1995) <b>IV:</b> CSR (MERC0)	Long-term perspective hypothesis [Managerial opportunism hypothesis]	CSR has a negative effect on EM
Pratiwi & Siregar (2019)	<i>Indonesia</i> 936 observations (2014 – 2016)	Examine how CSR disclosures affect EM, and the moderating effect of political connections	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Bozzolan et al., 2015; Cohen et al., 2008; Kothari et al., 2005; Roychowdhury, 2006) <b>IV:</b> CSR (content analysis) <b>MOD:</b> Political connections	Legitimacy theory [Ethical theory]	CSR disclosures have a positive effect on EM; no moderating effect of political connections
Sial et al. (2019)	<i>China</i> 3481 observations (2009 – 2015)	Examine the bi-directional relationship between CSR and EM, and the moderating effect of female and independent directors	<b>Method:</b> GMM <b>DV:</b> EM (Dechow et al., 1995; Roychowdhury, 2006) <b>IV:</b> CSR (RKS) <b>MOD:</b> Female and independent directors	Stakeholder theory; Agency theory	Negative bi-directional relationship between CSR and EM, strengthened by female and independent directors
Velte (2019)	<i>Germany</i> 548 observations (2011 – 2017)	Examine the bi-directional relationship between CSR and EM	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Cohen et al., 2008; Kothari et al., 2005; Roychowdhury, 2006) <b>IV:</b> CSR - overall and dimensions (Asset4, Thomson Reuters)	Stakeholder theory	Negative bi-directional relationship between CSR and AEM, but not real activities EM

Buertey et al. (2020)	<i>South Africa</i> 354 observations/ 118 firms (2013 – 2015)	Examine how CSR affects EM, and the moderating effect of corporate governance	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Kothari et al., 2005) <b>IV:</b> CSR (CSRHub) <b>MOD:</b> Corporate governance	Agency theory	CSR has a positive effect on EM, weakened by board size and block ownership
García-Sánchez et al. (2020)	<i>28 countries</i> 9,746 observations/ 3,594 firms (2007 – 2016)	Examine how CSR effects EM, and the moderating effect of managerial entrenchment	<b>Method:</b> GMM <b>DV:</b> EM (Cohen & Zarowin, 2010; Dechow et al., 1995; Roychowdhury, 2006) <b>IV:</b> CSR (Thomson Reuters, ASSET4) <b>MOD:</b> Managerial entrenchment	Agency theory; Stakeholder theory; Legitimacy theory	CSR has a negative effect on EM, weakened by managerial entrenchment in firms with weak governance
Gerged et al. (2020) 2020	<i>Kuwait</i> 300 observations (2010 – 2014)	Examine how environmental disclosures affect EM	<b>Method:</b> 2SLS and GMM <b>DV:</b> EM (Kothari et al., 2005) <b>IV:</b> Environmental disclosures (content analysis and disclosure index)	Stakeholder theory; Legitimacy theory	Environmental disclosures have a negative effect on EM
Habbash & Haddad (2020)	<i>Saudi Arabia</i> 225 observations (2015 – 2016)	Examine how CSR disclosures affect EM	<b>Method:</b> OLS <b>DV:</b> EM (Kothari et al., 2005) <b>IV:</b> CSR (content analysis)	Multiple objectives hypothesis [Myopia avoidance hypothesis; Predictable earnings hypothesis]	CSR disclosures have a positive effect on EM
Kumala & Siregar (2020)	<i>Indonesia</i> 105 observations - mining firms (2012 – 2014)	Examine how CSR disclosures affect EM, and the moderating effect of family ownership	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Kothari et al., 2005) <b>IV:</b> CSR (content analysis) <b>MOD:</b> Concentrated family ownership	Stakeholder theory; Legitimacy theory [Agency theory]	CSR disclosures have a negative effect on EM, strengthened by family ownership
Mohmed et al. (2020)	<i>Egypt</i> 100 firms (2007 – 2015)	Examine the bi-directional relationship between CSR and EM	<b>Method:</b> 2SLS <b>DV:</b> EM (Ball & Shivakumar, 2006; Dechow et al., 1995; Kothari et al., 2005) <b>IV:</b> CSR (S&P/ESG index)	Agency theory; Stakeholder theory; Stakeholder-stewardship theory	In the top 30 CSR scoring firms, CSR has a negative effect on EM; in the bottom 70 firms, CSR has a positive effect on EM
Rezaee et al. (2020)	<i>China</i> 14,807 observations/ 2,580 firms (2009 – 2015)	Examine how CSR affects EM, and the moderating effect of state ownership and marketization	<b>Method:</b> Multivariate regression and 2SLS; Split sample based on moderator (state ownership) <b>DV:</b> EM (Kothari et al., 2005; Roychowdhury, 2006) <b>IV:</b> CSR (RKS) <b>MOD:</b> State ownership; Marketization	Stakeholder theory; Legitimacy theory; Stewardship theory	CSR has a negative effect on EM, strengthened by marketization. CSR has a negative effect on AEM but a positive effect on real activities EM in non-state-owned firms
Chen & Hung (2021)	<i>Taiwan</i> 3,495 observations/ 699 firms (2010 – 2014)	Examine how CSR affects EM and firm value	<b>Method:</b> OLS <b>DV:</b> EM (Cohen & Zarowin, 2010; Kothari et al., 2005); Firm value <b>IV:</b> CSR (CSR Best Practice Principles for TWSE/GTSM listed companies)	Agency theory	CSR has a negative effect on EM; the interaction of CSR and EM decreases firm value

Gerged et al. (2021)	<i>Jordan</i> 500 observations/ 100 firms (2010 – 2014)	Examine how environmental disclosures affect EM, and the moderating effect of corporate governance	<b>Method:</b> OLS and GMM <b>DV:</b> EM (Kothari et al., 2005) <b>IV:</b> CSR environmental disclosures (content analysis) <b>MOD:</b> Corporate governance	Agency theory; Stakeholder theory; Legitimacy theory	Environmental disclosures have a negative effect on EM, strengthened by some board size, managerial and institutional ownership
Hickman et al. (2021)	<i>India</i> 5,194 observations (2012 – 2017)	Examine how CSR affects EM, before and after Indian Companies Act of 2013	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Cohen et al., 2008; Dechow et al., 1995; Roychowdhury, 2006) <b>IV:</b> CSR (dummy for disclosures before and after the Act)	Ethical perspective; Opportunistic perspective	CSR has a positive effect on EM; no significant change after the Act
Velte (2021)	<i>17 European countries</i> 1,509 observations/ 600 firms (2014 – 2018)	Examine how the environmental dimension of CSR and carbon performance affect EM	<b>Method:</b> Multivariate regression <b>DV:</b> EM (Cohen et al., 2008; Kothari et al., 2005; Roychowdhury, 2006) <b>IV:</b> CSR environmental score; carbon performance score (Thomson Reuters, ASSET4)	Agency theory	Environmental and Carbon performance have positive effect on real activities EM, but a negative effect on AEM.
Zhang et al. (2021)	<i>China</i> 1,635 observations/ 545 firms (2016 – 2018)	Examine how CSR performance and disclosures affect EM	<b>Method:</b> GLS <b>DV:</b> EM (Cohen et al., 2008; Jordaan et al., 2018; Roychowdhury, 2006) <b>IV:</b> CSR performance (China's top 200 firms CSR development index); CSR disclosures (dummy for voluntary disclosure)	Ethical theory; Opportunistic theory	CSR performance has a positive effect on real activities EM, but a negative effect on AEM. CSR disclosures have a negative effect on real activities EM, but a positive effect on AEM.

While the two concepts, CSR and EM individually, have been around for a long time, research on the relationship between CSR and EM is fairly new. Patten & Trompeter (2003) and Riahi-Belkaoui (2003) are among the pioneers examining the CSR-EM relationship, both studies based on samples from USA. The debate on the direction of the relationship between CSR and EM appears to have been initiated by these two pioneering studies that reported contrasting results. Using a sample of 40 chemical firms from USA during the year 1984, Patten & Trompeter (2003) report a negative relationship between pre-event environmental disclosures and income-decreasing accruals management. Patten & Trompeter (2003) do not examine overall CSR, but rather environmental disclosures by firms that were possibly affected by regulatory threats caused by the Bhopal chemical leak in 1984. The study has a very limited sample of 40 observations due to the specific setting it examines.

Riahi-Belkaoui (2003), on the other hand, uses a larger sample size and examines the effect of overall CSR performance on EM. Using a more recent sample (1994-1998), Riahi-Belkaoui (2003) also uses discretionary accruals as an EM proxy, but uses CSR scores from *Fortune Magazine*. Using a sample of 404 firm-year observations from USA between 1994 and 1998, Riahi-Belkaoui (2003) reports findings that contradict the findings of Patten & Trompeter (2003), and suggests that CSR has a positive effect on EM. Owing to the debate, initiated by Patten & Trompeter (2003) and Riahi-Belkaoui (2003) on how CSR affects EM, a number of studies followed to examine the CSR-EM relationship further. Chih et al. (2008) is the first study to examine the CSR-EM relationship using a large international sample of 1,653 firms from 46 countries, between 1993 and 2002 inclusive. Chih et al. (2008) also introduces four theoretical perspectives explaining the CSR-EM relationship – 1) myopia avoidance hypothesis, 2) multiple objectives hypothesis, 3) predictable earnings hypothesis, and 4) institutional hypothesis. This has made Chih et al. (2008) study one of the most popular and frequently cited in CSR-EM literature.

In the first 12 years in the CSR-EM literature (2003 to 2014), the relationship between CSR and EM had only been examined in developed market<sup>8</sup> countries or on international samples. There were no studies focussing solely on emerging market or frontier market countries. Most of the developed country studies are about the USA. From 2010 to 2017, a number of studies examined the CSR-EM relationship in USA (see Calegari et al., 2010; Gao & Zhang, 2015; Grougiou et al., 2014; Heltzer, 2011; Hong & Andersen, 2011; Kim et al., 2012; Litt et al., 2013; Liu et al., 2017; Yip et al., 2011).

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<sup>8</sup> The classifications of countries into developed, emerging and frontier market categories are based on the MSCI classification following MSCI (2021a).

However, during this time, there are studies that looked at the CSR-EM relationship outside USA, particularly focusing on Europe or Asia.

While the first study to look outside USA is Gargouri et al. (2010), examining a sample of 109 firms from Canada, from 2016 onwards European countries began to get attention for CSR-EM research (see Almahrog et al., 2018; Amar & Chakroun, 2018; Gras-Gil et al., 2016; Kyaw et al., 2017; Palacios-Manzano et al., 2019; Velte, 2019, 2021). The European countries that have been examined include, Spain (see Gras-Gil et al., 2016; Palacios-Manzano et al., 2019), United Kingdom (UK) (see Almahrog et al., 2018), France (see Amar & Chakroun, 2018), and Germany (see Velte, 2019). Kyaw et al. (2017) examine many European countries, while Velte (2021) examines 17 European countries.

Several studies have examined international samples, Chih et al. (2008) being the first one. Scholtens & Kang (2013) examine a sample of 139 firms from ten Asia-Pacific countries. The study includes a mix of developed countries (such as, Australia, Hong Kong and Japan) and emerging market countries (such as, China, India, Malaysia, Pakistan, Philippine, Singapore and Thailand). During 2015 to 2020, three more studies examined international samples, Martínez-Ferrero et al. (2015) using 26 countries, Bozzolan et al. (2015) using 24 countries, and García-Sánchez et al. (2020), examining 28 countries.

The first study to examine the CSR-EM issue with a sole focus on an emerging market country is the study by Cho & Chun (2015) which uses a sample of 1,432 firm-year observations of Korean firms. It is notable that from 2017 onwards, emerging market countries have become very popular for CSR-EM studies which include countries like Korea (see Choi et al., 2018; Chun & Cho, 2017), Indonesia (see Faisal et al., 2018; Kumala & Siregar, 2020; Pratiwi & Siregar, 2019), and South Africa (Buertey et al., 2020; Jordaan et al., 2018). Since 2018, China has been gaining increased attention for CSR-EM research. Li & Xia (2018), Wang et al. (2018) and Gong & Ho (2018) are the first three studies to examine the relationship between CSR and EM in China. Several other studies have subsequently examined the CSR-EM relationship in China (see Kim et al., 2019; Liu & Lee, 2019; Rezaee et al., 2020; Sial et al., 2019; Zhang et al., 2021). Middle Eastern countries have also gained increasing attention for CSR-EM research since 2018. These countries include United Arab Emirates (UAE) (see Kolsi & Attayah, 2018), Saudi Arabia (see Habbash & Haddad, 2020), Kuwait (see Gerged et al., 2020), Egypt (see Mohamed et al., 2020). Recent studies have also focussed on other Asian emerging market countries, particularly Taiwan and India. Chen & Hung (2021) are the first to examine Taiwan, while Hickman et al. (2021) are the first to examine India. As shown in Table 2.1,

EM-CSR literature has gained attention worldwide. Two studies have examined the CSR-EM relationship in frontier market countries – Muttakin et al. (2015) examined Bangladesh, and Gerged et al. (2021), examined Jordan.

Overall, 17 of the 48 studies are based on developed market countries, like USA, UK, Canada, Spain France and Germany, while 22 of the 48 studies are based on emerging market countries, such as China, Korea, Indonesia, South Africa, Taiwan, India, UAE, Egypt, Saudi Arabia and Kuwait. Two studies are based on frontier market countries, specifically Bangladesh and Jordan. Furthermore, seven of the 48 studies are based on international samples. Of these seven studies, only three use regional samples, such as Asia Pacific countries (see Scholtens & Kang, 2013) and European countries (see Kyaw et al., 2017; Velte, 2021).

The discussion so far has provided an overview of the samples involved in previous CSR-EM studies. Now I discuss the research objectives of prior studies. As evident from Column (3) of Table 2.1, the research objective of several prior studies is to examine how EM is affected by *CSR performance* (see Amar & Chakroun, 2018; Choi et al., 2018; Gargouri et al., 2010; Gras-Gil et al., 2016; Hong & Andersen, 2011; Kim et al., 2012; Palacios-Manzano et al., 2019), *CSR disclosures* (see Almahrog et al., 2018; Faisal et al., 2018; Habbash & Haddad, 2020; Kolsi & Attayah, 2018; Wang et al., 2018), or *both* (see Jordaan et al., 2018; Zhang et al., 2021). Gargouri et al. (2010) and Amar & Chakroun (2018) examine not only the overall *CSR performance*, but also the *individual CSR dimensions*. Heltzer (2011), Litt et al. (2013 and Velte (2021) examine how the *environmental dimension* of CSR (as opposed to overall CSR performance) affect EM, while Gerged et al. (2020) examine the effect of *environmental disclosures* on EM.

Some studies expand on the CSR-EM literature, by examining how various moderating factors affect this relationship (see Buertey et al., 2020; Chih et al., 2008; Cho & Chun, 2015; García-Sánchez et al., 2020; Gerged et al., 2021; Kim et al., 2019; Kumala & Siregar, 2020; Muttakin et al., 2015; Pratiwi & Siregar, 2019; Scholtens & Kang, 2013; Sial et al., 2019). For example, Chih et al. (2008) and Kim et al. (2019) examine the moderating role of institutional factors. However, while Chih et al. (2008) examine country-level institutional factors for 46 countries, that include Antidirector rights, legal enforcement and GDP per capita, Kim et al. (2019) examine state control and regional institutional environment among Chinese firms. Muttakin et al. (2015) examine the moderating effect of powerful stakeholders in Bangladesh (proxied by export-oriented industries). Cho & Chun (2015), Buertey et al. (2020) and Gerged et al. (2021) examine the moderating effect of corporate

governance on the CSR-EM relationship in Korea, South Africa and Jordan respectively. Scholtens & Kang (2013) observe INVPRO as a moderating factor affecting the CSR-EM relationship in ten Asia-Pacific countries, while García-Sánchez et al. (2020) test the moderating effect of managerial entrenchment across 28 countries. Pratiwi & Siregar (2019) and Kumala & Siregar (2020) examine the moderating effect of political connections and family ownership respectively, among Indonesian firms.

A number of studies examine the CSR-EM relationship by exploring contextual effects on the relationship, using split-sample approach (see Gong & Ho, 2018; Kyaw et al., 2017; Li & Xia, 2018; Liu & Lee, 2019; Rezaee et al., 2020; Yip et al., 2011). The contexts examined by these studies include US industries (that is, oil and gas industries with high political costs versus food industries with high ethical concerns) (see Yip et al., 2011), the institutional framework of European countries (that is, coordinated versus liberal market economies) (see Kyaw et al., 2017), firm ownership in China (that is private ownership versus state ownership) (see Li & Xia, 2018; Liu & Lee, 2019; Rezaee et al., 2020), marketization<sup>9</sup> in China (see Rezaee et al., 2020), and mandatory versus voluntary CSR disclosures in China, (see Gong & Ho, 2018). Hickman et al. (2021) use dummy variables to represent the differences in context, that is CSR disclosures before and after the Indian Companies Act of 2013.<sup>10</sup>

As a further expansion to the CSR-EM literature, some studies examine the bi-directional relationship between CSR and EM (see Grougiou et al., 2014; Martínez-Ferrero et al., 2015; Mohamed et al., 2020; Sial et al., 2019; Velte, 2019). Grougiou et al. (2014), Velte (2019) and Mohamed et al. (2020) examine the bi-directional CSR-EM relationship among US banks, German firms and Egyptian firms respectively. However, Martínez-Ferrero et al. (2015) and Sial et al. (2019) extend their research objectives beyond just examining the bi-directional CSR-EM relationship, by exploring moderating factors affecting the bi-directional CSR-EM relationship. Martínez-Ferrero et al. (2015) examine how country-level institutional factors (specifically, stakeholder and INVPRO) moderates the bi-directional relationship between CSR and EM across firms in 26 countries. In contrast, Sial et al. (2019) examine the moderating effect of female and independent directors on the bi-directional

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<sup>9</sup> Marketization refers to the level of market development, measured using the marketization index developed by China's National Economic Research Institute (Rezaee et al., 2020).

<sup>10</sup> The Indian Companies Act of 2013 specifies provisions "to improve governance and financial audits" (p.1). Additionally, the Act also mandates firms (that meet the size or profitability criteria) to spend at least 2% of their reported earnings on CSR initiatives (Hickman et al., 2021).

CSR-EM relationship within Chinese firms.

Some studies deviate from the usual trend of examining the effect of CSR on EM (where CSR is defined as the independent variable, and EM the dependent variable). Gao & Zhang (2015) and Chen & Hung (2021) examine how the interaction of CSR and EM affects firm value, using EM as the moderator, in firms in USA and Taiwan respectively. Calegari et al. (2010) and Bozzolan et al. (2015) take a different approach by examining EM as a mediator in the relationship between CSR and firm value, and between CSR and firm performance respectively. Specifically, Calegari et al. (2010) examine the indirect relationship between CSR and firm value via EM among US firms. In contrast, Bozzolan et al. (2015) focus on how CSR indirectly affects firm performance, via the trade-off between accruals based EM and real activities EM (REM) within firms of 26 countries. Chun & Cho (2017) examine how CSR affects the relationship between differentiation strategy and EM, while Liu et al. (2017) examine how family involvement indirectly affects EM via CSR.

The previous paragraphs have discussed the research objectives of prior studies. Now, I discuss the developments in the methodology in the CSR-EM literature, as shown in Column (4) of Table 2.1. As discussed above, since the first two studies in 2003, research on CSR-EM have continued to gain interest worldwide. Subsequent studies have taken two approaches when it comes to CSR – majority of the studies follow Riahi-Belkaoui (2003), and focus on *CSR performance*, using secondary sources to obtain CSR indices (33 of the 48 studies) (see Amar & Chakroun, 2018; Bozzolan et al., 2015; Buertey et al., 2020; Calegari et al., 2010; Chen & Hung, 2021; Chih et al., 2008; Cho & Chun, 2015; Choi et al., 2018; Chun & Cho, 2017; Gao & Zhang, 2015; García-Sánchez et al., 2020; Gargouri et al., 2010; Gras-Gil et al., 2016; Grougiou et al., 2014; Heltzer, 2011; Hong & Andersen, 2011; Kim et al., 2019; Kim et al., 2012; Kyaw et al., 2017; Li & Xia, 2018; Litt et al., 2013; Liu & Lee, 2019; Liu et al., 2017; Martínez-Ferrero et al., 2015; Mohamed et al., 2020; Palacios-Manzano et al., 2019; Rezaee et al., 2020; Scholtens & Kang, 2013; Sial et al., 2019; Velte, 2019, 2021). The secondary sources used by prior studies mainly include indices from secondary databases, predominantly, the KLD (Kinder, Lydenberg, and Domini) database (see Calegari et al., 2010; Gao & Zhang, 2015; Grougiou et al., 2014; Heltzer, 2011; Hong & Andersen, 2011; Kim et al., 2012; Litt et al., 2013; Liu et al., 2017), the KEJI (Korea Economic Justice Institute) database (see Cho & Chun, 2015; Choi et al., 2018; Chun & Cho, 2017), the RKS (Rankings) (see Gong & Ho, 2018; Kim et al., 2019; Liu & Lee, 2019; Rezaee et al., 2020; Sial et al., 2019), and Thomson Reuters ASSET4 (see García-Sánchez et al., 2020; Kyaw et al., 2017; Velte, 2019, 2021). Many other studies follow Patten & Trompeter (2003), and focus on *CSR disclosures* (12 of the 48 studies), mainly using content analysis approach (see Almahrog et al.,

2018; Faisal et al., 2018; Gerged et al., 2020; Gerged et al., 2021; Habbash & Haddad, 2020; Kolsi & Attayah, 2018; Kumala & Siregar, 2020; Muttakin et al., 2015; Pratiwi & Siregar, 2019; Yip et al., 2011), while some use dummy variables as indicators of CSR disclosures (see Wang et al., 2018). Additionally, a few recent studies examine *both CSR performance and CSR disclosures* (3 of the 48 studies) (see Gong & Ho, 2018; Jordaan et al., 2018; Zhang et al., 2021). Consistent with majority of the literature, the present study measures CSR performance using CSR index from a secondary database. This is discussed in greater detail in Chapter 3.

In terms of EM, prior studies use various proxies, with *discretionary accruals* being the most common measure (see Ackoff, 1999; Almahrog et al., 2018; Amar & Chakroun, 2018; Bozzolan et al., 2015; Buerthey et al., 2020; Calegari et al., 2010; Chen & Hung, 2021; Choi et al., 2018; Gao & Zhang, 2015; García-Sánchez et al., 2020; Gargouri et al., 2010; Gerged et al., 2020; Gerged et al., 2021; Gras-Gil et al., 2016; Habbash & Haddad, 2020; Heltzer, 2011; Hickman et al., 2021; Hong & Andersen, 2011; Jordaan et al., 2018; Kim et al., 2019; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Litt et al., 2013; Liu & Lee, 2019; Liu et al., 2017; Martínez-Ferrero et al., 2015; Mohmed et al., 2020; Muttakin et al., 2015; Palacios-Manzano et al., 2019; Patten & Trompeter, 2003; Pratiwi & Siregar, 2019; Rezaee et al., 2020; Riahi-Belkaoui, 2003; Sial et al., 2019; Velte, 2019, 2021; Wang et al., 2018; Yip et al., 2011; Zhang et al., 2021). Another quite popular measure of EM is *real activities EM (REM)*, used by several prior studies (see Bozzolan et al., 2015; Chen & Hung, 2021; Cho & Chun, 2015; Choi et al., 2018; Chun & Cho, 2017; Faisal et al., 2018; García-Sánchez et al., 2020; Gong & Ho, 2018; Hickman et al., 2021; Hong & Andersen, 2011; Jordaan et al., 2018; Kim et al., 2019; Kim et al., 2012; Kolsi & Attayah, 2018; Liu & Lee, 2019; Liu et al., 2017; Pratiwi & Siregar, 2019; Rezaee et al., 2020; Sial et al., 2019; Velte, 2019, 2021; Zhang et al., 2021). Other less popular EM measures used by prior studies include *accruals quality* (see Gong & Ho, 2018; Kolsi & Attayah, 2018), *earnings aggressiveness* (see Chih et al., 2008; Kyaw et al., 2017; Scholtens & Kang, 2013), *earnings smoothing* (see Chih et al., 2008; Gao & Zhang, 2015; Heltzer, 2011; Kolsi & Attayah, 2018; Scholtens & Kang, 2013), *asymmetric recognition of gains or losses* (see Mohmed et al., 2020), and for banks, *loan loss provisions* and *realized security gains and losses* (see Grougiou et al., 2014).

Following prior studies, the present study uses the most popular EM measure, that is, discretionary accruals, as the primary measure of EM. The study also uses accruals quality as an alternate measure of EM. The reason for choosing accruals quality as the alternate measure is that both discretionary accruals and accruals quality indicate both accrual-based EM. Other proxies, such as REM, measures different forms of EM, which is outside the scope of the present research.

Most prior studies use *multivariate regressions* or *Ordinary Least Squares (OLS) technique* estimation methods for analysis (for example, see Almahrog et al., 2018; Amar & Chakroun, 2018; Buertey et al., 2020; Calegari et al., 2010; Chen & Hung, 2021; Chih et al., 2008; Cho & Chun, 2015; Choi et al., 2018; Chun & Cho, 2017; Gao & Zhang, 2015; Gerged et al., 2021; Gong & Ho, 2018; Gras-Gil et al., 2016; Habbash & Haddad, 2020; Hickman et al., 2021; Hong & Andersen, 2011; Jordaan et al., 2018; Kim et al., 2019; Kim et al., 2012; Kolsi & Attayah, 2018; Kumala & Siregar, 2020; Kyaw et al., 2017; Li & Xia, 2018; Litt et al., 2013; Liu & Lee, 2019; Muttakin et al., 2015; Patten & Trompeter, 2003; Pratiwi & Siregar, 2019; Rezaee et al., 2020; Riahi-Belkaoui, 2003; Scholtens & Kang, 2013; Velte, 2019, 2021; Yip et al., 2011). Hong & Andersen (2011) highlight the need for improvements in the analytical models by incorporating more sophisticated models for examining the CSR-EM relationship. A range of other more sophisticated techniques have also been used to explore the CSR-EM relationship, such as, *2 Stage Least Squares (2SLS)* (Bozzolan et al., 2015; Calegari et al., 2010; Choi et al., 2018; Faisal et al., 2018; Gao & Zhang, 2015; Gerged et al., 2020; Gong & Ho, 2018; Grougiou et al., 2014; Kim et al., 2019; Mohamed et al., 2020; Palacios-Manzano et al., 2019; Rezaee et al., 2020), *General Methods of Moments (GMM)* (García-Sánchez et al., 2020; Gerged et al., 2020; Gerged et al., 2021; Gong & Ho, 2018; Kyaw et al., 2017; Martínez-Ferrero et al., 2015; Sial et al., 2019), *3 Stage Least Squares (3SLS)* (Liu et al., 2017), *Maximum Likelihood Estimation (MLE)* (Patten & Trompeter, 2003), *Probit* (Gargouri et al., 2010), *Difference-in-difference estimation* (Wang et al., 2018) and *Generalized Least Squares* (Zhang et al., 2021).

The previous paragraphs have discussed the methodology in prior studies. Now, I focus on the empirical findings, as shown in Column (6) of Table 2.1. The majority of prior studies (23 of the 48 studies) suggest that CSR has a *negative effect* on EM (see Almahrog et al., 2018; Bozzolan et al., 2015; Calegari et al., 2010; Chen & Hung, 2021; Cho & Chun, 2015; Chun & Cho, 2017; Faisal et al., 2018; Gao & Zhang, 2015; García-Sánchez et al., 2020; Gerged et al., 2020; Gerged et al., 2021; Gras-Gil et al., 2016; Hong & Andersen, 2011; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Litt et al., 2013; Martínez-Ferrero et al., 2015; Palacios-Manzano et al., 2019; Patten & Trompeter, 2003; Scholtens & Kang, 2013; Sial et al., 2019; Wang et al., 2018). The negative relationship between CSR and EM suggests that managers in firms with high CSR are less likely to manage earnings. Prior studies explain this negative relationship in two ways – 1) a relationship-driven perspective, and 2) a value-driven perspective.

The relationship-driven perspective suggests that the negative relationship between CSR and EM is a result of managers being genuinely concerned with maintaining relationships with stakeholders

(for example, see Almahrog et al., 2018; Amar & Chakroun, 2018; Cho & Chun, 2015; Choi et al., 2018; Chun & Cho, 2017; Faisal et al., 2018; Gras-Gil et al., 2016; Hong & Andersen, 2011; Joubert, 2020; Velte, 2019). As Hong & Andersen (2011) explain, CSR initiatives are often undertaken to maintain good relationships with stakeholders. Thus, managers with CSR commitments are more fixated on building long-term relationships with stakeholders as opposed to being driven simply by profit maximising incentives (Almahrog et al., 2018). EM, on the other hand is considered an agency cost that may provide misleading information to stakeholders regarding the firm's performance (Prior et al., 2008). Thus, managers' efforts to meet stakeholders' expectations (Amar & Chakroun, 2018; Faisal et al., 2018; Joubert, 2020), reduce information asymmetry (Almahrog et al., 2018; Joubert, 2020; Mohamed et al., 2020; Wang et al., 2018) and maintain ties with stakeholders (Chun & Cho, 2017; Gras-Gil et al., 2016; Hong & Andersen, 2011; Velte, 2019) are likely to drive managers in high CSR firms to avoid EM. Establishing better relationships with stakeholders may have a number of benefits for the managers, including the enhancement of the firm's brand image and reputation (Cho & Chun, 2015; Gras-Gil et al., 2016). Additionally engagement in CSR may expose firms to greater scrutiny by regulators and stakeholders (for example, see Litt et al., 2013). The higher risks associated with greater scrutiny may result in lower motives or opportunities to conduct EM (for example, see Patten & Trompeter, 2003). Prior studies also suggest that CSR disclosures reduce information asymmetry between managers and shareholders (Mohamed et al., 2020; Wang et al., 2018). Reduced information asymmetry makes the firm's activities more transparent to shareholders, thus increasing the risk of exposure of EM activities. Thus, managers in firms with high CSR are less likely to engage in EM to avoid risks of facing potential negative consequences and causing irreversible damage to their relationship with stakeholders, if their EM activities are discovered by stakeholders (Gerged et al., 2020; Gerged et al., 2021)

The value-driven perspective suggests that the negative relationship between CSR and EM may result from managers' ethical and moral values (for example, see Calegari et al., 2010; Gao & Zhang, 2015; García-Sánchez et al., 2020; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Martínez-Ferrero et al., 2015; Mohamed et al., 2020; Palacios-Manzano et al., 2019; Rezaee et al., 2020; Scholtens & Kang, 2013; Sial et al., 2019). Calegari et al. (2010) explain that CSR practices become embedded in the firm's corporate culture, and ethical and social norms and values while Almahrog et al. (2018) explain that CSR springs from managers' ethical and moral values. Due to their ethical and moral values, as well as their objective of meeting the ethical expectations of the society, managers engaged in CSR are likely to maintain transparency in their financial reporting practices

and thus avoid EM (Bozzolan et al., 2015; Calegari et al., 2010; Chen & Hung, 2021; Gao & Zhang, 2015; García-Sánchez et al., 2020; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Martínez-Ferrero et al., 2015; Palacios-Manzano et al., 2019; Rezaee et al., 2020; Sial et al., 2019). Additionally, Martínez-Ferrero et al. (2015) suggest that managers involved in unethical practices such as EM, are less likely to undertake CSR initiatives. Scholtens & Kang (2013) explain that EM is both an unethical act and an agency cost. Thus, managers in firms with high CSR avoid EM due to their ethical values, as well as to reduce agency costs (Scholtens & Kang, 2013). Bozzolan et al. (2015) find that managers in firms with high CSR are less likely to engage in REM than accruals-based EM, since the former has more detrimental consequences for the firm's long-term performance.

Some studies have further linked the negative relationship between CSR and EM with other factors. For example, Calegari et al. (2010), Gao & Zhang (2015), and Chen & Hung (2021) link CSR-EM to firm value, while Bozzolan et al. (2015) link CSR-EM to firm performance. Calegari et al. (2010) suggest that the negative effect of CSR indirectly improves firm value via lower EM. Contrastingly, Gao & Zhang (2015) suggest that the interaction of CSR and EM enhances firm value in US firms. Chen & Hung (2021) report contradictory findings, suggesting that the interaction between CSR and EM leads to a deterioration in firm value among Taiwanese firms. The differences in the results may be a result of contextual differences between the two countries, USA and Taiwan. Bozzolan et al. (2015) find that CSR indirectly affects firm performance, via the trade-off between accruals-based EM and REM. The study reports that firms with high CSR are less likely to use REM due to the detrimental consequences of REM on firm performance.

Several studies have reported moderating factors that affect the negative relationship between CSR and EM. The moderating factors that strengthen the negative CSR-EM relationship include *corporate governance* (see Cho & Chun, 2015), or *some aspects of corporate governance* (see Gerged et al., 2021; Sial et al., 2019), *family ownership* (see Kumala & Siregar, 2020), *institutional factors* (see Martínez-Ferrero et al., 2015) and *INVPRO* (see Scholtens & Kang, 2013). However, some moderating factors weaken the negative CSR-EM relationship, such as, *central government control*, in state-owned firms (see Li & Xia, 2018) and *managerial entrenchment*, in firms with weak corporate governance (see García-Sánchez et al., 2020).

In contrast to the studies above, a few studies (5 out of the 48 studies) propose that CSR has a *positive effect* on EM (see Buertey et al., 2020; Habbash & Haddad, 2020; Hickman et al., 2021; Pratiwi & Siregar, 2019; Riahi-Belkaoui, 2003). The positive relationship suggests that managers in

firms with high CSR are more likely to manage earnings. Prior studies explain such short-term focus in two ways: 1) incentive-driven perspective, 2) opportunity-driven perspective. The first perspective suggests that managers in firms with high CSR may have greater incentives to manage earnings due to being burdened with multiple expectations from various stakeholders, on top of increasing profits (Chih et al., 2008). The pressure to please multiple stakeholders at once, may lead managers to manage earnings and report favourable financial information (Chih et al., 2008; Habbash & Haddad, 2020; Kyaw et al., 2017). Furthermore, the reputation, created by high CSR engagement, may also lead managers to manage earnings to maintain their social image and ranking (Riahi-Belkaoui, 2003).

The second perspective suggests that CSR may increase managerial opportunities for EM. Since CSR creates a positive image in the market, and makes the firm appear transparent and ethical, managers may have more opportunities to manage earnings (Muttakin et al., 2015; Riahi-Belkaoui, 2003). Pratiwi & Siregar (2019) and Hickman et al., (2021) explain that managers may use increased CSR disclosure as a means to hide their EM engagement undertaken to retain corporate legitimacy and reputation. Buertey et al. (2020) and Jordaan et al. (2018) suggest that managers may often have opportunistic motives for undertaking CSR initiatives. For example, when firm performance deteriorates, managers may engage in more CSR practices and use their CSR performance as a shield to hide their increased EM. Buertey et al. (2020) further examine the moderating effect of board size and block ownership on the CSR-EM relationship, suggesting that these factors weaken the positive CSR-EM relationship.

A number of studies also indicate that the effect of CSR on EM is contextual, based on various factors (see Amar & Chakroun, 2018; Chih et al., 2008; Choi et al., 2018; Gargouri et al., 2010; Gong & Ho, 2018; Heltzer, 2011; Jordaan et al., 2018; Kim et al., 2019; Kolsi & Attayah, 2018; Kyaw et al., 2017; Liu & Lee, 2019; Mohamed et al., 2020; Muttakin et al., 2015; Rezaee et al., 2020; Velte, 2019, 2021; Yip et al., 2011; Zhang et al., 2021). Some studies suggest that the CSR-EM relationship is contextual on the type of EM (see Chih et al., 2008; Choi et al., 2018; Jordaan et al., 2018; Kolsi & Attayah, 2018; Velte, 2019; Velte, 2021; Zhang et al., 2021). Chih et al. (2008) explain that managers in firms with high CSR are more likely to use earnings aggressiveness to manage earnings, but less likely to use earnings smoothing and loss avoidance.

Highlighting the significance of endogeneity issues in the CSR-EM relationship, Choi et al. (2018) report that, after controlling for endogeneity, CSR has a negative effect on REM but no significant

effect on discretionary accruals. According to Velte (2019), there is a negative bi-directional relationship between CSR and accruals-based EM, but no significant relationship between CSR and REM. Jordaan et al. (2018) provides conflicting findings on the effect of CSR on EM. Jordaan et al. (2018) suggest that while managers, in firms with high CSR performance are more likely to engage in accruals-based EM, they are less likely to engage in real activities EM that are more severe and difficult to be reversed in the following period. Furthermore, Jordaan et al. (2018) also report a negative relationship between CSR disclosures and EM, suggesting that managers may use increased CSR disclosures to reduce information asymmetry with stakeholders, which in turn means that they are less likely to manage earnings. Zhang et al. (2021) suggests contradictory results, observing that CSR performance has a positive effect on REM, but a negative effect on AEM. Additionally, Zhang et al. (2021) find that CSR disclosures have a positive effect on accruals-based EM, but no significant effect on REM. The results are consistent with the findings of Kolsi & Attayah (2018) that CSR disclosures have a positive effect on accruals-based EM, but no significant effect on REM. Velte (2021) focusses on the environmental and carbon performance dimensions of CSR. Consistent with Kolsi & Attayah (2018), Velte (2021) also finds that CSR (that is, environmental and carbon performance) has a positive effect on REM. However, the study finds that environmental and carbon performance has a negative effect on AEM (Velte, 2021).

Gargouri et al. (2010) and Amar & Chakroun (2018) find that the CSR-EM relationship varies in the different CSR dimensions. The results are contradictory. While Gargouri et al. (2010) find no significant relationship between overall CSR and EM and between the corporate governance dimension and EM, Amar & Chakroun (2018) suggest that both overall CSR and corporate governance dimensions have negative effects on EM. Furthermore, Gargouri et al. (2010) report that the environmental and employee dimensions of CSR have a positive effect on EM, suggesting that managers with better relationships with their employees are more likely to manage earnings as their relationships with their employees may prevent possible whistleblowing when employees become aware of the prevailing EM practices. In contrast Amar & Chakroun (2018) find that the environmental dimension and some social dimensions (specifically, human rights and consumer expectations) have a negative effect on EM, whereas other social dimensions (specifically, labour, fairness of practices and community involvement) have no significant effect on EM.

Heltzer (2011) and Mohamed et al. (2020) find an asymmetric relationship between CSR and EM. By splitting the sample into three subsamples, Heltzer (2011) finds that there is no significant relationship between CSR and EM among firms classified as having strong and neutral

environmental performance. However, the study finds higher EM in firms with weak environmental performance. Heltzer (2011) explain that firms that care about environmental issues engage in CSR due to institutional factors, and EM has no role in this. However, firms that disregard environmental issues are generally less concerned about stakeholder relationships and are more likely to manage earnings to conceal unfavourable financial performance (Heltzer, 2011). Mohmed et al. (2020) find a negative relationship between CSR and EM within the top 30 CSR scoring firms, but a positive relationship between CSR and EM within the bottom 70 CSR scoring firms. Mohmed et al. (2020) suggest that managers in the top CSR scoring firms genuinely care about their stakeholders and therefore maintain transparency in their financial reporting practices by engaging less in EM. However, managers in the bottom CSR scoring firms use their CSR activities to mask their EM engagement.

Yip et al. (2011) and Muttakin et al. (2015) suggest that the relationship between CSR and EM varies based on the industry in which the firm operates, and the level of stakeholder scrutiny. Yip et al. (2011) finds that EM is more prevalent in the food industry but less prevalent in the oil and gas industry which has high political scrutiny. Firms within industries such as the oil and gas industry, may be subject to political pressure as a result of their operations being too large, or be regularly scrutinized, giving managers fewer opportunities to manage earnings (Yip et al., 2011). Yip et al. (2011) suggest that the CSR-EM relationship is driven by political costs as opposed to the ethical orientation of managers. Muttakin et al. (2015) suggest that firms that practice CSR are likely to have lower stakeholder scrutiny, particularly in countries with weaker legal and institutional backgrounds, broadening the opportunities for EM. However, the presence of powerful stakeholders (firms operating in export-oriented industries) may restrict such opportunities (Muttakin et al., 2015).

Kyaw et al. (2017) find the CSR-EM relationship to vary based on the institutional framework. The study observes that firms engaged in high CSR initiatives are more likely to manage earnings in coordinated market economies. However, the study finds no significant relationship between CSR and EM in liberal market economies (Kyaw et al., 2017).

A number of studies using Chinese samples examine various contexts, such as, mandatory or voluntary CSR reporting/disclosures (see Gong & Ho, 2018; Wang et al., 2018; Zhang et al., 2021), state ownership/control (see Kim et al., 2019; Li & Xia, 2018; Liu & Lee, 2019; Rezaee et al., 2020), institutional environment (see Kim et al., 2019), board characteristics (see Sial et al., 2019, and

marketization (see Rezaee et al., 2020). Gong & Ho (2018) find a negative relationship between CSR and EM within Chinese firms with mandatory CSR disclosures. However, highlighting the contextual nature of the CSR-EM relationship, the study reports no significant relationship between CSR and EM among firms with voluntary CSR disclosures. The result is consistent with Wang et al. (2018), suggesting that mandatory CSR reporting in China has a role in constraining EM. Zhang et al. (2021) focus on voluntary CSR disclosures. In contrast to Gong & Ho (2018) and Wang et al. (2018), Zhang et al. (2021) find that voluntary CSR disclosures have a negative effect on REM, but a positive effect on accruals-based EM. The differences in the sample used by the above studies may have contributed to the differences in the results. The sample period for Gong & Ho (2018) and Wang et al. (2018) overlap: Gong and Ho (2018) focus on the period 2009 to 2015 while Wang et al. (2018) focus on 2003 to 2015. As discussed above, the similarity of the results of these two studies (Gong & Ho, 2018 and Wang et al., 2018) suggest that mandatory CSR has a negative effect on EM. Zhang et al. (2021), reporting different results (regarding the effect of voluntary CSR disclosures on EM), focus on a shorter but more recent sample covering the period 2016 to 2018. The differences in the results indicate that the role of voluntary CSR disclosures may be changing in recent years.

Li & Xia (2018) report a negative relationship between CSR and EM in privately-owned Chinese firms. Kim et al. (2019) suggest that while, in general, there is a negative relationship between CSR and EM, the relationship becomes positive among firms with state control and firms operating in institutionally developed regions. Kim et al. (2019) explain that the higher government control and institutional development creates more legitimacy risk and higher expectations regarding firm performance. These expectations create more incentives for managers to manage earnings (Kim et al., 2019). In contrast to these studies, Liu & Lee (2019) report that CSR has a negative effect on EM in general and within state-owned Chinese firms, but no significant effect within privately-owned firms. All of these studies use very similar samples covering the periods 2009 to 2014 (see Li & Xia, 2018 and Kim et al., 2019), and 2010 to 2014 (see Liu & Lee, 2019). Kim et al. (2019) and Liu & Lee (2019) use the same CSR index from RKS. Thus, the different EM measures are likely to have contributed to the differences in the results, as indicated by Rezaee et al. (2020). Rezaee et al. (2020) also find a negative relationship between CSR and EM, suggesting that CSR has a negative effect on accruals-based EM, but a positive effect on REM, in state-owned firms, but no significant effect on privately-owned firms. Rezaee et al. (2020) also find the negative CSR-EM relationship to be stronger for firms in Chinese provinces with high marketization.

Only two of the 48 studies report that CSR has no significant effect on EM (see Grougiou et al., 2014;

Liu et al., 2017). Grougiou et al. (2014) examine the bi-directional relationship between CSR and EM. The study finds that among US commercial banks CSR has no significant effect on EM, but EM has a positive effect on CSR. The results support the view that managers engaged in EM are likely to adopt CSR practices in attempts to maintain organizational legitimacy. However, CSR performance is not an indication of managers' ethical orientation, and thus has no effect on the financial reporting quality (Grougiou et al., 2014). Liu et al. (2017) find that CSR has no significant effect on EM, once controlled for family firms, suggesting that family firms are an important driver in the CSR-EM relationship.

As discussed throughout this section, several prior studies have examined the relationship between CSR and EM. The primary purpose of these studies was to examine the direct effect of CSR on EM (see Almahrog et al., 2018; Amar & Chakroun, 2018; Faisal et al., 2018; Gargouri et al., 2010; Gras-Gil et al., 2016; Habbash & Haddad, 2020; Heltzer, 2011; Hong & Andersen, 2011; Jordaan et al., 2018; Kim et al., 2012; Kolsi & Attayah, 2018; Litt et al., 2013; Palacios-Manzano et al., 2019; Patten & Trompeter, 2003; Riahi-Belkaoui, 2003; Velte, 2021; Wang et al., 2018; Zhang et al., 2021). Additionally, some previous studies have looked at various moderating factors affecting or the contextual effect of various factors such as, industry (see Muttakin et al., 2015; Yip et al., 2011), private ownership versus state ownership (see Li & Xia, 2018; Liu & Lee, 2019; Rezaee et al., 2020), marketization (see Rezaee et al., 2020), mandatory versus voluntary CSR disclosures (see Gong & Ho, 2018; Hickman et al., 2021), endogeneity (see Choi et al., 2018), institutional factors (see Chih et al., 2008; Kim et al., 2019; Kyaw et al., 2017; Scholtens & Kang, 2013), corporate governance (see Buerter et al., 2020; Cho & Chun, 2015; Gerged et al., 2021), political connections (see Pratiwi & Siregar, 2019) and family ownership (see Kumala & Siregar, 2020). Moderating effects test the interaction of two variables (the independent and the moderating variables) on another variable (the dependent variable) (Little et al., 2007). Moderation identifies *when* certain effects will occur, by examining contextual factors, but it does not identify *why or how* these effects occur (Baron & Kenny, 1986). Mediation addresses the 'why or how' question. None of these studies have examined a mediating channel in the relationship between CSR and EM.

Mediation will tell us whether managers, engaged in CSR, may use any tools to indirectly manage earnings. Among prior studies, Calegari et al. (2010) and Bozzolan et al. (2015) examine how EM as a mediating or indirect channel between the relationship between CSR and firm value/performance. Liu et al., 2017 examine CSR as a mediating channel in the relationship between family involvement and EM. Mediation analysis captures indirect effects that inform whether the independent variable

(CSR) affects the dependent variable (EM) through a channel or tool. An indirect relationship exists when the independent variable affects a mediator, and the mediator in turn affects the dependent variable (Baron & Kenny, 1986). Different streams of literature show that CSR has a positive effect on intangible resources, known as intellectual capital of firms (for example see Altuner et al., 2015; Hawn & Ioannou, 2016; Massaro et al., 2018), and intellectual capital has a positive effect on EM (for example, see Bhandari et al., 2018; Francis et al., 2008; Malmendier & Tate, 2009; Shust, 2015). I focus on OC, a specific component of intellectual capital. OC includes organisational practices, processes, design and culture, that are part of the organisational structure, and are non-transferable or non-imitable by competitors (Attig & Cleary, 2014; Carlin et al., 2012; Lev, 2004; Lev & Radhakrishnan, 2005). I examine OC as a mediator in the CSR-EM relationship. To understand the much-debated CSR and EM relationship more comprehensively, it is critical to look at this relationship more closely, beyond merely moderating factors that affect the relationship, and investigate *how and why* CSR affects EM, by examining mediating channels. To this end, in my first project (Chapter 4), I examine the indirect relationship between CSR and EM, via a unique firm-level factor (that is, OC).

As discussed in the previous paragraphs, most prior studies use multivariate regressions (Almahrog et al., 2018; Amar & Chakroun, 2018; Buertey et al., 2020; Chih et al., 2008; Cho & Chun, 2015; Chun & Cho, 2017; Gao & Zhang, 2015; Gong & Ho, 2018; Gras-Gil et al., 2016; Hickman et al., 2021; Jordaan et al., 2018; Kim et al., 2012; Kolsi & Attayah, 2018; Kumala & Siregar, 2020; Li & Xia, 2018; Litt et al., 2013; Liu & Lee, 2019; Muttakin et al., 2015; Pratiwi & Siregar, 2019; Rezaee et al., 2020; Riahi-Belkaoui, 2003; Scholtens & Kang, 2013; Velte, 2019, 2021) or OLS (Calegari et al., 2010; Chen & Hung, 2021; Choi et al., 2018; Gerged et al., 2021; Habbash & Haddad, 2020; Hong & Andersen, 2011; Kim et al., 2019; Kyaw et al., 2017; Patten & Trompeter, 2003; Yip et al., 2011). Since the present study (Chapter 4) examines the indirect relationship between CSR and EM, standard OLS models are not the best choice (see Shaver, 2005). Thus, following Cheung (2016), the present study use structural equation modelling with maximum likelihood estimation as the primary analysis methods for the first research study (reported in Chapter 4). Additionally, to address endogeneity, the study performs 2SLS estimation with an instrumental variable.

Research study 1 (reported in Chapter 4) examines the direct and indirect relationship between CSR and EM via OC. To gain a more comprehensive understanding of the indirect relationship between CSR-EM via OC, I examine whether the relationship holds when specific firm-level circumstances change, in particular when the firm experiences a crisis situation. The rationale for choosing a crisis

situation is the current worldwide Covid-19 pandemic outbreak. The years 2020 and 2021 have seen businesses suffer worldwide resulting from country-wide restrictions as well as international border restrictions (Barua, 2020). Thousands of businesses have shut down, and thousands are still struggling financially (see Sundaram, 2020). As such, I have chosen to focus on financial distress (FD), as this is a firm-level crisis event that is very relevant in the current era where the struggle to overcome the pandemic, as well as the struggle for economic recovery continues. FD is a situation when firms do not have sufficient assets to fulfill their outstanding financial obligations (Baldwin & Mason, 1983). I posit that during crisis situations, specifically FD, the relationship between CSR and EM may change, as managers' priorities and actions change. In my second research study (reported in Chapter 5), I examine how FD moderates the direct relationship between CSR and EM, as well as the indirect relationship between CSR and EM via OC. This is known as moderated mediation. Moderated mediation, referred to as a situation when the indirect effect is moderated by another factor (James & Brett, 1984), has been gaining increasing research interest (Little et al., 2007). Similar to the first research study, the second research study also uses SEM and 2SLS models.

As evidenced in the above discussion, research on CSR and EM had initially gained popularity mostly in developed countries (such as, USA, UK, Canada, Spain France and Germany). More recently, emerging market countries have gained increased attention (such as China, Korea, Indonesia, South Africa, Taiwan, India, UAE, Egypt, Saudi Arabia and Kuwait). The majority of studies focussing on emerging market countries have used Chinese samples (see Gong & Ho, 2018; Kim et al., 2019; Li & Xia, 2018; Liu & Lee, 2019; Rezaee et al., 2020; Sial et al., 2019; Wang et al., 2018; Zhang et al., 2021). Furthermore, little attention has been paid to samples involving multiple emerging market countries (that is, regional samples).

Emerging markets are characterised as markets with high potential for economic growth (Kaymak & Bektas, 2015). However, due to the instability of policymaking in these markets, emerging market countries experience social, economic, political and demographic challenges (Kaymak & Bektas, 2015), making these countries more susceptible to CORR (Wu, 2005). As discussed earlier, emerging market countries are more likely to manage earnings due to factors such as, lower INVPRO, higher CORR, and COLL culture. Thus, it is imperative to conduct further CSR-EM research in emerging market countries that are more susceptible to EM, to gain a more comprehensive understanding of the CSR-EM relationship. I posit that in an emerging market context, rather than examining an indirect CSR-EM relationship (as I have done in Chapters 4 and 5), it is more relevant to examine how these unique challenges (INVPRO, CORR and COLL culture) affect the relationship between CSR

and EM. Prior studies have examined how each of these factors affect EM, but in my third research study (reported in Chapter 6), I examine the moderating effect of all of these factors, namely INVPRO, CORR and COLL culture on the CSR-EM relationship. I use Hierarchical Linear Modelling (HLM) technique in research study 3. Prior studies involving multiple-country samples with 2-level variables have chosen simple analytic methods. However, this may produce biased results (see Rabe-Hesketh & Skrondal, 2008). Thus, following Lewellyn & Bao (2017), the present study uses HLM technique, as this is a more efficient method for studies involving multi-level variables.

This thesis examines various firm-level factors (specifically OC and FD) and country-level contexts (specifically, culture, CORR and INVPRO) that may explain the CSR-EM relationship. To the best of my knowledge, the effect of these factors or contexts, on the CSR-EM relationship, has not been sufficiently addressed by prior studies.

## **2.6 Chapter Summary**

This chapter presents a detailed discussion of the main issues of this study, CSR and EM. The chapter begins by discussing CSR and EM, individually. The discussion on CSR lists a number of different definitions of CSR, followed by a list of the many managerial incentives for CSR. External incentives include sustaining relationships with key stakeholders, obtaining competitive advantage through differentiation, avoiding negative publicity, strengthening brand image, loyalty and the firm's reputation. Internal incentives include enhancing employee motivation and retention. CSR is commonly categorised into four dimensions, namely, economic, environmental, social and corporate governance dimensions.

The discussion on EM begins with several definitions of EM and then suggests several incentives that may lead managers to engage in EM. These incentives include debt covenant violations, maximization of compensation-based bonuses, inflating stock prices, obtaining private benefits of control, and meeting targets to please stakeholders. While there are several ways that earnings can be managed, the study highlights two of the frequent EM measures evidenced in literature, namely discretionary accruals and real earnings management.

The chapter then discusses CSR and EM, together, discussing the theoretical background and reviewing the literature. The relationship between CSR and EM may be explained by two contrasting perspectives. First, consistent with the managerial myopia hypothesis, managers engaged in CSR

may be more likely to manage earnings as a means to obtain short-term goals and please stakeholders. Managerial myopia is explained by two drivers, namely incentive-driven myopia and opportunity-driven myopia. In contrast, consistent with the myopia avoidance hypothesis, managers engaged in CSR may have a longer-term orientation, thus refraining from managing earnings. Myopia avoidance is also explained by two drivers, namely relationship-driven myopia avoidance and value-driven myopia avoidance.

# MEASUREMENT OF VARIABLES – CSR AND EM

## 3.1 Introduction

This section discusses the measurements of CSR and EM, as utilised in all three research studies undertaken as part of this thesis. For all three research studies, CSR is the independent variable and EM is the dependent variable. Each research study then utilises mediating and/or moderating variables. These are discussed in the subsequent chapters.

The rest of this chapter is organised as follows: Section 3.2 discusses the measurement of CSR, with sub-sections discussing the data source, and the primary and alternate measures of CSR. Section 3.3 discusses the measurement of EM, with sub-sections discussing the primary and alternate EM measures. The chapter ends with a chapter summary.

## 3.2 Measuring CSR

### 3.2.1 Data Source

As discussed in the literature review in Chapter 2, prior studies have looked at different forms of CSR. The majority of studies have examined *CSR performance* (for example, see Amar & Chakroun, 2018; Bozzolan et al., 2015; Buertey et al., 2020; Calegari et al., 2010; Chen & Hung, 2021; Chih et al., 2008; Cho & Chun, 2015; Choi et al., 2018; Chun & Cho, 2017; Gao & Zhang, 2015; García-Sánchez et al., 2020; Gargouri et al., 2010; Gras-Gil et al., 2016; Grougiou et al., 2014; Heltzer, 2011; Hickman et al., 2021; Hong & Andersen, 2011; Kim et al., 2019; Kim et al., 2012; Kyaw et al., 2017; Li & Xia, 2018; Litt et al., 2013; Liu & Lee, 2019; Liu et al., 2017; Martínez-Ferrero et al., 2015; Mohamed et al., 2020; Palacios-Manzano et al., 2019; Rezaee et al., 2020; Riahi-Belkaoui, 2003; Scholtens & Kang, 2013; Sial et al., 2019; Velte, 2019, 2021). Several other studies have examined *CSR disclosures* as a proxy for CSR (for example, see Almahrog et al., 2018; Faisal et al., 2018; Gerged et al., 2020; Gerged et al., 2021; Habbash & Haddad, 2020; Kolsi & Attayah, 2018; Kumala & Siregar, 2020; Muttakin et al., 2015; Patten & Trompeter, 2003; Pratiwi & Siregar, 2019; Wang et al., 2018; Yip et al., 2011).

Furthermore, while some studies have examined *overall CSR*, with weighted scores of the different dimensions (for example Bozzolan et al., 2015; Cho & Chun, 2015; Choi et al., 2013; Gao & Zhang,

2015; Gargouri et al., 2010; Grougiou et al., 2014; Hong & Andersen, 2011; Kyaw et al., 2017; Liu et al., 2017; Prior et al., 2008; Scholtens & Kang, 2013), others have focused on *individual dimensions*, such as, *environmental* (for example, see Gargouri et al., 2010; Heltzer, 2011; Kyaw et al., 2017; Litt et al., 2013; Sun et al., 2010), or *social pillars* (for example, see Gargouri et al., 2010; Kyaw et al., 2017). Corporate governance has also gained significant attention in recent CSR literature. While some studies examine *corporate governance as a part of CSR* (for example, see Gao & Zhang, 2015; Hong & Andersen, 2011; Kyaw et al., 2017; Prior et al., 2008), other studies have investigated *corporate governance as a variable isolated from CSR* or have excluded corporate governance altogether (for example, see Cho & Chun, 2015; Choi et al., 2013; Hussain et al., 2016; Kim et al., 2012). Furthermore, some studies focus on ESG dimensions to account for CSR, that is, the environmental, social and governance dimensions, while excluding the economic dimension (for example, see Gao & Zhang, 2015; Gargouri et al., 2010; Hong & Andersen, 2011; Kyaw et al., 2017). Consistent with this, the present study also defines CSR as ESG performance, that is the overall weighted average performance of environmental, social and government dimensions.

Prior studies have used various measures of CSR performance and disclosures. For CSR disclosures, prior studies have mostly used content analysis approach (for example, see Almahrog et al., 2018; Faisal et al., 2018; Gerged et al., 2020; Gerged et al., 2021; Habbash & Haddad, 2020; Kolsi & Attayah, 2018; Kumala & Siregar, 2020; Muttakin et al., 2015; Pratiwi & Siregar, 2019; Yip et al., 2011). For CSR performance, the majority of studies in existing literature use existing CSR indices, available on secondary databases. The most widely used secondary database for CSR indices is KLD (Kinder, Lydenberg, and Domini) (for example, see Calegari et al., 2010; Gao & Zhang, 2015; Grougiou et al., 2014; Heltzer, 2011; Hong & Andersen, 2011; Kim et al., 2012; Litt et al., 2013; Liu et al., 2017). The KLD database only includes CSR information for US companies. For non-US samples, studies have used various other secondary databases to obtain CSR information. For example, studies using Spanish samples have mostly used MERCO (Monitor Empresarial de Reputación Corporativa— a Spanish Business Monitor of Corporate Reputation) (for example, see Gras-Gil et al., 2016; Palacios-Manzano et al., 2019), while studies using Korean samples have mostly used KEJI (Korea Economic Justice Institute) database (for example, see Cho & Chun, 2015; Choi et al., 2018; Chun & Cho, 2017). Gargouri et al. (2010) have used MJRA-CSID (Michael Jantzi Research Associates – Canadian Social Investment database) for CSR scores for Canadian companies, while Amar & Chakroun (2018) have used ISO26000 (International Organization for Standardization) for French firms and firms respectively. Mohamed et al. (2020) and Chen & Hung (2021) obtain CSR

information from S&P ESG index for Egyptian firms, and CSR Best Practices Principles for Taiwanese firms respectively. For South African firms, Jordaan et al. (2018) has used SRI (Socially Responsible Investing), while Buertey et al. (2020) have used CSRHub. Studies based on Chinese firms have mostly used RKS (Rankings) (for example, see Gong & Ho, 2018; Kim et al., 2019; Liu & Lee, 2019; Rezaee et al., 2020; Sial et al., 2019). However, some less prominent sources for CSR information on Chinese firms include Chinese CSR White paper (for example, see Li & Xia, 2018) and China's top 200 firms' CSR development index (for example, see Zhang et al., 2021). Studies based on international samples use various other sources, including FTSE4 Good Global Index (for example, see Chih et al., 2008), Asia Sustainability Research (for example, see Scholtens & Kang, 2013), EIRIS (Ethical investment research services) (for example, see Bozzolan et al., 2015; Martínez-Ferrero et al., 2015) and Thomson Reuters ASSET4 (for example, see García-Sánchez et al., 2020; Velte, 2021). The Thomson Reuters ASSET4 index is also used by studies based on European countries, such as UK (for example, see Kyaw et al., 2017) and Germany (see Velte, 2019).

The present study focusses on CSR performance. The measure is based on Thompson Reuter's ESG Scores which replaces and improves the previously known Thomson Reuters ASSET4 index (Thomson Reuters, 2018).

### **3.2.2 Primary CSR Measure**

Thompson Reuter's ESG scores are firm level data, available annually from 2002 onwards (Thomson Reuters, 2018). The scores are based on CSR performance of companies as reported publicly by the company. Using over 400 company-level measures, Thomson Reuters categorises the CSR performances into ten categories. These ten categories are further categorised, according to weighted proportions, into the three CSR dimensions, that is, Environmental, Governance and Social. Thomson Reuters calculates ESG score as the weighted average of the three CSR dimensions (Environmental score weight = 34%, Social score weight = 35.5%, and Governance score weight = 30.5%) (Thomson Reuters, 2018). The final ESG score, reported as a percentage, is the primary measure of CSR in the present study, particularly in research studies 1 and 2 (reported in Chapters 4 and 5). In research study 3 (reported in Chapter 6), I use the individual CSR dimensions (Environmental, Governance and Social scores), in addition to the overall CSR scores, following prior studies (for example, see Amar & Chakroun, 2018; Gargouri et al., 2010; Velte, 2019).

### **3.2.3 Alternate CSR Measures**

For the purpose of checking sensitivity of the regression analyses for each research study, the study

utilises alternate measures of the main variables. I use two alternate measures for CSR – 1) CSR\_COMB and 2) CSR\_DUM.

CSR\_COMB is Thomson Reuter's ESG Combined score, measured the average of the ESG score and ESG controversies score (Thomson Reuters, 2018). The ESG controversies score is measured using 23 controversy topics as a basis. The controversies score each year incorporates any recent controversies pertinent to the year. Once information of all controversies for a firm is accumulated for a given year, Thomson Reuters adds the values for all the controversial topics and ranks the firms from lowest to highest scores. Given that controversy has a negative bearing on CSR performance, a lower score is better (Thomson Reuters, 2018). Finally, a percentile ranking formula is applied to obtain the ESG controversies score. The percentile ranking formula uses industry group as a benchmark (Thomson Reuters, 2018). The following example is provided by Thomson Reuters (2018, p. 18) to explain the ESG controversies score calculation:

For a controversy measure, if the benchmark consists of 6 companies, 4 with a value of 0 and two with a value of 1 (polarity here is negative, so the higher the number the worse it is), then the formula for the companies with no controversies will be:  $(2+4/2) / 6 = 67\%$  and for the companies with one controversy:  $(0+2/2) / 6 = 17\%$ .

As stated above, the alternate CSR proxy (CSR\_COMB) used in this study is the ESG combined score, which is the average of the ESG score and ESG controversies score, when there are controversies in a given year. The calculation of the ESG combined score is based on three conditions. First, if the controversy score is greater than or equal to 50%, then the ESG combined score is equal to the ESG score. Second, if the controversy score is less than 50% but is greater than the ESG score, then also the ESG combined score is equal to the ESG score. Third, if the controversy score is less than 50% and is less than the ESG score, then the ESG combined score is equal to the average of the ESG score and the controversies score.

The second alternate measure of CSR (CSR\_DUM) is a dummy variable, taking the value of 1 if the CSR score of the firm is greater median CSR, and 0 otherwise. The median is based on each year and industry.

### 3.3 Measuring EM

#### 3.3.1 Primary EM Measure - Discretionary Accruals

The present study uses accruals-based measures<sup>11</sup> to measure EM. Earnings comprises of two components – accruals and cash flows. Accruals is the component that involves management estimations and forecasts, and hence are more prone to be managed. Thus, consistent with several prior studies, I use discretionary accruals as the primary measure for EM (for example, see Ackoff, 1999; Almahrog et al., 2018; Amar & Chakroun, 2018; Bozzolan et al., 2015; Buerthey et al., 2020; Calegari et al., 2010; Chen & Hung, 2021; Choi et al., 2018; Gao & Zhang, 2015; García-Sánchez et al., 2020; Gargouri et al., 2010; Gerged et al., 2020; Gerged et al., 2021; Gras-Gil et al., 2016; Habbash & Haddad, 2020; Heltzer, 2011; Hickman et al., 2021; Hong & Andersen, 2011; Jordaan et al., 2018; Kim et al., 2019; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Litt et al., 2013; Liu & Lee, 2019; Liu et al., 2017; Martínez-Ferrero et al., 2015; Mohamed et al., 2020; Muttakin et al., 2015; Palacios-Manzano et al., 2019; Patten & Trompeter, 2003; Pratiwi & Siregar, 2019; Rezaee et al., 2020; Riahi-Belkaoui, 2003; Sial et al., 2019; Velte, 2019, 2021; Wang et al., 2018; Yip et al., 2011; Zhang et al., 2021). A lower magnitude of discretionary accruals represent a better mapping of accruals into cash flows, and hence indicates higher earnings quality (that is, lower EM) (McNichols, 2002).

With the widespread use of discretionary accruals as a measure for EM among prior studies, there are several models to measure discretionary accruals. Of these, the Jones (1991) is one of the oldest models that is still popularly used by researchers (for example, see Alves, 2012; Heltzer, 2011; Koh, 2003; Ratnawati et al., 2016; Yip et al., 2011). In fact, it is believed that the introduction of the abnormal accruals model developed by Jones (1991a) has a significant contribution in the growth of EM research (DeFond, 2010). The model has become a quite standardized measure of EM, eliminating the need to develop a new proxy for every new study (DeFond, 2010). The original Jones model is among the first widely accepted models designed to capture EM (DeFond, 2010). The model is based on the assumption that non-discretionary accruals are not constant from year to year (Jones, 1991a). Thus, the difference between a current year's and the prior year's total accruals should be a result of changes in discretionary accruals (Jones, 1991a). The model controls for

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<sup>11</sup> The present study focusses on the effect of CSR on opportunistic accounting/financial reporting practices. I do this by examining accruals-based EM. I do not examine other measures of EM, such as real earnings management (REM) as REM involves real economic actions (such as, providing discounts to reach sales targets) as opposed to mere accounting manipulations. Hence REM is outside the scope of the present study, but may be an insightful future research direction, as discussed in Chapter 7.

changes in business conditions that may cause changes in non-discretionary accruals (Jones, 1991a). Revenues are used as a control variable since revenues may change without any interference by managers (Jones, 1991a). The model also includes the gross property plant and equipment value as a control variable to account for non-discretionary depreciation expense (Jones, 1991a).

Continuous developments of the original Jones model are evident (DeFond, 2010). An immediate modification of the Jones model, popularly known as the modified Jones model, has been developed by Dechow et al. (1995). Among the various models available to measure discretionary accruals, the modified Jones model appears to be the most widely used one (for example, see Al-Fayoumi et al., 2010; Al-Rassas & Kamardin, 2016; Alves, 2012; Bozzolan et al., 2015; Choi et al., 2013; Chung et al., 2002; Gargouri et al., 2010; Heltzer, 2011; Hou et al., 2015; Kim et al., 2012; Lyu et al., 2016; Muttakin et al., 2015; Velury & Jenkins, 2006).

The modified Jones model provides a modification to the Jones model in that this model subtracts the change in accounts receivable from the change in sales in the nondiscretionary accruals calculation (Dechow et al., 1995). The modified Jones model addresses the implicit assumption in the Jones model that earnings are not managed through sales (Dechow et al., 1995). The model considers that managers may exert discretion on the recognition of revenues from credit sales (Dechow et al., 1995). For example, managers may use their discretion to recognize revenues in transactions where the cash has not been received by the end of the year, and it is dubious whether the revenues have been earned (Dechow et al., 1995). The modified Jones model is based on the logic that it is easier to manage earnings through exerting discretion over revenue recognition through credit sales as opposed to revenue recognition through cash sales. Thus, the model is based on an implicit assumption that in years where earnings are managed, changes in credit sales result from EM.

The modified Jones model is estimated by regressing total accruals against the change in revenues (adjusted for the change in receivables) and gross property, plant and equipment. Consistent with prior literature, the regression is estimated, as shown in equation (1), for each year and each two-digit SIC code, for which there are at least eight firm year observations per regression.

$$TA_{it} = \alpha_1 (1/A_{it-1}) + \alpha_2 (\Delta REV_{it} - \Delta REC_{it}) + \alpha_3 PPE_{it} + \varepsilon_{it} \quad (1)$$

where

$TA_{it}$  = total accruals in year  $t$  for firm  $i$  scaled by total assets at  $t - 1$ ;

$\Delta REV_{it}$  = change in revenues (revenues in year  $t$  less revenues in year  $t - 1$ ) for firm  $i$  scaled by total assets at  $t - 1$ ;

$\Delta REC_{it}$  = change in accounts receivables (net receivables in year  $t$  less net receivables in year  $t - 1$ ) for firm  $i$  scaled by total assets at  $t - 1$ ;

$PPE_{it}$  = gross property, plant and equipment in year  $t$  for firm  $i$  scaled by total assets at  $t - 1$ ;

$A_{it-1}$  = total assets in year  $t - 1$  for firm  $i$ ;

$\varepsilon_{it}$  = error term in year  $t$  for firm  $i$ .

Following prior studies, equation (1) is estimated for each year and each two-digit SIC code, for which there are at least eight firm year observations per regression. The absolute value of the residual from equation (1) (that is, the absolute value of discretionary accruals) generates the magnitude of EM in the present study. A higher value of the residual indicates poor mapping of accruals into cash flows (that is, higher EM).

Following Dechow et al. (1995), the total accruals (TA) for equation (1) is estimated using the equation below:

$$TA_{it} = (\Delta CA_{it} - \Delta CL_{it} - \Delta Cash_{it} + \Delta ST Debt_{it} - DEP_{it}) / A_{it-1} \quad (2)$$

where

$\Delta CA_{it}$  = change in current assets (current assets in year  $t$  less current assets in year  $t - 1$ ) for firm  $i$ ;

$\Delta Cash_{it}$  = change in cash (cash in year  $t$  less cash in year  $t - 1$ ) for firm  $i$ ;

$\Delta CL_{it}$  = change in current liabilities (current liabilities in year  $t$  less current liabilities in year  $t - 1$ ) for firm  $i$ ;

$\Delta ST Debt$  = change in short-term debts (short-term debts in year  $t$  less short-term debts in year  $t - 1$ ) for firm  $i$  (missing values for short-term debts are replaced with zero);

$DEP_{it}$  = depreciation and amortization expenses in year  $t$  for firm  $i$ ;

$A_{it-1}$  = total assets in year  $t - 1$  for firm  $i$ ;

Earnings can be managed upwards or downwards using discretionary accruals (Shust, 2015). However, the present study considers the absolute value of discretionary accruals as our measure

for EM, as we are concerned with the magnitude of EM as opposed to the direction of EM (see Almahrog et al., 2018; Choi et al., 2013; Hong & Andersen, 2011; Martínez-Ferrero et al., 2013; Shust, 2015; Sun et al., 2010; Yip et al., 2011). Absolute discretionary accruals is considered a more refined measure for EM (for example, see Dechow et al., 1995; Kothari et al., 2005). The absolute value of the residual from equation (1) generates the dependent variable EM. A higher value of the residual represents poor mapping of accruals into cash flows resulting from both intentional EM and unintentional estimation errors (Hong & Andersen, 2011).

### 3.3.2 Alternate EM Measure – Accruals Quality

In order to check the sensitivity of the regression analysis, I utilize an alternate specification of EM by measuring accruals quality using the Dechow & Dichev (2002) model. This model is based on the assumption that accruals are based on management's forecast of past, present and future cash flows, since accruals and cash flows are the two components of earnings (Dechow & Dichev, 2002). Based on this argument, better quality accruals are expected to be better mapped into cash flows (McNichols, 2002). Thus, total accruals are regressed on cash flow of the present year, cash flow of the previous year, and cash flow of the following year. To reduce measurement errors, we follow the modification of the original Dechow & Dichev (2002) model as suggested by Francis et al. (2005) by including change in revenue and property plant and equipment. Thus, I use the following model as the alternate EM measure:

$$TA_{it} = \beta_0 + \beta_1 CFO_{it-1} + \beta_2 CFO_{it} + \beta_3 CFO_{it+1} + \beta_4 \Delta REV_{it} + \beta_5 PPE_{it} + \varepsilon_{it} \quad (3)$$

where

$TA_{it}$  = total accruals (as measured in equation (2)) in year  $t$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$CFO_{it-1}$  = cash flow from operations in year  $t-1$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$CFO_{it}$  = cash flow from operations in year  $t$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$CFO_{it+1}$  = cash flow from operations in year  $t+1$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$\Delta REV_{it}$  = change in sales revenue (sales revenue in year  $t$  less sales revenue in year  $t-1$ ) for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$PPE_{it}$  = gross property, plant and equipment in year  $t$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$\varepsilon_{it}$  = error term in year  $t$  for firm  $i$ .

EM\_DD, that is, the alternate measure for EM, is measured as the 5-year standard deviation of the residual  $\varepsilon_{it}$  from equation (3). The 5-year standard deviation is estimated for the years  $t-4$  to  $t$  for each firm-year observation. To enable the calculation of the standard deviation, the equation (3) above is estimated from years 1998 to 2017 (that is, from 5 years prior to the beginning of the sample period). A higher value on EM\_DD, that is the standard deviation from the residual from equation (3), indicates higher EM, whereas a lower residual indicates lower EM and better-quality accruals.

### **3.4 Chapter Summary**

This chapter discusses the measurement of the independent and dependent variables, that is, CSR and EM. The primary measure of the independent variable (CSR) is obtained from Thomson Reuters ESG scores. The alternate measures are based on 1) CSR\_COMB - ESG Combined score from Thomson Reuters, and 2) CSR\_DUM – a dummy variable taking the value of 1 if the CSR score of a firm is higher than the industry and year median, and 0 otherwise. The primary measure of the dependent variable (EM) is based on the discretionary accruals model by Dechow et al. (1995), while the alternate EM measure (EM\_DD) is based on the accruals quality model by Dechow & Dichev (2002).

# **EARNINGS MANAGEMENT AND CORPORATE SOCIAL RESPONSIBILITY: INVESTIGATION OF THE DIRECT AND INDIRECT RELATIONSHIP VIA ORGANISATION CAPITAL.**

## **4.1 Introduction**

This chapter addresses the first research objective, that is, to investigate *why* and *how* Corporate Social Responsibility (CSR) affects Earnings Management (EM), by examining the direct CSR-EM relationship and indirect CSR-EM relationship via Organization Capital (OC). Research objective 1 is addressed by answering the following two research questions:

*Research Question 1.1: Does CSR have a significant direct effect on EM?*

*Research Question 1.2: Does CSR have a significant indirect effect on EM via OC?*

This chapter is organised as follows: Sections 4.2 and 4.3 discuss the background and justification of this research study, and its contribution respectively. Section 4.4 presents the theoretical background, reviews the literature while in Section 4.5 hypotheses are developed on the relationships between CSR and EM, CSR and OC, and OC and EM. Section 4.6 presents the conceptual framework of the study. Section 4.7 describes the data research methodology adopted for this study. This is followed by the results and findings in Section 4.8, and the discussion of the findings in Section 4.9. The chapter ends with a summary in Section 4.10.

## **4.2 Background and Justification**

### **4.2.1 Background of the Study**

This study examines the direct relationship between CSR and EM, and the indirect relationship between CSR and EM through a mediating effect of OC. Both CSR and EM have gained significant attention by practitioners and academic researchers in recent times. Despite the growing interest in academic research in examining the relationship between CSR and EM, there appears to be a lack of consensus on the direction of the relationship between CSR and EM, as evidenced by mixed findings in the literature, discussed in Chapter 2. The present study examines the CSR-EM relationship from two contrasting managerial behaviour perspectives, specifically the managerial myopia and the myopia avoidance hypotheses. The first perspective suggests that managers engaged in CSR are less likely to manage earnings, since they are myopia avoidant (long-term

oriented). The contrasting perspective suggests that managers engaged in CSR are more likely to manage earnings, since they are myopic (short-term oriented). These two perspectives have been discussed in greater detail in Chapter 2. In this chapter, I examine the direct and indirect CSR-EM relationships, based on these two contrasting managerial perspectives, by focussing on a developed economy, i.e., USA, in order to mitigate the potential influences of country-level factors on this relationship. This study focusses on the CSR and EM issue on a micro-level, by utilising firm-level data.

To provide further in-depth analysis of the CSR and EM relationship, this research study examines not only the direct relationship between CSR and EM, but also the indirect relationship between CSR and EM via OC as a mediating channel. In other words, this study examines OC as a channel through which CSR influences EM. Examining the indirect effect via a mediating channel will address the questions *why* and *how* CSR affects EM.

The mediating channel, OC, is an important component of intellectual capital (that is, intangible resources). The rationale behind considering OC as a mediating channel primarily relates to the growing importance of intellectual capital. Research on intellectual capital has been gaining momentum, particularly due to the growth of intangible industries, such as, internet, software and biotech since the mid 1980s (Nakamura, 1999). In most first world economies, the primary source of gross domestic product (GDP) have now shifted to services and intangible outputs, from traditional manufacturing-based industries and traditional commodities (Petty & Guthrie, 2000). From the beginning of the twentieth century, the US economy has experienced a similar and substantial shift from a purely industrial economy to a more knowledge based economy (Srivastava, 2014). Such a considerable shift in the concentration of US industry is a result of firms altering their attention to investments on intangibles, such as, innovation, research and development, human capital, customer relationships, etc. (Canibano et al., 2000; Srivastava, 2014). While firms are progressively shifting towards more knowledge based investments, such intellectual capital is still not reported on the balance sheet (Canibano et al., 2000). As a result, financial statements are unable to provide all the relevant information regarding firm value (Canibano et al., 2000; Toorchi et al., 2015). This is evidenced by the increasing gap between market value and book value of equity as suggested by some studies, resulting in a loss of relevance of financial statements (for example, see Amin & Lev, 1996; Canibano et al., 2000; Lev & Zarowin, 1999; Roslender & Fincham, 2001). Thus, when examining the quality of financial information and factors like CSR and EM that affect financial information quality, it is now essential to look at intellectual capital.

As a result of the growing significance of intellectual capital, particularly in the US economy (see Srivastava, 2014), contemporary accounting researchers have started to focus more on OC (for example, see Atkeson & Kehoe, 2005; Attig & Cleary, 2014, 2015; Black & Lynch, 2005; Bloom et al., 2010; Brynjolfsson et al., 2002; Carlin et al., 2012; Eisfeldt & Papanikolaou, 2013; Hasan & Cheung, 2018; Lev et al., 2009; Rahaman & Al Zaman, 2013; Squicciarini & Le Mouel, 2012; Tronconi & Marzetti, 2011). OC (organizational capital or structural capital) is one of the three components, the other two being human capital and relational capital (or customer capital) of intellectual capital (Edvinsson & Malone, 1997; Roos & Roos, 1997; Stewart & Ruckdeschel, 1998). Human capital represents the people or employees in the firm employees (Stewart & Ruckdeschel, 1998). It refers to the knowledge, talent, skills, capabilities, expertise, loyalty and motivation of the firm's employees (Hormiga et al., 2011; Stewart & Ruckdeschel, 1998; Tayles et al., 2007). Relational capital refers to the firm's connections with outsiders (Hormiga et al., 2011; Stewart & Ruckdeschel, 1998). It encompasses relationships external stakeholders, such as, suppliers, distributors, customers, government, industry networks, etc. (Jacobsen et al., 2005; Stewart & Ruckdeschel, 1998; Sydler et al., 2014; Tayles et al., 2007). Relational capital is often represented as relational aspects such as customer loyalty, brand image, attitude, preference, brand recognition, etc. (Stewart & Ruckdeschel, 1998; Sydler et al., 2014). OC represents all other elements of intellectual capital, such as the processes, networks, cultures, values, intellectual properties, etc. (Jacobsen et al., 2005; Stewart & Ruckdeschel, 1998; Sydler et al., 2014; Tayles et al., 2007). OC is defined as the fundamental processes and systems of firms that "enable superior operating, investment and innovation performance, represented by the agglomeration of technologies – business practices, processes and designs" (Lev et al., 2009, p. 277). OC is the more permanent intangible resource of firms since it represents the element of intellectual capital that is left behind with the firm even when employees leave (Stewart & Ruckdeschel, 1998). Bloom et al. (2010) suggest that OC can be viewed as the distinctive managerial culture that is imprinted on the organisation. This distinctive culture, whether good or bad, remains with the organisation until it ceases to exist. Thus, OC is considered to be the most important intangible asset for firms (Lev et al., 2009).

OC has gained significant research attention in recent times (Tronconi & Marzetti, 2011). This growing interest in OC research is justified by its growing importance in US and global capital markets (Eisfeldt & Papanikolaou, 2013). The literature suggests numerous reasons why OC is a valuable resource for firms. The most commonly cited benefit is that OC assists firms in achieving sustainable competitive advantage (for example, see Lev & Radhakrishnan, 2005; Lev et al., 2009;

Tronconi & Marzetti, 2011). While production resources, such as labour and capital, are equally available to most firms, OC in contrast, refers to the unique systems or processes of firms that are not transferable to or able to be copied by other firms (Lev, 2004; Lev & Radhakrishnan, 2005). Thus, OC enables firms to achieve sustainable competitive advantage (Lev & Radhakrishnan, 2005; Lev et al., 2009; Tronconi & Marzetti, 2011). Furthermore, OC is a major contributor to financial performance (Sydler et al., 2014; Tronconi & Marzetti, 2011), productive capacity (Black & Lynch, 2005), and value creation and growth for firms (Lev & Radhakrishnan, 2005).

Despite the growing interest in OC, there still appears to be a lack of a consistent definition (Black & Lynch, 2005). Overall, the literature offers two main views on OC (Hasan & Cheung, 2018). The first view suggests that OC is manifested within the firms' employees and their social connections (Hasan & Cheung, 2018). Consistent with this view, OC encompasses: 1) the firm's knowledge regarding the abilities of its employees that allows better matching of tasks to workers (Prescott & Visscher, 1980), 2) the specialised talent of key employees that is a key determinant of future productivity of the firms (Eisfeldt & Papanikolaou, 2013; Prescott & Visscher, 1980).

The second view suggests that OC is embedded within the organizational structure, as opposed to the employees (Hasan & Cheung, 2018). As stated earlier, according to Bloom et al. (2010) OC represents the distinctive managerial culture that is imprinted on the organisation, and remains with the organisation until it ceases to exist. Similar to this perspective, Carlin et al. (2012) views OC as a form of internal firm language that encompasses numerous firm practices such as, informal work routines, technical jargons and other patterns or practices arising from previous experiences. Thus, OC contributes by fostering coordination within the internal communication channels in enhancing productivity (Carlin et al., 2012). Since OC is an intra-firm language, Carlin et al. (2012) notes that OC may not be transferred or imitated by other firms, even with employee turnover. Similarly, some studies view high management quality as a proxy for high OC (for example, see (Attig & Cleary, 2014, 2015; Bloom et al., 2010; Bloom & Van Reenen, 2007). Management quality gradually evolves over time through training, experience and knowledge (Bloom et al., 2010), becomes embedded in the organizational structure, and is not prone to frequent changes even with management replacements (Bloom & Van Reenen, 2007). Attig & Cleary (2014) clarifies that this idea of OC as equivalent to management practices is considerably different from human capital. According to Attig & Cleary (2014), human capital refers to management styles which are subject to change as management changes. However, management quality practices (i.e. OC) do not change often, and are not transferable to other firms (Attig & Cleary, 2014).

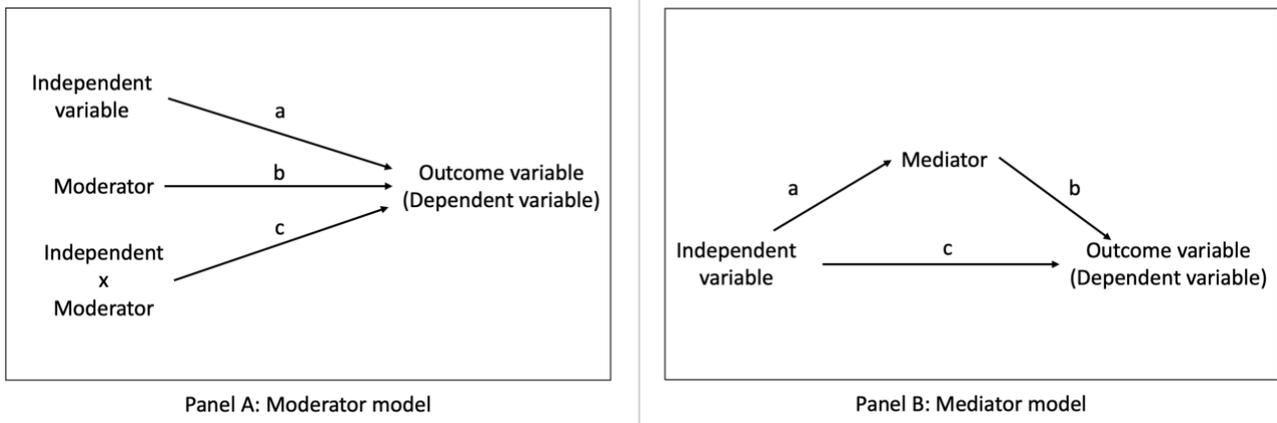
Black & Lynch (2005) conceptualise OC to be an amalgamation of the two streams of thought discussed above. According to Black & Lynch (2005), OC is a result of the interaction of three main components, namely, 1) training of the workforce, 2) employee voice, and 3) organizational design/practices. Black & Lynch (2005) suggest that employer-provided training is an important component of organization capital since training requirements may be dependent on structural changes within the organization, such as the introduction of new technologies, implementation of teamwork-based projects, etc. The second component, employee voice, refers to enhancing the autonomy and discretion of non-managerial workers and enabling them to have greater input into the work structure (Black & Lynch, 2005). The third component, organizational design, refers to the use of cross-functional processes enabling flexibility of labour allocation, diffusion of information technology, etc. (Black & Lynch, 2005). Thus, according to Black & Lynch (2005), OC is both embodied in the employees as well as embedded in the organisational structure.

Consistent with the literature, the present study defines OC as an integration of management quality practices and employee training with the overall organizational process, techniques, design and culture. Based on the definition of OC, the present study refers to high OC firms as firms that have superior management quality practices, and a knowledgeable workforce through training provided, that exhibit an overall effective organisational design. Additionally, I follow the view, proposed by Carlin et al. (2012) and Attig & Cleary (2014), that OC is embedded in the organisational structure and cannot be transferred with the turnover of management or employees. This view is consistent with the resource-based view (RBV) (Hasan & Cheung, 2018). The RBV states that a firm is a bundle of resources and capabilities that are rare and unable to be exchanged, copied or substituted (Barney, 1991). These resources and capabilities consist of tangible and intangible assets, and are the main driver of sustained competitive advantage for firms (Barney, 1991). Thus, consistent with literature, I draw on to the RBV as the theoretical background of OC since OC is a major source of competitive advantage for firms (for example, see Hasan & Cheung, 2018; Squicciarini & Le Mouel, 2012), and an important component of intellectual capital (see Lev et al., 2009).

#### **4.2.2 Justification of the Study**

The negative consequences of EM, discussed in Chapters 1 and 2, have attracted researchers to study a myriad of factors that may influence EM. Furthermore, with the growing importance of CSR, several studies have examined the CSR and EM relationship, as discussed in Chapter 2. Overall, there is sufficient empirical evidence to establish a relationship between CSR and EM, albeit debates on

the direction of this relationship continue. Cho & Lee (2017) suggest that due to limited resources, managers are often faced with an ethical dilemma regarding their investment in CSR activities. This means that there may be two varying motives behind CSR. While CSR actions may be undertaken from purely altruistic intentions, some managers may have a more financial motive behind engaging in CSR activities (Cho & Lee, 2017). The literature shows mixed results on the relationship between CSR and EM, suggesting the need for further in-depth understanding of how CSR influences EM. Prior studies have examined various contexts or moderating effects on the CSR-EM relationship (for example, see Buerthey et al., 2020; Chih et al., 2008; Cho & Chun, 2015; García-Sánchez et al., 2020; Gerged et al., 2021; Kim et al., 2019; Kumala & Siregar, 2020; Muttakin et al., 2015; Pratiwi & Siregar, 2019; Scholtens & Kang, 2013; Sial et al., 2019). The concept of moderation includes looking at interactions, differences within subgroups and contexts that may change the basic relationship between the independent and dependent variables (CSR and EM in the present study) (Little et al., 2007). Thus, moderation explains how the interaction of CSR with another factor or context (such as, firm ownership, institutional features, corporate governance and/or board characteristics, etc.) may affect EM. For example, testing a moderating effect of corporate governance on the CSR-EM relationship would tell us how the interaction of CSR and corporate governance (measured as the product of CSR x Corporate Governance) would affect EM (for example, see Buerthey et al., 2020; Cho & Chun, 2015; Gerged et al., 2021). Moderating would tell us whether the relationship between CSR and EM would become stronger or weaker, when the moderator (corporate governance in this example) is present. Moderation reveals whether a third variable may affect the strength or direction of the relationship between CSR and EM (see Baron & Kenny, 1986). However, moderation only looks at the overall effect of the interaction of the two factors. It does not distinguish which variable (the independent variable – CSR, or the moderating variable) individually affects the dependent variable – EM (Little et al., 2007). Moderation identify *when* certain effects will occur, by examining contextual factors, but it does not identify *why* or *how* these effects occur (Baron & Kenny, 1986). The *why* and *how* questions are addressed by mediation. Figure 4.1 illustrates moderated and mediated effect diagrams, adapted from (Baron & Kenny, 1986).



**Figure 0.1 Moderator Versus Mediator Models (Adapted from Baron and Kenny (1986))**

In the context of the present study, moderation will suggest *when* CSR has an effect of EM, whereas mediation will suggest *why* and *how* CSR effects EM. Mediation will tell us whether managers engaged in CSR may use any tools to indirectly manage earnings. Mediation analysis captures indirect effects that inform whether the independent variable (CSR) affects the dependent variable (EM) through a channel or tool. An indirect relationship exists when the independent variable affects a mediator, and the mediator in turn affects the dependent variable (Baron & Kenny, 1986). To the best of my knowledge, the mediating effect on the CSR-EM relationship has not yet been examined by prior studies. Among prior studies, Calegari et al. (2010) and Bozzolan et al. (2015) examine EM as a mediating or indirect channel in the relationship between CSR and firm value/performance. Liu et al., 2017 examine CSR as a mediating channel in the relationship between family involvement and EM. Additionally, some studies examine intellectual capital as a mediating channel between CSR and firm performance (for example, see Jain et al., 2017; Surroca et al., 2010). None of these studies examine a mediating channel in the relationship between CSR and EM. I posit that, in order to understand the CSR-EM relationship, it is essential to examine this issue in-depth, and go beyond just examining moderating effects that explain *when* CSR affects EM. To this end, I examine the indirect relationship between CSR and EM, to address *why* and *how* CSR affects EM, through the mediating channel OC.

As outlined earlier, OC is an important component of intellectual capital. Different streams of literature have linked CSR with intellectual capital (for example see Altuner et al., 2015; Hawn & Ioannou, 2016; Massaro et al., 2018), and intellectual capital with EM (for example, see Bhandari et al., 2018; Francis et al., 2008; Malmendier & Tate, 2009; Shust, 2015). The literature linking CSR and

intellectual capital suggests that CSR has an influence on intellectual capital (for example see Jain et al., 2017; Massaro et al., 2018; Surroca et al., 2010). According to the RBV, CSR is an essential element in the creation of intellectual capital, specifically, knowledge development that is crucial for business model sustainability (Eisenhardt & Martin, 2000; Nikolaou, 2017; Villalonga, 2004). Furthermore, there is the notion in the literature that intellectual capital in turn has an influence on EM (for example, see Bhandari et al., 2018; Francis et al., 2008). A mediating channel may exist between the dependent and independent variables if the independent variable has an influence on the mediator, and the mediator in turn has an influence on the dependent variable (Wu & Zumbo, 2008). Thus, the notion in the literature suggests that intellectual capital may be a mediating channel in the relationship between CSR and EM. However, intellectual is a very broad expression embracing various components, as discussed in the previous section, namely, human capital, relational capital and organization capital (OC). While both CSR and EM are direct results of managerial actions or practices (for example, see Attig & Cleary, 2015; Healy & Wahlen, 1999; Levitt Jr, 1998), it is important to note that the broad array of intangibles may not all be relevant to managerial practices. Hence, I choose to examine OC in particular since OC is directly relevant to business and/or managerial practices (see Attig & Cleary, 2015; Lev et al., 2009). Examining the indirect CSR-EM relationship via OC, will address the existing debate on the CSR-EM relationship, by providing insights on *why* and *how* CSR affects EM.

### **4.3 Contribution of the Study**

The present study makes numerous contributions to existing literature and theory, First, the study enriches the CSR-EM literature, by addressing the existing debate on the effect of CSR on EM, from two contrasting managerial behaviour perspectives, namely the managerial myopia (short-term orientation) and the myopia avoidance (long-term orientation) hypotheses. The mixed findings in the literature on the relationship between CSR and EM suggest these two contrasting perspectives. One side of the argument suggests CSR may have a role in escalating managers myopic behaviour, thus increasing EM engagement by managers for short-term goal achievements. A contrasting perspective suggests that CSR may have a role in constraining managers' myopic behaviour, thus reducing EM to reach short-term goals. The present study addresses this continuing debate by revising the relationship between CSR and EM in depth. The study finds that CSR has a direct negative effect on EM, consistent with the myopia avoidance (long-term orientation) perspective.

Second, the study examines the indirect relationship between CSR and EM via a mediating channel. While prior studies have examined various moderating effects, to the best of my knowledge a mediating effect on the CSR-EM relationship has not yet been examined. While moderating effects show *when* CSR affects EM, the present study examines the CSR-EM relationship more closely, by examining the indirect relationship via a mediating channel, and thus addressing the questions *why* and *how* CSR affects EM. In particular, the study examines the indirect relationship between CSR and EM via OC, from the same two contrasting managerial behaviour perspectives, namely, managerial myopia and myopia avoidance hypotheses. The findings provide an interesting insight suggesting that managerial behaviour may change with their firm's unique abilities (that is, OC). The study finds that managers engaged in CSR may use their firms' unique abilities (OC) to manage more earnings, consistent with the managerial myopia (short-term orientation) perspective.

Third, by incorporating OC as the mediator in the indirect CSR-EM relationship, the study contributes to the literature on OC (and intellectual capital) in general by linking OC to the two prevalent accounting research areas - CSR and EM. In the process of looking at OC as a mediating channel, I examine how CSR influences OC, and how OC in turn effects EM. According to the existing literature, CSR has an influence on intellectual capital (for example, see Altuner et al., 2015; Hawn & Ioannou, 2016; Jain et al., 2017; Massaro et al., 2018; Surroca et al., 2010), as well as on the specific intellectual components, namely, human capital (for example, see Casalegno et al., 2017; Pedrini, 2007), and relational capital (for example, Biswas & Suar, 2016; Chung et al., 2015; Hur et al., 2014; Martínez et al., 2014). Since, OC is also a component of intellectual capital, the present study focusses on OC as opposed to other forms of intellectual capital.

Since CSR is a voluntary act in most countries, it is influenced by managerial discretion, and OC is a reflection of management practices (see Attig & Cleary, 2015). Thus, it seems more reasonable to link CSR with OC as opposed to other components of intellectual capital that may not be directly relevant to management practices. I have identified four studies that focus on the relationship of CSR specifically to OC, as opposed to other forms of intellectual capital (see Attig & Cleary, 2015; Barrena-Martinez et al., 2019; Cho & Lee, 2017; Zhang et al., 2014). However, the present study is different from Attig & Cleary (2015) and Cho & Lee (2017) in that I examine how CSR influences OC while Attig & Cleary (2015) and Cho & Lee (2017) observe the influence of OC on CSR. The present study is also different from Zhang et al. (2014) and Barrena-Martinez et al. (2019). Zhang et al. (2014) examine how the social dimension of CSR affects employee outcomes (specifically, organizational citizenship behaviour and affective commitment). My definition of OC is much broader than this, as

OC, in the present study, includes an integration of knowledge, organisational practices, techniques and culture, and managerial quality practices. Furthermore, the present study examines overall CSR (measured by calculating a weighted average of the 3 individual dimensions – Environmental (ENV), Social (SOC) and Governance (GOV)). In contrast, Zhang et al. (2014) focusses on SOC only. Barrena-Martinez et al. (2019) examine all three IC dimensions – OC, human capital and relational capital. However, as a proxy for CSR Barrena-Martinez et al. (2019) consider socially responsible HR practices only. While this is a component of CSR, overall CSR may encompass numerous other aspects (discussed in detail in Chapter 3). Thus, to the best of my knowledge, the present study is the first study to examine the effect of overall CSR on specifically OC. I posit that it is important to examine the relationship between CSR and EM from the perspectives of the RBV theory, discussed in section 4.4.1. According to the RBV perspective, CSR values and practices integrate themselves into the organisations' culture, identity, practices and overall structure (that is, OC) thus enhancing or strengthening OC (Dutton & Dukerich, 1991; Starik & Rands, 1995). This is evidenced from businesses such as Body shop and Ben and Jerry's (discussed in section 4.4.1), where their CSR activities have become part of their unique brand identity (Barney et al., 2001; Russo & Fouts, 1997).

In the process of examining OC as a mediating channel, the present study also examines the relationship between OC and EM. Prior studies have examined the influence of various forms of intellectual capital on EM (for example, see Al-dhamari & Ku Ismail, 2015; Bhandari et al., 2018; Chaney et al., 2011; Francis et al., 2008; Hao & Li, 2016; Malmendier & Tate, 2009; Shust, 2015). The present study examines the relationship of EM specifically with OC, as opposed to other broader components of intellectual capital. As discussed in the previous section, EM is a discretionary action for managers and other corporate insiders (Healy & Wahlen, 1999; Levitt Jr, 1998). As noted by Attig & Cleary (2015), OC is a reflection of the quality of management practices. Thus, investigation of whether high quality management practices (that is, OC) has any influence on suppressing the deliberate EM activities by management is a valuable research endeavour. Other forms of intangibles may be much broader and non-specific to management actions. In the OC literature, while a multitude of factors have been associated with OC, there appears to be a noteworthy gap in studies linking OC and EM. By linking OC to EM, I deviate from the existing studies that have traditionally linked OC mainly to governance mechanisms, such as ownership structures, board structure, chief executive officer (CEO) compensation, etc. To the best of my knowledge, this is the first study to examine the relationship between OC and EM. I posit that it is important to examine the relationship between OC and EM because the theoretical perspective of the managerial myopia

hypothesis suggest that the unique and sophisticated abilities in firms with high OC may increase both managerial incentives and opportunities to manage earnings. This is discussed in greater details in section 4.4.2

#### **4.4 Theoretical Background**

This section discusses the theoretical background of this study. The study examines the direct relationship between CSR and EM, and the indirect relationship between CSR and EM, via the mediating channel OC. For the purpose of examining the indirect relationship, the study examines the two paths through which CSR may indirectly affect EM via OC, that is, the effect of CSR on OC, and the effect of OC on EM. The theoretical background section discusses the theories that may explain each of these relationships, that is, the two paths involved in the indirect relationship between CSR and EM (that is, the relationship between CSR and OC, and the relationship between OC and EM), the direct effect of CSR on EM, and the indirect relationship between CSR and EM via OC. This study explains these key relationships with three theories – 1) the resource-based view (RBV) theory, 2) the managerial myopia hypothesis; and 3) the myopia avoidance hypothesis.

The RBV theory explains the relationship between CSR and OC. The managerial myopia hypothesis and the myopia avoidance hypothesis present two opposing perspectives on managers' likelihood in engaging in EM. These two contrasting managerial behaviour theories explain the relationship between OC and EM, and the direct and indirect relationship between CSR and EM.

##### **4.4.1 Resource-Based View**

According to prior studies, the adoption of CSR practices by firms can result in a myriad of intangible outcomes, such as, establishing better relationships with key stakeholders (Prior et al., 2008), strengthening reputation and brand image (Epstein & Roy, 2001; Prior et al., 2008), gaining customer loyalty through increased trust (Pivato et al., 2008; Waldman et al., 2006; Werther & Chandler, 2005), and improving employee motivation and retention (Epstein & Roy, 2001; Sprinkle & Maines, 2010; Wagner & Schaltegger, 2004). CSR can also provide competitive advantage to firms, as these practices help firms to differentiate themselves from competitors (Branco & Rodrigues, 2006). Prior studies establishing a link between CSR and intellectual capital or intangibles have frequently explained this relationship through the lens of the resource-based view (RBV).

The RBV suggests that the core elements that enable a firm to obtain and sustain competitive advantage are the unique bundle of resources that the firm controls (Barney, 1991). These resources

may include “assets, capabilities, organizational processes, firm attributes, information, knowledge etc. controlled by a firm” (Barney, 1991, p. 101). Barney (1991) views these resources as a bundle of tangible and intangible assets, classifying them into three categories, namely: 1) physical capital resources (including physical technology, physical assets, geographical location, etc.), 2) human capital resources (including training skills, knowledge, experience, relationships, etc. of the workforce), and 3) organization capital resources (including reporting structure, planning, controlling and coordinating systems, relationships within the firms, as well as relationships with the external environment). Barney (1991) emphasizes that these resources are unique to each firm, as they are not easily substitutable or imitable by other firms. The unique bundle of resources result from a firm’s past management decisions and subsequent experience (Lockett & Thompson, 2001).

Prior studies suggest that a firm’s ethical values and practices may shape the firm’s culture (Barney, 1986), as well as establish a source of competitive advantage (Branco & Rodrigues, 2006; Russo & Fouts, 1997). Russo & Fouts (1997) argue that firms engaging in CSR initiatives undergo vital reforms in their internal organisational culture, human resources, and organisational capabilities, and production processes. CSR activities by firms require increased employee involvement, coordination and integration across disciplines, and substantial changes in management orientation, specifically, adoption of a forward-thinking managerial approach, and readiness to adopt changes (Shrivastava, 1995). Thus, according to the resource-based view (RBV), CSR has the ability to create intangible assets, such as knowledge development, that is essential for sustainable business models (Eisenhardt & Martin, 2000; Nikolaou, 2017; Villalonga, 2004). Firms with high CSR, through better knowledge development, are likely to have higher OC, including superior managerial quality practices, a more knowledgeable workforce, and efficient organisational processes and designs (Branco & Rodrigues, 2006; Orlitzky, 2005). Furthermore, a firm’s ethical stance and CSR actions are likely integrate with the organisation’s identity and image (Dutton & Dukerich, 1991), and are reflected in their organisational design, systems, practices and policies (Starik & Rands, 1995). For example, firms such as Ben and Jerry’s<sup>12</sup> and the Body Shop<sup>13</sup> have embedded their ethical values

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<sup>12</sup> Ben and Jerry’s website clearly exhibit their values involving a three-fold mission: 1) their product mission to improve their products, 2) their economic mission to ensure financial growth, and 3) their social mission to come up with “innovative ways to make the world a better place” (Ben and Jerry’s, 2020b). In terms of their social mission, Ben and Jerry’s lists several causes that they have supported (see, (Ben and Jerry’s, 2020a)

<sup>13</sup> The Body Shop makes their values very clear by stating that their business purpose is to “exist and fight for a fairer, more beautiful world” (The Body Shop, 2020b). While The Body Shop is a well-known brand, advocating against animal cruelty in the cosmetic testing process, they are also quite active advocators for the “Black Lives Matter” protest, Women’s Empowerment, and Community Fair Trade that involves sourcing ingredients from all parts of the world (The Body Shop, 2020a).

into their business models in a unique and inimitable manner (Barney et al., 2001; Russo & Fouts, 1997).

Thus, CSR practices, such as initiatives towards environmental concerns (for example, energy saving, recycling of materials, etc.) and social concerns (for example, better treatment of workers, training and development of the workforce, etc.), are likely to blend into the organisational process and become part of the structural capital or organisation capital.

The above discussion reviews the theory explaining the relationship between CSR and OC, the first indirect channel that is examined in the overall examination of the indirect relationship between CSR and EM via OC. The second channel is the relationship between OC and EM.

The relationships between OC and EM, and between CSR and EM, may be explained by two contrasting perspectives. The first one of these perspectives is explained through the lens of Managerial Myopia hypothesis. As discussed in the next paragraph, the managerial myopia hypothesis explains how managers' focus on short-term objectives, may lead them to manage earnings. Furthermore, this perspective, of the managerial myopia hypothesis, suggests that firms with higher OC and firms with high CSR are more likely to manage earnings.

#### **4.4.2 *Managerial Myopia Hypothesis***

The managerial myopia hypothesis suggests that managers may exert greater emphasis on short-term objectives, that may forgo long-term value creation of the firm (Hayes & Abernathy, 1980). Chapter 2 discusses the managerial myopia hypothesis in detail, examining the relationship between CSR and EM through lens of this theory. The managerial myopia hypothesis may also explain the relationship between OC and EM.

The relationship between OC and EM may be interpreted in two contrasting ways. Some evidence in the literature suggests that firms with high OC are more likely to engage in EM. This perspective is consistent with the managerial myopia hypothesis. The second perspective is consistent with the myopia avoidance hypothesis, suggesting that firms with high OC are less likely to engage in EM. In this section, I discuss the relationship between OC and EM through the lens of the managerial myopia hypothesis, while the contrasting perspective, that is, the myopia avoidance hypothesis is discussed in the next section. Consistent with the managerial myopia hypothesis, there are two primary reasons why firms with high OC may have high EM. First, managers in high OC firms may be subject to greater market pressures, tempting them towards adopting a short-term approach to

achieve short-term targets. These pressures may arise from higher expectations and standards set by investors and analysts in terms of the firms' financial performance (Malmendier & Tate, 2009). Furthermore, the managers' reputation may also be at stake if they repeatedly fail to meet the targets (Francis et al., 2008; Malmendier & Tate, 2009). Therefore, managers may demonstrate myopic behaviour as a rent extraction strategy, by using EM as a means to achieve financial targets and meet market expectations, as well as to safeguard their reputation (Francis et al., 2008; Malmendier & Tate, 2009). Furthermore, the positive image that high OC firms have, may lead to managers becoming narcissistic, as they strive for power and reputation. Prior studies have shown that narcissistic managers are more likely to manage earnings as they are more concerned to safeguard their reputation by maintaining a positive perception in the market regarding the firms' financial performance (for example, see Buchholz et al., 2020; Lin et al., 2020). The second reason for managers' myopic behaviour may simply result from increased opportunities to manage earnings. Firms with high OC, that is superior management quality practices and processes, may have lower stakeholder scrutiny, which in turn may provide managers with greater opportunities to manage earnings (for example, see Muttakin et al., 2015; Yip et al., 2011). Furthermore, managers in high OC firms may have superior techniques and knowledge about the firm and its internal control systems, enabling them to manage earnings more easily with less chances of their EM being detected (Demerjian et al., 2013; Gul et al., 2018).

In regard to the effect of CSR on EM, the managerial myopia hypothesis suggests that managers in firms with high CSR are more likely to manage earnings. As discussed in greater details in Chapter 2, this may be due to – 1) incentive-driven myopia - short-term behaviour of managers, as they focus on meeting short-term objectives due to various incentives, including responding to pressures from stakeholders (Chih et al., 2008; Gargouri et al., 2010; Nikolov, 2018), opportunistic motives such as to avoid debt covenant violations (Dechow & Schrand, 2004; Jaggi & Lee, 2002), increasing compensation-based bonuses (Dechow & Schrand, 2004), inflating stock prices prior (Dechow & Schrand, 2004; Lehmann, 2016; Levitt Jr, 1998), and safeguarding their reputation by achieving targets (Francis et al., 2008), 2) opportunity-driven myopia – short-term behaviour arising from greater opportunities resulting from CSR initiatives creating a positive image (Kim et al., 2012; Muttakin et al., 2015).

As discussed above, while the managerial myopia hypothesis explains one perspective on the relationships between OC and EM, and between CSR and EM, a contrasting perspective on these relationships is offered by the myopia avoidance hypothesis. The next section discusses the myopia

avoidance hypothesis, suggesting that managers in high OC firms and managers in high CSR firms are less likely to manage earnings.

#### **4.4.3 Myopia Avoidance Hypothesis**

Myopia avoidance hypothesis offers a contrasting perspective to the managerial myopia hypothesis. The myopia avoidance hypothesis suggests that managers care more about long-term value creation of the firm, and thus, they avoid myopic or short-term behaviour such as EM. Chapter 2 discusses the myopia avoidance hypothesis in detail and examines the relationship between CSR and EM through the lens of this theory. The myopia avoidance hypothesis also offers a contrasting perspective on the relationship between OC and EM.

Managers in firms with high OC (i.e., superior processes, management quality practices, relationship networks, etc.) may utilise their firms unique abilities to sustain their relationships with stakeholders. Therefore, it can be expected that managers in high OC firms manage earnings less, as they avoid myopic or short-term behaviour. Furthermore, managers in high OC firms often possess higher levels of skills and knowledge and are able to exert higher levels of accuracy in their financial reporting estimations, thereby improving the quality of financial information (Demerjian et al., 2013). This view is consistent with the myopia avoidance hypothesis, suggesting that managers in high OC firms are more concerned about long-term value creation and sustainability of their firms.

The myopia avoidance hypothesis also presents a contrasting perspective on the relationship between CSR and EM, suggesting that managers in firms with high CSR are less likely to manage earnings. According to prior studies, this negative relationship between CSR and EM may be because managers undertaking CSR initiatives have a long-term orientation (Chih et al., 2008; Choi & Pae, 2011; Gargouri et al., 2010) that may result from – 1) relationship-driven myopia avoidance – managers' genuine concern about sustaining relationships with stakeholders (Bozzolan et al., 2015; Chih et al., 2008), and avoiding risks of negative consequences that may hamper their relationships with stakeholders (Gerged et al., 2020; Gerged et al., 2021; Litt et al., 2013); and/or 2) value-driven myopia avoidance – managers' moral obligations and ethical values leading them to avoid unethical acts, that is, EM (Litt et al., 2013).

## **4.5 Literature Review and Hypothesis Development**

This section discusses the relevant literature on CSR, OC and EM. Based on the relationships between CSR and EM, CSR and OC, and OC and EM, the literature review leads to the development of the hypotheses that are tested to examine the direct and indirect relationship between CSR and EM. Since the literature on CSR and EM has been discussed quite comprehensively in Chapter 2, in this section, I only briefly discuss the effect of CSR on EM briefly.

While many studies have examined the issues of CSR and EM separately, in recent years there has been a growing focus among recent studies on the links between CSR and EM. Many of these studies are based on US-samples (for example, see Calegari et al., 2010; Gao & Zhang, 2015; Grougiou et al., 2014; Heltzer, 2011; Hong & Andersen, 2011; Kim et al., 2012; Litt et al., 2013; Liu et al., 2017; Patten & Trompeter, 2003; Riahi-Belkaoui, 2003; Yip et al., 2011). However, the literature portrays mixed findings on the relationship between CSR and EM.

### **4.5.1 *The Direct Effect of CSR on EM***

There are two contrasting perspectives explaining the relationship between CSR and EM. One perspective suggests that CSR has a positive effect on EM (for example, see Buertey et al., 2020; Gargouri et al., 2010; Habbash & Haddad, 2020; Hickman et al., 2021; Kolsi & Attayah, 2018; Kyaw et al., 2017; Pratiwi & Siregar, 2019; Riahi-Belkaoui, 2003). Consistent to managerial myopia hypothesis, this perspective suggests that managers in firms with high CSR are more likely to manage earnings to meet short-term objectives. This may be for two main reasons. First, the positive relationship between CSR and EM may be incentive-driven. Managers in firms with high CSR are burdened with numerous expectations from various stakeholders, in addition to the profit-making objectives of shareholders (Chih et al., 2008). The added pressure of meeting multiple objectives may create greater incentives for managers to report favourable financial information reports, leading them managers to manage earnings (Chih et al., 2008; Habbash & Haddad, 2020; Kyaw et al., 2017). Second, the positive relationship between CSR and EM may be opportunity-driven. Managers engaged in CSR activities may manage earnings due to greater opportunities arising from CSR creating a positive image and lowering scrutiny (for example, see Chih et al., 2008; Gras-Gil et al., 2016; Kim et al., 2012). Furthermore, managers may use their CSR activities as a shield to cover-up or 'greenwash' their EM (for example, see Buertey et al., 2020; Jordaan et al., 2018; Mohamed et al., 2020; Muttakin et al., 2015; Zhang et al., 2021).

However, the contrasting perspective suggests that CSR has a negative effect on EM (for example,

see Almahrog et al., 2018; Bozzolan et al., 2015; Calegari et al., 2010; Chen & Hung, 2021; Cho & Chun, 2015; Chun & Cho, 2017; Faisal et al., 2018; Gao & Zhang, 2015; García-Sánchez et al., 2020; Gerged et al., 2020; Gerged et al., 2021; Gras-Gil et al., 2016; Hong & Andersen, 2011; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Litt et al., 2013; Martínez-Ferrero et al., 2015; Palacios-Manzano et al., 2019; Patten & Trompeter, 2003; Scholtens & Kang, 2013; Sial et al., 2019; Wang et al., 2018). Consistent with the myopia avoidance hypothesis, this perspective suggests that managers in firms with high CSR are more long-term oriented, and are therefore, less likely to manage earnings for short-term gains (Chih et al., 2008). This may be due to two main reasons. First, the negative relationship between CSR and EM may be relationship-driven. As EM is an agency cost, managers engaged in CSR may avoid managing earnings in order to maintain their relationships with stakeholders (for example, see Almahrog et al., 2018; Amar & Chakroun, 2018; Cho & Chun, 2015; Choi et al., 2018; Faisal et al., 2018; Gras-Gil et al., 2016; Hong & Andersen, 2011; Joubert, 2020; Velte, 2019). Furthermore, since CSR enhances transparency and reduces information asymmetry between managers and stakeholders (for example, see Litt et al., 2013; Wang et al., 2018), the risks of EM being discovered may be higher within firms with high CSR. Thus, managers may avoid EM to avoid negative consequences arising from discovery of their EM and causing irreversible damage to their relationships with stakeholders (for example, see Gerged et al., 2020; Gerged et al., 2021; Litt et al., 2013).

Second, the negative relationship between CSR and EM may be value-driven. Since EM is considered an unethical act, managers engaged in CSR due to their ethical and moral values are less likely to manage earnings (for example, see Calegari et al., 2010; Gao & Zhang, 2015; García-Sánchez et al., 2020; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Martínez-Ferrero et al., 2015; Mohmed et al., 2020; Palacios-Manzano et al., 2019; Rezaee et al., 2020; Sial et al., 2019).

A number of studies also find mixed results, suggesting that the relationship between CSR and EM is contextual in relation to a number of factors such as, the *specific type of EM measure* used (for example, see Chih et al., 2008; Jordaan et al., 2018; Kolsi & Attayah, 2018; Velte, 2019; Velte, 2021; Zhang et al., 2021), the *different CSR dimensions* (for example, see Gargouri et al., 2010; Amar & Chakroun, 2018), the *industry in which the firm operates* (for example, see Muttakin et al., 2015; Yip et al., 2011); *government control and institutional factors* (see Kim et al., 2019; Kyaw et al., 2017; Li & Xia, 2018; Liu & Lee, 2019; Rezaee et al., 2020), and the *ranking of CSR performance* (see Mohmed et al., 2020).

Based on the contrasting evidence in the literature regarding the relationship between CSR and EM, the present study examines the following opposing hypotheses:

*H1.1a: Consistent with the managerial myopia hypothesis, there is a positive and significant direct relationship between CSR and EM.*

*H1.1b: Consistent with the myopia avoidance hypothesis, there is a negative and significant direct relationship between CSR and EM.*

#### **4.5.2 The Effect of CSR on OC**

Table 4.1 presents a summary of the literature on the relationship of CSR with intellectual capital components, including OC. As evident from Table 4.1 Panel A, prior studies suggest a positive relationship between CSR and overall intellectual capital in general (for example see Altuner et al., 2015; Hawn & Ioannou, 2016; Massaro et al., 2018). Altuner et al. (2015) report a positive relationship between CSR and intellectual capital among 133 manufacturing firms from Istanbul between 2007 and 2011, as evident from positive correlation testing results between the two variables. Hawn & Ioannou (2016) adopt a unique approach by examining the interaction of internal and external CSR on market value of firms on a sample of 5,958 firm-year observations from 1,492 firms across 33 countries for the period 2002 to 2008. The findings of the study indicate that joint use of internal and external CSR actions enable the creation of intangible resources for firms, as evident by the higher market value (Hawn & Ioannou, 2016). To distinguish internal from external CSR actions, Hawn & Ioannou (2016) refer to the former as a firm's internal actions or policies to develop organizational capabilities, and the latter as publicly visible actions, particularly through the communication of social and environmental actions. Given that the market value of firms consists of tangible and intangible resources, Hawn & Ioannou (2016) explain that the findings of their study suggest that the interaction of internal and external CSR enhances intangible resources. Drawing on content analysis of 1,651 blog posts with over 1.5 million words published in CSRwire.com, Massaro et al. (2018) report that CSR and intellectual capital influence one another. As an example, Massaro et al. (2018) explain that providing training and education for employees is a social activity under the CSR umbrella, which also enhances the human capital dimension of intellectual capital. Thus, the findings encourage managers to engage in both CSR and intellectual capital development (Massaro et al., 2018).

In addition to the association between CSR and intellectual capital, the role of intellectual capital as

a mediating channel between the relationship between CSR and financial performance has also gained some attention (for example, see Jain et al., 2017; Surroca et al., 2010). Using a sample of 5,599 firms from 28 countries for the period 2002 to 2004, Surroca et al. (2010) find a positive relationship between CSR and intellectual capital. Furthermore, Surroca et al. (2010) note that intellectual capital mediates the relationship between CSR and financial performance. The findings suggest that there is no direct relationship between CSR and financial performance, but an indirect relationship exists through the channel of intellectual capital (Surroca et al., 2010). Jain also finds a mediating role of intellectual capital on the relationship between CSR and financial performance. Based on a survey of 384 small and medium enterprises (SMEs) in Rajasthan, India, Jain suggests that CSR has a positive influence on intellectual capital. Additionally, Jain finds a weak positive direct relationship between CSR and financial performance, but a strong positive indirect relationship between CSR and financial performance, through the mediating effect of intellectual capital.

Table 4.1 Panel A also summarises some studies that have linked CSR with relational capital. As a matter of fact, there is an abundance of literature examining the influence of CSR on various relational (or customer) capital aspects such as branding equity (Hur et al., 2014), brand image (Martínez et al., 2014), customer retention (Chung et al., 2015), brand loyalty (Chung et al., 2015; Martínez et al., 2014), employer branding (Biswas & Suar, 2016), etc. Since the majority of these studies focus on the marketing aspect of relational capital, I have only included the more recent studies linking CSR and relational (or customer) capital. As evident from Table 4.1 Panel A, these studies suggest a positive relationship between CSR and relational capital. For example, based on a survey of 867 South Korean consumers, Hur et al. (2014) report a positive relationship between CSR and the brand equity of firms. Furthermore, Hur et al. (2014) find that CSR has both a direct influence on brand equity, and an indirect influence on brand equity through the mediating channels of brand credibility and reputation. The results indicate that CSR enhances brand equity via improving brand credibility and reputation (Hur et al., 2014). Consistent with this, Martínez et al. (2014) also find a positive association of CSR with relational capital in the hotel industry. Martínez et al. (2014) conducted a survey of 1,921 consumers who have previously stayed at one of the top 10 Spanish hotel chains (with over 600 hotels) in Latin America. The findings suggest that CSR has a positive influence on brand image and loyalty (Martínez et al., 2014). Similarly, Chung et al. (2015) note a positive influence of CSR on customer satisfaction and loyalty, based on a survey of 276 participants from Eastern China. Biswas & Suar (2016) focus on a different aspect of relational capital, namely, employee branding to attract potential talented workers. Based on a survey of a

sample of 347 top executives in 209 Indian companies, Biswas & Suar (2016) find that CSR (along with several other factors, such as organizational support, trust, prestige, leadership, etc.) has a positive influence on employer branding, which in turn has an influence on the financial and non-financial performance of firms. The findings suggest that CSR influences employer branding, making the firm more attractive to talented job seekers, thereby achieving a competitive advantage (Biswas & Suar, 2016).

In addition to linking CSR with overall intellectual capital and with OC, some studies have also linked CSR with the other intellectual capital components, such as human capital (for example, see Casalegno et al., 2017) and relational (or customer) capital (for example, see Biswas & Suar, 2016; Chung et al., 2015; Hur et al., 2014; Martínez et al., 2014). Table 4.1 Panel B provides a summary of these studies. Casalegno et al. (2017) examine the relationship between CSR and human capital on a small sample of the top 10 largest European companies. The study finds a strong relationship between CSR and human capital (Casalegno et al., 2017). Casalegno et al. (2017) note that this positive association between CSR and human capital leads to value creation for shareholders. Taking a different approach to most prior studies, Pedrini (2007) also reports an association between CSR and human capital by examining the similarities and the possible overlaps between CSR information and human capital information. Examination of the human capital related disclosures of a sample of 20 reports containing intellectual capital information, and comparing them to the 2002 Global Reporting Initiatives' (GRI) guidelines, Pedrini (2007) concludes that there is significant convergence between the two disclosure types. The study notes an overlap in the CSR disclosures and human capital in three areas in particular: 1) human capital descriptions, 2) workforce diversity, and 3) training quality and intensity. Pedrini (2007) flags the possibility of a convergence of the CSR reports and intellectual capital in the future.

There appears to be a limited but noteworthy number of studies linking CSR specifically to OC. I have identified five prior studies that link CSR to OC (see Attig & Cleary, 2015; Barrena-Martinez et al., 2019; Cho & Lee, 2017; Gallardo-Vázquez et al., 2019; Zhang et al., 2014). Table 4.1 Panel B summarises the relevant literature on CSR and OC.

Prior studies report a positive association between CSR and OC (see Attig & Cleary, 2015; Barrena-Martinez et al., 2019; Cho & Lee, 2017; Gallardo-Vázquez et al., 2019; Zhang et al., 2014). Based on 700 survey responses from Chinese companies, Zhang et al. (2014) test various direct and indirect

links among high performance work systems<sup>14</sup>, CSR, and employee outcomes, specifically employee commitment and organisational citizenship behaviour. The findings suggest that CSR has a positive influence on employee satisfaction, commitment and organizational citizenship behaviour, demonstrated through discretionary actions taken by employees above and beyond general expectations (Zhang et al., 2014). Barrena-Martinez et al. (2019), in a survey of 315 Spanish firms, find that the human resource dimension of CSR has a positive effect on OC, and on the other components of intellectual capital (human and relational capital). Similarly, from a survey of 77 Spanish firms, Gallardo-Vázquez et al. (2019) report a positive effect of CSR on OC and on the other components of intellectual capital.

Additionally, I have identified two studies that examine how OC aspects, such as management quality practices (Attig & Cleary, 2015) and managerial efficiency (Cho & Lee, 2017), influence CSR. Using a sample of 449 observations from 179 US firms for the period 2005 to 2007, Attig & Cleary (2015) find a positive association between management quality practices (a proxy used to measure OC) and CSR. The findings suggest that superior management practices lead to better social outcomes for firms (Attig & Cleary, 2015). Consistent with this, Cho & Lee (2017) also find a positive relationship between CSR and OC (specifically, managerial efficiency). Using a sample of 11,037 firm-year observations over the period 2003 to 2010, Cho and Lee (2017) report that firms with efficient managers have higher economic and social CSR practices, but lower environmental CSR practices. Since the economic (or product-related) and social dimensions of CSR refer to more strategic CSR actions that contribute to adding value, Cho and Lee (2017) argue that efficient managers are more likely to chose CSR actions that directly add value to the firm. Consequently, with limited resources, efficient managers may chose not to focus much on CSR actions based on altruistic motives (that is, the environmental CSR dimension) (Cho & Lee, 2017).

Overall, as evident from the literature review, there appears to be a general consensus that CSR has a positive influence on intellectual capital and its specific components (OC, human capital and relational capital) (for example, see Casalegno et al., 2017; Chung et al., 2015; Hur et al., 2014; Jain et al., 2017; Martínez et al., 2014; Surroca et al., 2010; Zhang et al., 2014). The positive relationship between CSR and OC may be explained by the RBV. RBV highlights that intangible resources, particularly knowledge, are critical for a firm's sustainability (Chang & Chen, 2012; Villalonga, 2004). Several studies highlight the capability of CSR to create knowledge development essential for

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<sup>14</sup> Zhang *et al.* (2014) define high performance work systems as a source of competitive advantage obtained through human resource practices aimed at improving staff skills, commitment, productivity, etc.

sustainable business models (Eisenhardt & Martin, 2000; Nikolaou, 2017; Villalonga, 2004). This implies that CSR is an essential strategy for better OC.

There appears to be substantial evidence in the literature that there is a relationship between CSR and OC. Consistent with the literature and with the RBV theory, the following hypothesis is developed:

*H1.2: Consistent with the RBV theory, there is a positive and significant relationship between CSR and OC.*

**Table 0.1 Summary of prior studies examining the relationship between CSR and OC**

Panel A: Prior studies linking CSR with intellectual capital					
(1)	(2)	(3)	(4)	(5)	(6)
Authors (Year)	Country Sample (Period)	Research Objective	Research method	Theory	Key findings
Pivato et al. (2008)	Italy 400 survey participants	Examine how CSR affects relational capital - customer trust	<b>Method:</b> SEM <b>DV:</b> Customer trust <b>IV:</b> CSR	Stakeholder trust perspective	CSR has a positive effect on relational capital
Surroca et al. (2010)	28 countries 5,599 firms (2002 – 2004)	Examine how CSR indirectly affects firm performance via Intellectual Capital (IC)	<b>Method:</b> OLS <b>DV and IV:</b> Financial performance; CSR <b>MED:</b> IC	Instrumental view; slack resources view; RBV	CSR and IC are positively related. IC mediates the relationship between CSR and performance
Hur et al. (2014)	Korea 867 survey participants	Examine how CSR affects relational capital - brand equity	<b>Method:</b> SEM <b>DV:</b> Brand equity <b>IV:</b> CSR <b>MED:</b> Brand credibility; brand reputation	RBV	CSR has a positive direct effect on relational capital, and indirect effect via brand credibility and reputation
Martínez et al. (2014)	Latin America 1,921 survey participants	Examine how CSR affects relational capital - brand image and loyalty	<b>Method:</b> Confirmatory factor analysis; SEM <b>DV:</b> Brand image; brand loyalty <b>IV:</b> CSR <b>MOD:</b>	Theory of sustainable development	CSR has a positive effect on relational capital
Altuner et al. (2015)	Turkey 133 firms (2007 – 2011)	Examine how CSR are IC are related directly and indirectly via corporate governance	<b>Method:</b> Linear correlation, t-test; ANOVA <b>DV and IV:</b> IC; CSR <b>MED:</b> Corporate governance	n/a	Positive direct and indirect effect between CSR and IC via corporate governance
Chung et al. (2015)	China 276 survey participants	Examine how CSR affects relational capital - customer satisfaction and loyalty	<b>Method:</b> SEM <b>DV:</b> Customer satisfaction; customer loyalty <b>IV:</b> CSR	n/a	CSR has a positive effect on relational capital
Biswas & Suar (2016)	India 347 survey participants	Examine how CSR (among other things) affects relational capital - employer branding	<b>Method:</b> SEM <b>DV:</b> Employee branding; firm performance <b>IV:</b> CSR	RBV	CSR has a positive effect on relational capital, which in turn has a positive effect on firm performance
Hawn & Ioannou (2016)	33 countries 5,958 observations/ 1492 firms (2002 – 2008)	Examine how CSR affects IC and firm value	<b>Method:</b> OLS <b>DV:</b> IC <b>IV:</b> CSR	RBV	External and internal CSR jointly have a positive effect on IC and market value
Casalegno et al. (2017)	Europe 10 largest firms (2010 – 2012)	Examine how CSR affects human capital	<b>Method:</b> Case analysis <b>DV:</b> Human capital <b>IV:</b> CSR	n/a	CSR has a positive effect on human capital
Jain et al. (2017)	India 384 survey firms	Examine how CSR indirectly affects firm performance via IC	<b>Method:</b> SEM <b>DV:</b> Financial performance <b>IV:</b> CSR <b>MED:</b> IC	RBV	CSR and IC are positively related. IC mediates the relationship between CSR and performance

Massaro et al. (2018)	1651 blog posts in CSRwire.com	Examine how CSR and IC are related	<b>Method:</b> Concept extraction; content analysis <b>DV:</b> IC <b>IV:</b> CSR	n/a	IC and CSR are positively related to each other
<b>Panel B: Prior studies linking CSR with OC</b>					
Zhang et al. (2014)	<i>China</i> 700 survey participants	Examine how social (SOC) dimension affects employee outcomes <sup>15</sup>	<b>Method:</b> SEM <b>DV:</b> Employee outcomes (Organizational citizenship behaviour; organizational affective commitment) <b>IV:</b> SOC	Stakeholder perspective	SOC has a positive effect on employee outcomes
Barrena-Martinez et al. (2019)	<i>Spain</i> 315 survey firm respondents	Examine how socially responsible human resource (HR) practices affect OC and other IC components	<b>Method:</b> SEM <b>DV:</b> IC components - OC, human and relational capital <b>IV:</b> Socially responsible HR practices	Synergistic assumptions of the configurational approach	Socially responsible HR practices has a positive effect on OC and other IC components
Gallardo-Vázquez et al. (2019)	<i>Spain</i> 77 survey firm respondents	Examine how CSR affects OC and other IC components	<b>Method:</b> SEM <b>DV:</b> IC components - OC, human and relational capital <b>IV:</b> CSR	Stakeholder theory; legitimacy theory	CSR has a positive effect on OC and other IC components
Attig & Cleary (2015)	<i>USA</i> 449 observations/ 179 firms (2005-2007)	Examine how OC affects CSR	<b>Method:</b> OLS; 2SLS <b>DV:</b> CSR <b>IV:</b> OC	Slack resource perspective	OC has a positive effect on CSR
Cho & Lee (2017)	<i>USA</i> 11,037 observations (2003-2010)	Examine how managerial efficiency affects CSR	<b>Method:</b> OLS <b>DV:</b> CSR <b>IV:</b> Managerial efficiency	Upper echelons theory	Positive effect on product-related and SOC dimensions, but negative effect on environmental dimension

<sup>15</sup> Zhang, *et al.* (2014) examine several direct and indirect relationships between the variables. The literature review in this chapter only discusses the relationships that are relevant to the present study (that is, the relationship between CSR and employee outcomes).

### **4.5.3 The Effect of OC on EM**

The EM literature has traditionally focussed on corporate characteristics such as firm size, audit quality etc. (Demerjian et al., 2013), with a growing interest in CSR in recent years. However, another contemporary trend evident from the EM literature is the association of EM with intangibles. Despite a limited number of studies available on this, the studies linking intellectual capital and EM has also gained some momentum during the last two decades (for example, see Bhandari et al., 2018; Francis et al., 2008; Malmendier & Tate, 2009; Shust, 2015).

To the best of my knowledge, no prior study has examined the relationship between OC and EM specifically. Therefore, throughout the remainder of this section, I discuss the literature relevant to intellectual capital components and EM. Table 4.2 provides a summary of the relevant literature on intellectual capital components and EM, categorised into 3 categories – 1) Panel A shows the studies examining various facets of management (for example, see Francis et al., 2008; Malmendier & Tate, 2009), 2) Panel B discusses the studies examining relationship aspects, such as political connections (for example, see Al-dhamari & Ku Ismail, 2015; Chaney et al., 2011) and CEO's external connections (for example, see Bhandari et al., 2018); 3) Panel C shows the studies examining R&D expenditure as a proxy for intangible intensity (for example, see Hao & Li, 2016; Shust, 2015).

I have identified only one study that examines OC as opposed to broader intellectual capital - Demerjian et al. (2013), who examine the relationship between OC and earnings quality as opposed to EM, reporting findings contradictory to the majority of the literature. Using a sample of 78,423 firm-year observations from 1989 to 2009, Demerjian et al. (2013) find managerial ability positively influences earnings quality. The positive relationship between managerial ability and earnings quality suggests that more able managers are more knowledgeable, and are therefore able to make financial reporting estimations with higher accuracy (Demerjian et al., 2013). However, Demerjian et al. (2013) also explain that their analysis examines earnings quality and not EM. Demerjian et al. (2013) expect that more able managers will be able to manage earnings more successfully. The better quality of earnings (such as, smoother earnings) may result from effective EM by managers.

As summarised in Table 4.2 Panel A, Francis et al. (2008) and Malmendier & Tate (2009) focus on senior level management (that is, CEO) and the likelihood of EM. Using a sample of 2,000 observations between 1992 and 2001, Francis et al. (2008) find CEO reputation to be negatively (positively) related to earnings quality (EM). Consistent with the rent extraction hypothesis, Francis

et al. (2008) suggest that reputed CEOs are more likely to manage earnings to report favourable financial information, in attempts to maintain their reputation. With additional tests, Francis et al. (2008) also find that firms with poorer earnings quality are more likely to employ reputable CEOs in an attempt to reverse the negative image caused by the poor earnings quality. Consistent with this, Malmendier & Tate (2009) report that superstar CEOs are more likely to manage earnings. Using a sample of 71,418 firm-year observations over the period 1975 to 2002, Malmendier & Tate (2009) find that award-winning CEOs have higher expectations from investors and analysts, which may in turn lead them to manage earnings to meet those expectations.

Table 4.2 Panel B summarises the literature on relational aspects of intellectual capital and EM. Al-dhamari & Ku Ismail (2015), Bhandari et al. (2018) and Chaney et al. (2011) examine how various relational aspects of firms influence EM. Using an international sample of 4,964 firms from 19 countries across the period 1997 to 2001, Chaney et al. (2011) demonstrate that firms with political ties have lower earnings quality. Chaney et al. (2011) reasons that the lower earnings quality could result from intentional EM by managers as they try to extract private benefits. Furthermore, once political connections have been established, the firms may start having a relaxed attitude toward maintaining high quality earnings. Upon examining 295 firm-year observations from Malaysian listed firms between 2007 and 2011, Al-dhamari & Ku Ismail (2015) find lower earnings quality (that is, higher EM) in firms with political connections. Al-dhamari & Ku Ismail (2015) inform that Malaysian politically connected firms may experience pressure from the government to conceal financial information that may create negative publicity for the government. Such pressures may lead managers to manage earnings to conceal financial transactions resulting from the political connection. In contrast to the majority of the literature, Bhandari et al., 2018 find a negative association between EM and relational capital (specifically, a CEO's external connections with other executives and directors). Using a sample of 5,611 firm-year observations between 2002 and 2014, Bhandari *et al.* (2018) demonstrate that firms with higher CEO network connections are less likely to manage earnings as exposure of EM engagement may sabotage the CEO's reputation and network connections. However, Bhandari et al. (2018) also note that this lower EM may result from the increased difficulties in detecting accounting manipulations when CEOs are well-connected (for example, see Khanna et al., 2015).

Table 4.2 Panel C discusses studies that examine R&D as a form of intellectual capital and EM. Using the intensity of R&D expenditure as a proxy for intangibles, Shust (2015) finds a positive influence of R&D on EM on a sample of 77,003 observations between 1988 and 2010. Shust (2015) explains

that high-tech firms (that is, firms with high R&D activities) have greater uncertainty regarding their future performance, and this uncertainty in turn is likely to lead to higher EM incentives. Hao & Li (2016) examines the association between future innovation opportunities and discretionary accruals across a sample of 20,265 observations between 1988 and 2006. The findings suggest a positive association between future innovation opportunities (proxied by R&D intensity, patents and patent citations and discretionary accruals) among firms with financial constraints. However, Hao & Li (2016) explain that the positive relationship between innovation opportunities and discretionary accruals is a result of truth revealing discretionary accruals (as opposed to manipulative EM) to signal future growth prospects of innovative firms.

In addition to the studies on intellectual capital and EM, I have identified some studies that examine how intangibles intensity influence earnings quality as opposed to EM. The majority of these studies suggest that higher intangibles within firms cause a decline in the quality of earnings. For example, Kothari et al. (2002) find that R&D investments (a commonly used proxy for intangibles) increase the variability of future earnings, making earnings more uncertain. Using a sample of observations from intangible intensive and non-intangible intensive industries, Ciftci et al. (2014) also find declining earnings quality among intangible intensive industries. Similarly, Srivastava (2014) also finds a negative relationship between intangible intensity and earnings quality, specifically the volatility, relevance and matching of earnings. Srivastava (2014) suggests that the growth of intangible intensive industries is accountable for the decline in earnings quality of firms over the past forty years. Two recent studies, Bushman et al. (2016) and Nallareddy et al. (2018) highlight intangible intensity as one of the reasons behind changing accruals properties, specifically the changing correlation between accruals and cashflows. In contrast to the majority of the literature, Villalonga (2004) observes increased earnings persistence among firms with higher intangibles. However, the author warns that this higher persistence can also be a disadvantage for firms with lower or negative earnings, as these unattractive earnings figures may also be more persistent.

Overall, most of the literature on intellectual capital and EM indicate a positive relationship between the two variables. Furthermore, the negative relationship between intellectual capital and earnings quality evidenced in the broader literature review also implies a similar indication. Thus, based on the findings from the broader literature, the present study expects to find a positive relationship between OC and EM. I expect this positive relationship for three main reasons. First, managers in firms with high OC may experience greater pressure from higher expectations from investors and analysts in terms of firm performance (Malmendier & Tate, 2009). In response to such pressures,

managers may have more incentives to manage earnings to meet or exceed short-term targets, as repeated inability to meet targets may harm the management's reputation<sup>16</sup> (Francis et al., 2008; Malmendier & Tate, 2009). Second, high OC is a reflection of superior managerial quality practices and ability (for example, see Attig & Cleary, 2015; Demerjian et al., 2013). The higher ability of managers may also imply that the managers are more knowledgeable and have greater ability to manage earnings with minimum chances of getting caught<sup>17</sup>. Furthermore, prior studies suggest that the lack of an adequate and consistent accounting standard or regulatory body, specifying disclosure requirements for intellectual capital, creates greater uncertainty regarding earnings, more forecasting errors and greater information asymmetries between managers and stakeholders. This in turn leads to greater opportunities for EM (García-Ayuso, 2003; Lev et al., 2005; Starovic & Marr, 2003). Thus, the literature suggests that managers in firms with high OC are likely to be myopic (short-term oriented). Hence, consistent with majority of the literature, and with the managerial myopia hypothesis, I expect to find a positive relationship between OC and EM. Thus, the following hypothesis is tested:

*H1.3: Consistent with the managerial myopia hypothesis, there is a positive and significant relationship between OC and EM.*

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<sup>16</sup> A contrasting perspective suggests that managers may avoid EM since their reputations may be at stake if their EM is detected. However, taken together with the next argument (that managers in firms with high OC may have superior techniques to manage earnings with lower chances of getting caught), firms with high OC may have both incentives and opportunities to manage more earnings. Managers in firms with high OC may have more incentives to manage earnings to meet stakeholder expectations and to safeguard their reputation by avoiding failures in meeting targets. The greater opportunities provided by high OC may make it easier for them to manage earnings for their opportunistic incentives.

<sup>17</sup> This is one side of the argument. It should be acknowledged that managers in firms with high OC may simply have better ability to manage their firms' performance more effectively, thus eliminating or reducing their need to manage earnings. The present study adopts the first argument, suggesting that OC may increase EM, since this is consistent to majority of the literature.

**Table 0.2 Summary of prior studies examining the relationship between Intellectual Capital on EM**

Panel A: Prior studies linking management aspects of intellectual capital with EM					
(1)	(2)	(3)	(4)	(5)	(6)
Authors (Year)	Country Sample (Period)	Research Objective	Research method	Theory	Key findings
Francis et al. (2008)	USA 2,000 observations (1992 – 2001)	Examine how CEO's reputation affects EM	<b>Method:</b> Simultaneous regression equations <b>DV:</b> EM <b>IV:</b> CEO reputation	Efficient contracting perspective; rent extraction perspective; matching argument	CEO reputation has a positive effect on EM (lower earnings quality)
Malmendier & Tate (2009)	USA 71,418 observations (1975 – 2002)	Examine how CEOs with superstar status influence firm performance	<b>Method:</b> Logit regression <b>DV:</b> EM <b>IV:</b> CEO status	Rent extraction perspective	CEO reputation has a positive effect on EM
Demerjian et al. (2013)	USA 78,423 observations (1989 – 2009)	Examine how managerial ability affects EM	<b>Method:</b> OLS <b>DV:</b> Managerial ability <b>IV:</b> EM	n/a	Managerial ability is positively associated with earnings quality
Panel B: Prior studies linking relational aspects of intellectual capital with EM					
Chaney et al. (2011)	19 countries 4,964 firms (1997 – 2001)	Examine how political connections affect EM	<b>Method:</b> Probit regression <b>DV:</b> EM <b>IV:</b> Political ties	n/a	Political connections have a positive (negative) effect on EM (earnings quality)
Al-dhamari & Ku Ismail (2015)	Malaysia 295 observations (2007 – 2011)	Examine how political connections and cash holdings affect EM	<b>Method:</b> OLS; Seemingly unrelated regression <b>DV:</b> EM <b>IV:</b> Political connections; cash holdings	Political extraction perspective	Investors perceive EM to be higher for politically connected firms
Bhandari et al. (2018)	USA 5,611 observations (2002 – 2014)	Examine how CEO's external connections affect EM	<b>Method:</b> <b>DV:</b> EM <b>IV:</b> CEO's external networks	Social network perspective	CEO's networks have a negative effect on EM
Panel C: Prior studies linking R&D related intellectual capital with EM					
Shust (2015)	USA 77,003 observations (1988 - 2010)	Examine how R&D <sup>18</sup> intensity influences EM	<b>Method:</b> OLS; 2SLS <b>DV:</b> EM <b>IV:</b> R&D intensity	n/a	R&D intensity has a positive effect on EM.
Hao & Li (2016)	USA 20,265 observations (1988 - 2006)	Examine how IC affects EM among financially constrained firms	<b>Method:</b> OLS <b>DV:</b> EM <b>IV:</b> Innovation (R&D expenses; Number of patents applied; citations received by a patent); Financial constraint	Manipulation hypothesis; signalling hypothesis	EM has a positive effect on IC in financially constrained firms

<sup>18</sup> Some studies use R&D as a basis for intangibles, since investments in R&D are essential for higher knowledge creation and technological innovations (Canibano *et al.* 2000).

#### **4.5.4 The Indirect Effect of CSR on EM**

In a mediational model “the independent variable is presumed to cause the mediator, and in turn, the mediator causes the dependent variable” (Wu & Zumbo, 2008, p. 369). The literature discussed in the previous sections suggest the possibility of a mediational effect of OC.

Prior studies have established a mediating effect of intellectual capital on the relationship between CSR and financial performance (for example, see Jain et al., 2017; Surroca et al., 2010). However, to the best of my knowledge, the mediating effect of intellectual capital on the relationship between CSR and EM has not been examined to date. Given that intellectual capital encompasses a broad range of components, such as relational capital, human capital and OC, the present study focusses on the mediating role of OC rather than the other components of intellectual capital. The rationale behind this is that OC consists of aspects such as practices, policies and processes that are directly relevant to management. Both CSR and EM also result from direct managerial actions. Thus, it seems reasonable to examine OC in the CSR and EM relationship context rather than other intellectual capital components that may not be direct results of management actions. Prior literature in CSR and EM shows that CSR has a significant influence on EM (for example, see Bozzolan et al., 2015; Cho & Chun, 2015; Choi et al., 2013; Grougiou et al., 2014; Hong & Andersen, 2011; Kim et al., 2012; Litt et al., 2013; Prior et al., 2008; Scholtens & Kang, 2013; Sun et al., 2010). The literature on CSR and intellectual capital appears quite consistent in that CSR has a positive influence on intellectual capital (for example see Altuner et al., 2015; Attig & Cleary, 2015; Cho & Lee, 2017; Hawn & Ioannou, 2016; Massaro et al., 2018; Zhang et al., 2014). The intellectual capital and EM literature broadly suggests that intellectual capital has a positive influence on EM (for example, see Al-dhamari & Ku Ismail, 2015; Chaney et al., 2011; Francis et al., 2008; Malmendier & Tate, 2009; Shust, 2015). Thus, based on prior literature, the conditions of a mediating role of OC seems plausible. As CSR (independent variable) influences OC, and OC in turn influences EM (dependent variable), there is a possibility of a mediating effect of OC on the relationship between CSR and EM. A mediating effect would mean that managers engaged in CSR, may use their firm’s high OC, to either manage more earnings or manage less earnings. From the perspective of the managerial myopia hypothesis, it can be expected that in firms with high OC, managers engaged in CSR may use their firm’s unique resources opportunistically to manage more earnings for short-term goals. In contrast, from the myopia avoidance hypothesis, it can be expected that in firms high OC, managers may use their firm’s unique resources more ethically aimed toward long-term value creation, and constrain EM within their firms. Thus, the following alternate hypotheses are tested:

*H1.4a: Consistent with the managerial myopia hypothesis, there is a positive and significant indirect relationship between CSR and EM, via the mediator OC.*

*H1.4b: Consistent with the myopia avoidance hypothesis, there is a negative and significant indirect relationship between CSR and EM, via the mediator OC.*

## **4.6 The Conceptual Framework**

Figure 4.2 depicts the conceptual framework addressing research objective 1, to examine the direct and indirect relationship between CSR and EM, with OC as a mediator. The figure presents the main relationships tested in this study and illustrates that mediation exists if the independent variable, CSR, affects the mediator, OC, that in turn, affects the dependent variable, EM. Path *a* represents the direct effect of CSR on OC, testing hypothesis H1.2. Consistent with the RBV, the study expects to find a positive and significant direct relationship between CSR and OC, as hypothesised in H1.2. Path *b* represents the direct effect of OC on EM, testing hypothesis H1.3. Consistent with the managerial myopia hypothesis, the study expects to find a positive and significant direct relationship between OC and EM, as hypothesised in H1.3. Path *c* represents the direct relationship between CSR and EM (H1.1a and H1.1b) and Path *c'* represents the indirect relationship between CSR and EM, via the mediator, OC (H1.4a and H1.4b). The indirect (mediation) effect, path *c'*, represents the portion of the relationship between CSR and EM that is mediated by OC. The size of the indirect effect is calculated as the product of paths *a* and *b*. The standard errors of the indirect effect are estimated using the delta method and the bootstrapping technique.

The direct relationship between CSR and EM and the indirect relationship via OC are tested using two contrasting hypotheses. H1.1a and H1.4a expect to find a positive direct CSR-EM relationship and a positive indirect CSR-EM relationship via OC, respectively, consistent the managerial myopia hypothesis. In contrast, H.1b and H1.4b expect to find a negative direct CSR-EM relationship and a negative indirect CSR-EM relationship via OC, respectively, consistent with the myopia avoidance hypothesis.

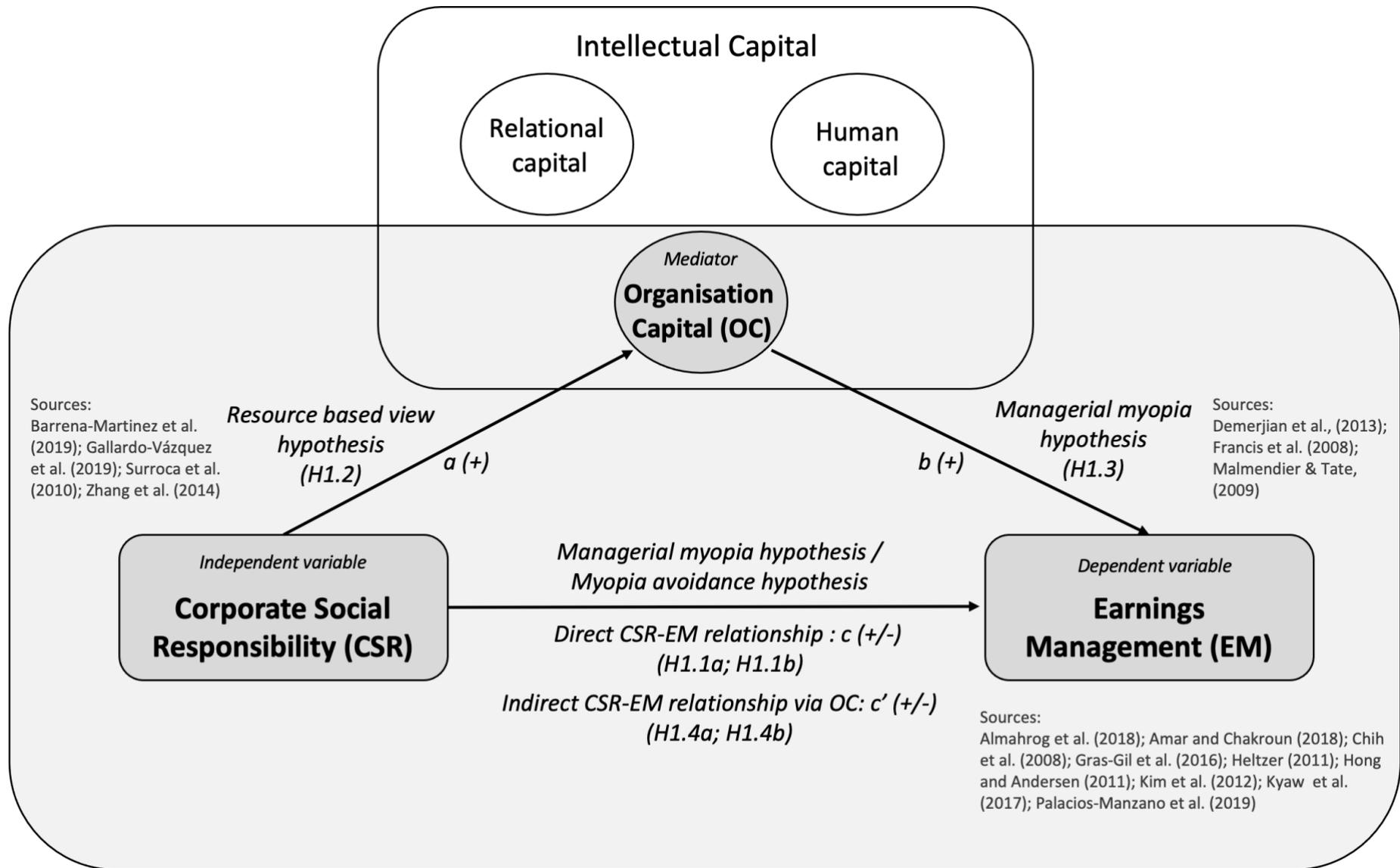


Figure 0.2 The Conceptual Framework

## **4.7 Data and Methodology**

This section discusses the research methodology adopted to test the hypotheses discussed in Section 4.5. The section describes the sample and data for the study, followed by details of the measurements of the dependent variable (EM), the independent variable (CSR), the mediating variable (OC) and the control variables. The section includes a discussion of the research models used in this study and ends with a discussion of the sensitivity test and accounting for endogeneity.

### **4.7.1 Data and Sample**

The sample for this study includes US non-financial firms listed on the Datastream International Database. The sample is selected based on the following criteria: 1) the firm must be publicly listed 2) the firm must have CSR information for at least one of the observed years; 3) the firm must be a non-financial firm (firms with SIC codes between 6000 and 6799 are excluded); 4) Each two-digit Standard Industrial Classification (SIC) code grouping must have a minimum of 8 firms. CSR data for US firms is not available prior to 2002 on Datastream. Therefore, the sample period selected for this study is 2002 – 2017 inclusive.

Panel A of Table 4.3 shows that the initial sample size was 61,952 firm-year observations from 3,872 firms. The exclusion of financial firms (13,584 firm-years), firms with missing financial data over the sample period (800 firm-years) and firms with less than 8 firms in their 2-digit SIC grouping (752 firm-years) yields a final sample size of 46,816 firm-year observations from 2,926 firms. The number of observations in any given regression varies depending on the model-specific data requirements. Table 4.3 Panel B reports the distribution of the sample by the Fama-French 12 industry groups. The sample is unevenly distributed across industries, with the “Other” and “Business Equipment” industries being dominant at 19.45% and 17.19% respectively. Table 4.3 Panel C illustrates the year distribution of the sample. The study uses a balanced sample, with equal number of firm-year observations, 2,926 firm-year observations per year.

The data utilised in this study are mostly financial statement data. All financial statement data have been collected from Datastream’s Worldscope database. Additionally, the study also uses the ESG index from Thomson Reuters database (for measuring the independent variable, CSR, as discussed in Section 4.7.3) and the Consumer Price Index (CPI) from Datastream (for measuring the mediating variable, OC, as discussed in Section 4.7.4). All data are collected for the period 1998 to 2018 inclusive, to enable the use of lagged data, as well as measure EM\_DD (the alternate measure of

EM that is based on a 5-year standard deviation of the accruals quality model, as discussed in the next section). Appendix A1 shows the list of data for this study.

**Table 0.3 Sample Selection and Distribution of the Sample**

<b>Panel A: Data and Sample</b>		
Description	Number of Observations	Number of firms
Initial sample (data available in Datastream)	61,952	3,872
Less:		
Financial firms	(13,584)	(849)
	48,368	3,023
Firms with missing financial data for sample period	(800)	(50)
	47,568	2,973
Firms with less than 8 firms in their 2-digit SIC grouping	(752)	(47)
<b>Total</b>	<b>46,816</b>	<b>2,926</b>
<b>Panel B: Industry Distribution</b>		
Industry name	Number of Observations	% of observations
Consumer nondurables	2,864	6.12
Consumer durables	1,520	3.25
Manufacturing	5,440	11.62
Oil, gas and coal extraction and products	2,848	6.08
Chemicals and allied products	1,856	3.96
Business equipment	8,048	17.19
Telephone and television transmission	2,448	5.23
Utilities	2,608	5.57
Wholesale, retail and some services	4,832	10.32
Healthcare, medical equipment and drugs	5,248	11.21
Other	9,104	19.45
<b>Total</b>	<b>46,816</b>	<b>100%</b>
<b>Panel C: Year distribution</b>		
Year	Number of Observations	% of observations
2002	2,926	6.25
2003	2,926	6.25
2004	2,926	6.25
2005	2,926	6.25
2006	2,926	6.25
2007	2,926	6.25
2008	2,926	6.25
2009	2,926	6.25
2010	2,926	6.25
2011	2,926	6.25
2012	2,926	6.25
2013	2,926	6.25
2014	2,926	6.25
2015	2,926	6.25
2016	2,926	6.25
2017	2,926	6.25
<b>Total</b>	<b>46,816</b>	<b>100</b>

#### 4.7.2 Dependent Variable

The dependent variable for this study is EM (detailed measurement of EM is shown in Section 3.3). As discussed in Chapter 3, I use discretionary accruals as the proxy for EM, using the modified Jones model developed by Dechow et al. (1995), using equation (1) below. Consistent with prior literature, equation (1) is estimated for each year and each two-digit SIC code, for which there are at least eight firm year observations per regression.

$$TA_{it} = \alpha_1 (1/A_{it-1}) + \alpha_2 (\Delta REV_{it} - \Delta REC_{it}) + \alpha_3 PPE_{it} + \varepsilon_{it} \quad (1)$$

where

$TA_{it}$  = total accruals (as measured in equation (2)) in year  $t$  for firm  $i$  scaled by total assets at  $t - 1$ ;

$\Delta REV_{it}$  = change in revenues (revenues in year  $t$  less revenues in year  $t - 1$ ) for firm  $i$  scaled by total assets at  $t - 1$ ;

$\Delta REC_{it}$  = change in accounts receivables (net receivables in year  $t$  less net receivables in year  $t - 1$ ) for firm  $i$  scaled by total assets at  $t - 1$ ;

$PPE_{it}$  = gross property, plant and equipment in year  $t$  for firm  $i$  scaled by total assets at  $t - 1$ ;

$A_{it-1}$  = total assets in year  $t - 1$  for firm  $i$ ;

$\varepsilon_{it}$  = error term in year  $t$  for firm  $i$ .

Following Dechow et al. (1995), the total accruals is measured as shown below:

$$TA_{it} = (\Delta CA_{it} - \Delta CL_{it} - \Delta Cash_{it} - DEP_{it})/A_{it-1} \quad (2)$$

where

$\Delta CA_{it}$  = change in current assets (current assets in year  $t$  less current assets in year  $t - 1$ ) for firm  $i$ ;

$\Delta Cash_{it}$  = change in cash (cash in year  $t$  less cash in year  $t - 1$ ) for firm  $i$ ;

$\Delta CL_{it}$  = change in current liabilities (current liabilities in year  $t$  less current liabilities in year  $t - 1$ ) for firm  $i$ ;

$DEP_{it}$  = depreciation and amortization expenses in year  $t$  for firm  $i$ .

In order to check the sensitivity of the regression analysis, the study utilizes an alternate

specification of EM by measuring accruals quality using the Dechow & Dichev (2002) model. To reduce measurement errors, I follow the modification of the original Dechow & Dichev (2002) model as suggested by Francis et al. (2005) by including change in revenue and property plant and equipment, using equation (3) below:

$$TA_{it} = \beta_0 + \beta_1 CFO_{it-1} + \beta_2 CFO_{it} + \beta_3 CFO_{it+1} + \beta_4 \Delta REV_{it} + \beta_5 PPE_{it} + \varepsilon_{it} \quad (3)$$

where

$TA_{it}$  = total accruals (as measured in equation (2)) in year  $t$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$CFO_{it-1}$  = cash flow from operations in year  $t-1$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$CFO_{it}$  = cash flow from operations in year  $t$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$CFO_{it+1}$  = cash flow from operations in year  $t+1$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$\Delta REV_{it}$  = change in sales revenue (sales revenue in year  $t$  less sales revenue in year  $t - 1$ ) for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$PPE_{it}$  = gross property, plant and equipment in year  $t$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$\varepsilon_{it}$  = error term in year  $t$  for firm  $i$ .

EM\_DD, that is, the alternate measure for EM, is measured as the 5-year standard deviation of the residual  $\varepsilon_{it}$  from equation (3). The 5-year standard deviation is estimated for the years  $t-4$  to  $t$  for each firm-year observation. To enable the calculation of the standard deviation, the equation (3) above is estimated from years 1998 to 2017 (that is, from 5 years prior to the beginning of the sample period). A higher value on EM\_DD, that is the standard deviation from the residual from equation (3), indicates higher EM, whereas a lower residual indicates lower EM and better-quality accruals.

#### 4.7.3 Independent Variable

The independent variable in this study is CSR. The CSR scores used in this study are the Thomson Reuters ESG scores collected from Thomson Reuters ESG index. The ESG scores are firm level data, computed as a weighted average score of the three ESG dimensions, that is, (Environmental score

weight = 34%; Social score weight = 35.5%; and Governance score weight = 30.5%) (Thomson Reuters, 2018)

To test the sensitivity of my analyses, I use two alternate measures of CSR (CSR\_COMB and CSR\_DUM). CSR\_COMB is the ESG combined score from Thomson Reuters, computed as the average of the ESG score and ESG controversies score (Thomson Reuters, 2018). Following Gao & Zhang (2015), I compute CSR\_DUM as a dummy variable that equals 1 if the Datastream ESG score for the firm is greater than the median (by year and two-digit SIC code classification), and 0 otherwise.

#### 4.7.4 Mediating Variable

There is a lack of consensus on a consistent measure of OC (Black & Lynch, 2005; Guthrie et al., 2012; Lev & Radhakrishnan, 2005). While a small number of firms have started to report some intellectual capital components, there is still no consistent framework for such reporting (Guthrie & Petty, 2000). Often investments in OC are listed under an assortment of expense items in the income statement, making it more difficult to track these investments (Tronconi & Marzetti, 2011). Several prior studies measure OC on the basis of selling, general and administrative (SG&A) expenses (for example, see Eisfeldt & Papanikolaou, 2013; Hasan & Cheung, 2018; Lev & Radhakrishnan, 2005). Thus, consistent with prior studies, the present study measures OC (that is, the mediating variable) on the basis of SG&A expenses. According to the USA Generally Accepted Accounting Principles (GAAP), SG&A expenses encompass all non-production related commercial expenses (Eisfeldt & Papanikolaou, 2013). The justification of SG&A in measuring OC lies in the fact that a large portion of the SG&A expenses includes expenses related to labour and information technology, such as wages, training, information technology, etc. (Eisfeldt & Papanikolaou, 2013). Thus, SG&A expense is likely to capture any changes in spending by the firm to enhance OC (Eisfeldt & Papanikolaou, 2013).

Following Eisfeldt & Papanikolaou (2013), I measure the stock of organisation capital each year by accumulating the deflated value of SG&A, as shown below:

$$OC_{it} = OC_{i,t-1} (1 - \delta_0) + \frac{SGA_{i,t}}{cpi_t} \quad (4)$$

Consistent with Eisfeldt & Papanikolaou (2013), I measure the initial stock of organisation capital as shown below:

$$OC_{it0} = \frac{SGA_{i,t}}{g + \delta_0} \quad (5)$$

where

$OC_{i,t}$  = stock of organization capital in year  $t$  for firm  $i$ , divided by total assets (following Eisfeldt and Papanikolaou (2013));

$\delta_0$  = depreciation rate of OC (15%) consistent with prior studies (for example, see

Eisfeldt & Papanikolaou, 2013; Hasan & Cheung, 2018);

$SGA_{i,t}$  = SG&A expense in year  $t$  for firm  $i$ ; Missing values are replaced with 0;

$cpi_t$  = consumer price index (CPI) for year  $t$ , computed as the 12-month average CPI;

$g$  = average real growth of SG&A, which is 12.22% in my estimates. The average real growth of SG&A expense is calculated as:  $\frac{[(\text{Growth rate of SGA between 2001 and 2002}) - 1]}{1 + \text{inflation rate between 2001 and 2002}}$ .

As part of the sensitivity analysis, an alternate measure of OC is used. The alternate measure of the stock of OC (OC\_PT) is based on the perpetual inventory method developed by Peters & Taylor (2017). The main difference between the primary measure of OC and the alternate measure OC\_PT lies in the depreciation rate and the measurement of the stock of OC in the initial year. As Peters & Taylor (2017) note, it is important to vary the depreciation rate for knowledge-based assets to check robustness of the findings to different depreciation rates. Thus, following Peters & Taylor (2017) and Falato et al. (2013), I use a depreciation rate of 20% for OC\_PT measurement. Additionally, I follow the simplistic procedure adopted by Peters & Taylor (2017) and set the initial stock of  $OC\_PT_{i,t_0}$  at 0. Following Peters & Taylor (2017), the alternate measure for OC, that is OC\_PT, is estimated using the following equation.

$$OC\_PT_{i,t} = OC\_PT_{i,t-1}(1 - \delta_0) + SGA_{i,t} \quad (6)$$

where

$OC\_PT_{i,t}$  = stock of organization capital in year  $t$  for firm  $i$ , divided by total assets (following Peters & Taylor, 2017);

$\delta_0$  = depreciation rate of OC (20%), consistent with Peters & Taylor (2017);

$SGA_{i,t}$  = SG&A expense in year  $t$  for firm  $i$ ; Missing values are replaced with 0;

#### **4.7.5 Control Variables**

To avoid potential misspecification problems due to correlated omitted variables in the research models, I use several control variables that influence OC and EM. I control for firm size (SIZE) computed as the natural logarithm of market value of equity. Prior literature shows that larger firms have less EM as a result of being exposed to greater scrutiny (Chih et al., 2008; Kim et al., 2012; Roychowdhury, 2006; Scholtens & Kang, 2013). In terms of the relationship between SIZE and OC, Eisfeldt & Papanikolaou (2013) suggests that smaller firms have higher OC.

I also control for firm performance computed as the adjusted Return on Assets (ROA), that is, the mean ROA for each year and sector (based in the two-digit SIC codes) subtracted from the focal firm's ROA. ROA is measured as the income before extraordinary items, scaled by lagged total assets. (Cho & Chun, 2015) suggest that firms with lower incomes may be more prone to manage earnings upwards in an attempt to attract investors. In contrast, firms with higher financial performance have higher OC (Eisfeldt & Papanikolaou, 2013).

Following Kim et al. (2012), I also control for Leverage (LEV) as an indicator of the firm's ability to meet its financial obligations. Kim et al. (2012) find a positive association between firm leverage and EM. Eisfeldt & Papanikolaou (2013) suggest that high OC firms have lower financial leverage. I measure LEV as the long-term debts divided by total assets.

I also follow Kim et al. (2012), and use Research and Development intensity (RD) as a control variable since RD intensity may influence firm performance. Kim et al. (2012) suggest that firms with higher RD intensity are more likely to manage earnings. Additionally, Eisfeldt & Papanikolaou (2013) suggests that high OC firms have higher R&D expenditure as well as other forms of intangible investments. Following Kim et al. (2012), I measure RD as the proportion of total R&D expenses to net sales.

According to the literature, the control variables discussed above, SIZE, ADJROA, LEV and RD, may be associated with both EM and OC. Therefore, these control variables are common for all equations, that is, equations with EM and OC as the dependent variables. Two other control variables are used PR (Physical Resources) and MB (Market to Book ratio). However, PR is a control variable only for equations with OC as the dependent variable, while MB is a control variable only for equations with EM as the dependent variable.

PR is used as a proxy for Physical Resources, as the literature suggests a negative association

between OC and physical capital investments (Eisfeldt & Papanikolaou, 2013). PR is measured as the difference between total assets and current assets, divided by total assets.

Studies show that growth opportunities impact EM (Roychowdhury, 2006). Following Roychowdhury (2006) and Kim et al. (2012), I use MB as an indicator of growth opportunities, measured as the ratio of the market value of equity to the book value of equity.

Following prior studies, I also control for unobserved heterogeneity by including a range of dummy variables representing year effects and industry effects at two-digit SIC level (for example, see Cheung, 2016). Following Cheung (2016), I do not specify firm-level fixed effects in my regression estimations for two reasons: first, as Guenster et al. (2011) note, using panel fixed effects if CSR is persistent may result in a considerable loss of information; second, my second estimation method, that is, the Maximum Likelihood (ML) model, may involve an incidental parameter problem (that is, the ML estimators are likely to be inconsistent) (see Lancaster, 2000; Neyman & Scott, 1948).

Following prior studies, to minimise the undesirable influence of outliers, the key variables are winsorized at the 1st and 99th percentiles (for example, see Attig & Cleary, 2014; Cheung, 2016; Hasan & Cheung, 2018; Kim et al., 2012). Table 4.4 presents definitions of the key variables.

**Table 0.4 Variable Definition and Measurement**

Variable	Symbol	Definition and Method of measurement
<b>Dependent variable</b>		
Earnings Management	EM	Absolute value of discretionary accruals (that is, unsigned accruals) using the modified Jones model (Dechow et al., 1995): $TA_{it} = \alpha_i [1/A_{it-1}] + \beta_{1i} (\Delta REV_{it} - \Delta REC_{it}) + \beta_{2i} (PPE_{it}) + \varepsilon_{it}$
Earnings Management alternate measure	EM_DD	Accruals quality model following Dechow & Dichev (2002): $TA_{it} = \beta_0 + \beta_{1i} CFO_{it-1} + \beta_{2i} CFO_{it} + \beta_{3i} CFO_{it+1} + \beta_{4i} \Delta REV_{it} + \beta_{5i} PPE_{it} + \varepsilon_{it}$
<b>Independent Variable</b>		
Corporate Social Responsibility	CSR	ESG score from Thomson Reuters ESG index.
Corporate Social Responsibility alternate measure	CSR_COMB	ESG Combined score from Thomson Reuters ESG index.
Corporate Social Responsibility alternate measure	CSR_DUM	Dummy variable equals 1 if the from Thomson Reuters ESG score is greater than the median (by year and industry classification), and 0 otherwise
<b>Mediating Variable</b>		
Organization Capital	OC	Perpetual inventory method developed by Eisfeldt & Papanikolaou (2013): $OC_{i,t} = OC_{i,t-1} (1 - \delta_0) + \frac{SGA_{i,t}}{cpi_t}$
Organization Capital alternate measure	OC_PT	Perpetual inventory method developed by Peters & Taylor (2017): $OC_{PT_{i,t}} = OC_{PT_{i,t-1}} (1 - \delta_0) + SGA_{i,t}$
<b>Control Variables</b>		
Firm Size	SIZE	Natural logarithm of market of market value of equity
Firm Leverage	LEV	Long-term debts divided by total assets
Firm Performance	ADJROA	Industry adjusted earnings before interest and tax scaled by lagged total assets
Research and Development Intensity	RD	Research and Development expense divided by total sales
Physical resources	PR	Capital intensity measured as total assets minus current assets divided by total assets.
Firm Growth opportunities	MB	Market to Book ratio
YEAR	YEAR	Dummy variables to control for the year effect.
INDUSTRY	IND	Dummy variables to control for industry effect (two-digit SIC code).
<b>Instrument variable (for 2SLS)</b>		
Industry median CSR	CSR_M	Following Nguyen et al. (2019), the industry median of CSR (based on Fama-French 48 industry classification) is used an instrument for CSR to address endogeneity.

#### **4.7.6 Research Model - Maximum Likelihood Estimation**

The mediation analysis approach by Baron and Kenny (1986) mediation is a long-standing and commonly utilised method for testing mediation, involving estimation of three ordinary least squares (OLS) regression equations. However, recent studies are trending towards using other estimation methods such as structural equation models, 2SLS models, etc. (Shaver, 2005). One of the constraints of the standard Baron and Kenny (1986) mediation analysis approach is that it is based on the implicit assumption that the error terms in the first two regression equations are uncorrelated (Shaver, 2005). However, any unobservable variable that may affect both the mediator and the dependent variable (that is OC and EM) that is excluded from the OLS regression models will cause the error terms in the equations to be correlated (Shaver, 2005). Consequently, the key assumption of the models may be violated if the error terms are correlated, causing the estimates to be biased and inconsistent (Shaver, 2005).

To address such concerns and check robustness of the findings, I employ structural equation modelling (SEM). I use the Maximum Likelihood (ML) method as a SEM. SEM, also known as simultaneous equation modelling, “is a collection of statistical techniques that allow a set of relationships between one or more independent variables” (Ullman & Bentler, 2003, p. 661). While a number of estimation techniques are available in SEM, the ML model is the most common default technique in most statistical programs, and the most widely used technique under SEM (Ullman & Bentler, 2003). A notable advantage of the ML method is that the method allows for correlations between the error terms across the two equations (Cheung, 2016). The ML method is considered to be a more appropriate technique particularly with large sample sizes. Ullman & Bentler (2003) suggests that for sample sizes greater than 500 observations, the ML method is more appropriate whereas for sample sizes smaller than 500 observations, the Generalized Least Squares technique is more suitable. Since the present study has a large sample size (that is, 46,816 observations), the ML technique is a reasonable choice.

I estimate equations (7) and (8) below, using ML estimation as SEM. Following prior studies, the ML model consists of two equations (for example, see Cheung, 2016). Equation (7) examines how CSR influences OC, while equation (8) examines how the OC influences EM. The presence of CSR in equation (8) allows for the possibility that CSR may have a direct effect on EM, proxied by absolute discretionary accruals. In this model, OC is a channel through which CSR effects EM indirectly.

$$OC_{it} = \alpha_0 + \alpha_1 CSR_{it} + \alpha_2 SIZE_{it} + \alpha_3 LEV_{it} + \alpha_4 ADJROA_{it} + \alpha_5 RD_{it} + \alpha_6 PR_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (7)$$

$$EM_{it} = \beta_0 + \beta_1 OC_{it} + \beta_2 CSR_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 ADJROA_{it} + \beta_6 RD_{it} + \beta_7 MB_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (8)$$

where

$EM_{it}$  = Earnings management in year  $t$  for firm  $i$ , proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995);

$OC_{it}$  = Stock of organization capital in year  $t$  for firm  $i$ , divided by total assets following Eisfeldt & Papanikolaou (2013);

$CSR_{it}$  = The ESG score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ADJROA_{it}$  = Industry-adjusted ROA in year  $t$  for firm  $i$ , measured as the industry median income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$PR_{it}$  = Physical resources in year  $t$  for firm  $i$ , measured as total assets minus current assets, scaled by total assets;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ .

Equations (7) and (8) are estimated as part of the hypotheses testing, to address research objective 1, and research questions 1.1 and 1.2. Both equations utilise dummy variables to control for the effects of year and industry (using two-digit SIC codes). Many studies adopting SEM with ML estimation use robust standard errors in their estimation (for example, see Cheung, 2016). Savalei (2014) explains that using standard error estimates allow the researcher to estimate the variability of the parameter estimates across repeated samples. The standard errors may be incorrect if they are computed with inefficient estimators. In such cases, robust corrections can be used to correct these incorrect standard errors and test statistics (Savalei, 2014). Thus, in order to avoid problems of incorrect standard errors and test statistics, equations (7) and (8) are estimated with robust

standard errors. The analyses follow several steps, as discussed below. A summary of this discussion is provided in Table 4.5.

### ***Step 1: Tests for hypotheses H1.1a and H1.1b***

In step 1 of the research analysis, I address research question 1.1 by examining the direct relationship between CSR and EM. In this step, I test hypotheses H1.1a and H1.1b by estimating equation (8).

The direct effect of CSR on EM is captured by the coefficient  $\beta_2$  in equation (8). If the coefficient  $\beta_2$  is statistically significant, it will address research question 1.1, suggesting that CSR has a significant *direct* effect on EM. A positive and significant value on the coefficient  $\beta_2$  will provide support for hypothesis H1.1a, suggesting a positive direct CSR-EM relationship, consistent with the managerial myopia hypothesis; a negative and significant value on the coefficient  $\beta_2$  will provide support for hypothesis H1.1b, suggesting a negative direct CSR-EM relationship, consistent with the myopia avoidance hypothesis.

### ***Step 2: Tests for hypothesis H1.2***

To address research question 1.2 and examine the indirect relationship between CSR and EM via OC, first I examine the two indirect paths involved in this indirect relationship. Thus, in step 2 of the research analysis, I test the first indirect path, that is, the relationship between CSR and OC. In this step, I test hypothesis H1.2 by estimating equation (7).

The effect of CSR on OC is captured by the coefficient  $\alpha_1$  in equation (7). If the coefficient  $\alpha_1$  is positive and statistically significant, it will provide support for hypothesis H1.2, suggesting a positive relationship between CSR and OC, consistent with the RBV theory.

### ***Step 3: Tests for hypothesis H1.3***

In step 3 of the research analysis, I test the second indirect path, that is, the relationship between OC and EM. In this step, I test hypothesis H1.3 by estimating equation (8).

The effect of OC on EM is captured by the coefficient  $\beta_1$  in equation (7). If the coefficient  $\beta_1$  is positive and statistically significant, it will provide support for hypothesis H1.3, suggesting a positive relationship between OC and EM, consistent with the managerial myopia hypothesis.

#### **Step 4: Tests for hypotheses H1.4a and H1.4b**

In step 4 of the research analysis, I address research question 1.2 by examining the indirect relationship between CSR and EM. In this step, I test hypotheses H1.4a and H1.4b by estimating equations (7) and (8) together using SEM.

I use the SEM method for the mediation analysis, as the SEM method allows the total effect of CSR on EM to be decomposed into direct and indirect effects. The direct effect of CSR on EM, as stated earlier, is the CSR coefficient ( $\beta_2$ ) from equation (8), while the indirect effect of CSR on EM is the product of the CSR coefficient ( $\alpha_1$ ) from equation (7) and the OC coefficient ( $\beta_1$ ) from equation (8) (that is,  $\alpha_1\beta_1$ ). While the product of  $\alpha_1\beta_1$  provides the magnitude of the indirect relationship, nevertheless it is essential to test for the statistical significance of the indirect relationship (Cheung, 2016). As noted by Cheung (2016), even if the coefficients of both  $\alpha_1$  and  $\beta_1$  are statistically significant when tested independently, it is still possible for the coefficients to be statistically insignificant when test jointly. Given that the coefficients  $\alpha_1$  and  $\beta_1$  are random variables, estimating the standard error of the indirect effect may be appropriate (Cheung, 2016). A commonly used method of estimating the standard error of the indirect effect, as proposed by Goodman (1960) is:

$$s(\beta_1\alpha_1) = \sqrt{\alpha_1^2 s^2_{\beta_1} + \beta_1^2 s^2_{\alpha_1} - s^2_{\alpha_1} s^2_{\beta_1}} \quad (9)$$

The standard error estimation proposed by Goodman (1960) is based on the assumption that the error terms are normally distributed. However, the multivariate delta method advised by Sobel (1982, 1986) provides estimates with the least biasedness (Cheung, 2016). Thus, I follow Cheung (2016) in using the multivariate delta method advised by Sobel (1982, 1986) to test the statistical significance of the indirect effect. The multivariate delta method adopts a first-order Taylor approximation to estimate the standard errors of the transformed random variables,  $\alpha_1$  and  $\beta_1$  (Cheung, 2016).

The delta method assumes that the indirect effect, represented by the product of the coefficients ( $\alpha_1\beta_1$ ), is normally distributed when the sample size is large (Shrout & Bolger, 2002). However, the delta method may not be reliable if the normality assumption is questionable (Cheung, 2016). Even if the distribution of the variables  $\alpha_1$  and  $\beta_1$  are normal, this does not substantiate that the product ( $\alpha_1\beta_1$ ) will also be normally distributed (Cheung, 2016). Prior studies have found the distribution of the product ( $\alpha_1\beta_1$ ) to be positively skewed for small sample sizes (Shrout & Bolger, 2002). Although

the present study uses a large sample size of 46,816 firm-year observations, I address the potential issues related to the delta method by adopting the bootstrapping technique, consistent with prior studies (for example, see Cheung, 2016; Shrout & Bolger, 2002) in addition to the delta method to test the statistical significance of the indirect effect.

The bootstrapping method is a resampling technique that is commonly used when the assumptions for other statistical methods are violated, such as the case of indirect effect not being normally distributed (MacKinnon et al., 2004; Shrout & Bolger, 2002). The bootstrapping process involves repeated sampling with replacement of the data (Brooks, 2014). This resampling process may be considered as taking a sample from a sample, as the original sample is treated as a population from which samples are drawn (Brooks, 2014). The original sample of N units is resampled with replacement, and for each resample, the test statistic (that is, the indirect effect for the present study) is estimated (Brooks, 2014; Cheung, 2016). This process is repeated k times before the test statistic estimates are sorted from low to high. The sorted distribution provides the upper and lower bounds of the confidence interval (Cheung, 2016). Following Cheung (2016), I set k = 1,000. The 95% confidence interval is reported for the indirect effect. For interpreting the significance of the indirect effect, I follow Cheung (2016), in that if zero lies within the confidence interval, the indirect effect is not significant.

If the indirect effect coefficient ( $\alpha_1\beta_1$ ) is statistically significant, it will address research question 1.2, suggesting that CSR has a significant *indirect* effect on EM. A positive and significant value on the coefficient  $\alpha_1\beta_1$  will provide support for hypothesis H1.4a, suggesting a positive indirect CSR-EM relationship via OC, consistent with the managerial myopia hypothesis; a negative and significant value on the coefficient  $\alpha_1\beta_1$  will provide support for hypothesis H1.4b, suggesting a negative indirect CSR-EM relationship, consistent with the myopia avoidance hypothesis.

**Table 0.5 Summary of Research Questions and Hypotheses Testing**

Research Question	Hypothesis	Theory	Expected sign
1.1. Does CSR have a significant <i>direct</i> effect on EM?	H1.1a: Consistent with the managerial myopia hypothesis, there is a positive and significant <i>direct</i> relationship between CSR and EM.	Managerial myopia hypothesis	$\beta_2 = +$ (Equation 8)
	H1.1b: Consistent with the myopia avoidance hypothesis, there is a negative and significant <i>direct</i> relationship between CSR and EM.	Myopia avoidance hypothesis	$\beta_2 = -$ (Equation 8)
1.2. Does CSR have a significant <i>indirect</i> effect on EM via OC?	H1.2: Consistent with the RBV theory, there is a positive and significant relationship between CSR and OC.	RBV theory	$\alpha_1 = +$ (Equation 7)
	H1.3: Consistent with the managerial myopia hypothesis, there is a positive and significant relationship between OC and EM.	Managerial myopia hypothesis	$\beta_1 = +$ (Equation 8)
	H1.4a: Consistent to the managerial myopia hypothesis, there is a positive and significant <i>indirect</i> relationship between CSR and EM, via the mediator OC.	Managerial myopia hypothesis	$\alpha_1\beta_1 = +$ (Equations 7 and 8)
	H1.4b: Consistent with the myopia avoidance hypothesis, there is a negative and significant <i>indirect</i> relationship between CSR and EM, via the mediator OC.	Myopia avoidance hypothesis	$\alpha_1\beta_1 = -$ (Equations 7 and 8)

#### 4.7.7 Sensitivity Analysis

To test the sensitivity of the ML specification model with robust standard errors, I estimate the ML specification of equations (7a) and (8a), with robust standard errors. Equations (7a) and (8a) are re-estimations of equations (7) and (8) respectively, with the main variables (EM, CSR and OC) replaced with their alternate specifications (EM\_DD, CSR\_COMB, OC\_PT respectively).

$$OC\_PT_{it} = \alpha_0 + \alpha_1 CSR\_COMB_{it} + \alpha_2 SIZE_{it} + \alpha_3 LEV_{it} + \alpha_4 ADJROA_{it} + \alpha_5 RD_{it} + \alpha_6 PR_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (7a)$$

$$EM\_DD_{it} = \beta_0 + \beta_1 OC\_PT_{it} + \beta_2 CSR\_COMB_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 ADJROA_{it} + \beta_6 RD_{it} + \beta_7 MB_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (8a)$$

where

$EM\_DD_{it}$  = Earnings management in year  $t$  for firm  $i$ , proxied by accruals quality model by Dechow & Dichev (2002);

$OC\_PT_{it}$  = Alternate measure for Stock of organization capital in year  $t$  for firm  $i$ , divided by total assets following Peters & Taylor (2017);

$CSR\_COMB_{it}$  = The ESG combined score from Datastream in year  $t$  for firm  $i$ ;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ADJROA_{it}$  = Industry-adjusted ROA in year  $t$  for firm  $i$ , measured as the industry median of income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$PR_{it}$  = Physical resources in year  $t$  for firm  $i$ , measured as total assets minus current assets, scaled by total assets;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ .

Since the study uses 2 alternate measures for CSR, equations (7b) and (8b) are estimates using ML specifications, with robust standard errors. Equations (7b) and (8b) are also re-estimations of equations (7) and (8) respectively, with the main variables (EM, CSR and OC) replaced with their alternate specifications (EM\_DD, CSR\_DUM, OC\_PT respectively).

$$OC\_PT_{it} = \alpha_0 + \alpha_1 CSR\_DUM_{it} + \alpha_2 SIZE_{it} + \alpha_3 LEV_{it} + \alpha_4 ADJROA_{it} + \alpha_5 RD_{it} + \alpha_6 PR_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (7b)$$

$$EM\_DD_{it} = \beta_0 + \beta_1 OC\_PT_{it} + \beta_2 CSR\_DUM_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 ADJROA_{it} + \beta_6 RD_{it} + \beta_7 MB_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (8b)$$

where

$EM\_DD_{it}$  = Earnings management in year  $t$  for firm  $i$ , proxied by accruals quality model by Dechow & Dichev (2002);

$OC\_PT_{it}$  = Alternate measure for Stock of organization capital in year  $t$  for firm  $i$ , divided by total assets following Peters & Taylor (2017);

$CSR\_DUM_{it}$  = Dummy variable taking the value of 1 if the CSR score of the firm is greater median CSR (is based on each year and industry), and 0 otherwise.

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ADJROA_{it}$  = Industry-adjusted ROA in year  $t$  for firm  $i$ , measured as the industry median of income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$PR_{it}$  = Physical resources in year  $t$  for firm  $i$ , measured as total assets minus current assets, scaled by total assets;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ .

#### **4.7.8 Accounting for Endogeneity – 2SLS Estimation**

Prior studies suggest CSR may be endogenous (for example, see Almahrog et al., 2018; Bozzolan et al., 2015; Cheung, 2016; Choi et al., 2013; Choi et al., 2018; Gao & Zhang, 2015; Gong & Ho, 2018; Grougiou et al., 2014; Liu et al., 2017; Martínez-Ferrero et al., 2015; Prior et al., 2008). Endogeneity occurs when an independent variable is correlated with the error term (Bhandari et al., 2018). Such correlation may cause the estimates to be inconsistent and biased (Bhandari et al., 2018). There may be two sources of endogeneity issues in CSR engagement. First is a selection bias, arising from the possibility that CSR engagement is likely to be influenced by management policies and other

internal factors, as opposed to being random decisions (Choi et al., 2018). These unobserved variables that may affect CSR but are excluded from the regression models may be correlated with the error terms in equations (7), and (8) (Cheung, 2016; Choi et al., 2018). The second source of endogeneity may arise from a simultaneity problem (Choi et al., 2018). As evident from prior studies, CSR and EM may affect each other (for example, see Choi et al., 2013; Choi et al., 2018; Choi & Pae, 2011; Grougiou et al., 2014; Martínez-Ferrero et al., 2015). Furthermore, both CSR and EM have common determinants in the form of firm characteristics, such as, firm size, leverage, market to book ratio, return on assets, etc. (Bozzolan et al., 2015; Choi et al., 2018). As such, regression estimations with either EM or CSR are subject to endogeneity (Choi et al., 2018).

Some prior studies have critiqued the approach of using lagged variables to address endogeneity (for example, see Bellemare et al., 2017; Reed, 2015). Reed, (2015) explains that the approach using lagged variables does not resolve the simultaneity issue. On the contrary, this approach may worsen the problem by causing serial correlation (Reed, 2015). Bellemare et al., 2017 express concern about the lack of a theoretical explanation behind using lagged independent variables to address endogeneity. However, several prior studies advocate the use the 2SLS estimation technique with instrumental variable(s) to address endogeneity (for example, see Bhandari et al., 2018; Bozzolan et al., 2015; Grougiou et al., 2014). To address endogeneity issues where the independent variable is correlated with the error term, 2SLS estimation with instrumental variables allow for consistent estimation (Bhandari et al., 2018).

Thus, to address endogeneity, I use a 2SLS approach to re-estimate equations (7) and (8). Shaver (2005) suggests that for a system of equations estimated using the 2SLS technique, at least one explanatory variable from the first equation should be eliminated from the second equation. Consistent with this, I drop LEV from equation (8). This choice is based on the results obtained from estimating the original equation (8) using ML estimation method, discussed in greater detail in Section 4.8.4. The results show that LEV is the only control variable that does not have a statistically significant relationship with EM (that is, the dependent variable from equation 8). All other control variables (namely, SIZE, ADJROA, RD and MB) have statistically significant relationships with EM at the 1% level of significance. Since the 2SLS estimation requires me to drop one variable, I drop the variable that does not have a statistically significant relationship with the dependent variable.

The first stage in the 2SLS estimation technique involves estimating the reduced form equation using OLS, and saving the fitted values for the dependent variables (Brooks, 2014). In the first stage, the

endogenous variable is regressed against all other exogenous variables and the instrument (Fodio et al., 2013). An instrumental variable is a variable that is correlated with the endogenous variable but not with the error term (Shaver, 2005). Since the error term and the instrument are uncorrelated, this estimation technique eliminates the problems concerned with simple OLS estimation as discussed above (Shaver, 2005). Following, Nguyen et al. (2019), I use CSR\_M as an instrument. CSR\_M is the median of CSR calculated for each Fama-French 48 industry grouping. Nguyen et al. (2019) explain that a suitable instrument should be correlated with CSR, but not with the dependent variable EM. Thus, following Nguyen et al. (2019), the choice of instrument in the present study is based on the literature that suggests that firm-level CSR is closely linked to the industry norm that is captured by the industry median CSR (for example, see Harjoto & Jo (2015)). However, the industry CSR norm is unlikely to be linked to firm-level EM (the dependent variable).

In the first stage of the 2SLS estimation, I estimate the following equations, using the endogenous variable (that is, CSR) as the dependent variable, regressed against the instrumental variable (CSR\_M) and all other control variables:

$$CSR_{it} = \alpha_0 + \alpha_1 CSR\_M_{it} + \alpha_2 SIZE_{it} + \alpha_3 LEV_{it} + \alpha_4 ADJROA_{it} + \alpha_5 RD_{it} + \beta_6 PR_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (9a)$$

$$CSR_{it} = \beta_0 + \beta_1 CSR\_M_{it} + \beta_2 OC_{it} + \beta_3 SIZE_{it} + \beta_4 ADJROA_{it} + \beta_5 RD_{it} + \beta_6 MB_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (10a)$$

where

$CSR_{it}$  = The ESG combined score from Datastream in year  $t$  for firm  $i$ ;

$CSR\_M$  = Median of CSR calculated for each Fama-French 48 industry grouping.

$OC_{it}$  = Stock of organization capital in year  $t$  for firm  $i$ , divided by total assets;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ADJROA_{it}$  = Industry-adjusted ROA in year  $t$  for firm  $i$ , measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from firm  $i$ ;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$PR_{it}$  = Physical resources in year  $t$  for firm  $i$ , measured as total assets minus current assets, scaled by total assets;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ .

In stage 2 of the 2SLS estimation technique, the endogenous variable (that is CSR) is replaced with the fitted value of CSR obtained from the stage 1 estimations of equations (9a) and (10a) (see Brooks, 2014). Thus, in stage 2, I estimate the following regression models:

$$OC_{it} = \alpha_0 + \alpha_1 CSR^{9a}_{it} + \alpha_2 SIZE_{it} + \alpha_3 LEV_{it} + \alpha_4 ADJROA_{it} + \alpha_5 RD_{it} + \alpha_6 PR_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (9b)$$

where

$OC_{it}$  = Stock of organization capital in year  $t$  for firm  $i$ , divided by total assets;

$CSR^{9a}_{it}$  = the estimate obtained from equation (9a) now incorporated as a predictor;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ADJROAA_{it}$  = Industry-adjusted ROA in year  $t$  for firm  $i$ , measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from firm  $i$ ;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$PR_{it}$  = Physical resources in year  $t$  for firm  $i$ , measured as total assets minus current assets, scaled by total assets.

$$EM_{it} = \beta_0 + \beta_1 OC_{it} + \beta_2 CSR^{9a}_{it} + \beta_3 SIZE_{it} + \beta_4 ADJROA_{it} + \beta_5 RD_{it} + \beta_6 MB_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (10b)$$

where

$EM_{it}$  = Earnings management in year  $t$  for firm  $i$ , proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995);

$OC_{it}$  = Stock of organization capital in year  $t$  for firm  $i$ , divided by total assets

$CSR^{9a}_{it}$  = the estimate obtained from equation (9a) now incorporated as a predictor;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$ADJROA_{it}$  = Industry-adjusted ROA in year  $t$  for firm  $i$ , measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from firm  $i$ ;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ .

To test the statistical significance of the indirect effect from the 2SLS estimation, I use the bootstrap technique, with 1,000 replications, as discussed earlier.

## 4.8 Results and Findings

### 4.8.1 Descriptive Statistics

Table 4.6 presents the descriptive statistics for the key variables in the sample. The table shows the number of observations, mean, median, maximum and minimum values and standard deviation of the variables. The mean value for the dependent variable, EM is 0.0955. My measure of EM is based on the absolute value of discretionary accruals following the discretionary accruals model by (Dechow et al., 1995). Based on a randomly selected sample of 1,000 firm-year observations between 1950 and 1991, the original study, Dechow et al. (1995) report the mean EM to be 0.002, based on signed discretionary accruals. The mean EM in the present study is different from that reported by Dechow et al. (1995) for three main reasons – 1) unlike Dechow et al. (1995), I use the absolute value of discretionary accruals (not signed discretionary accruals); 2) the sample size in the present study (that is, 46,816 observations in the full sample, and 27,208 observations with EM) is much larger than the one used by Dechow et al. (1995) (1,000 observations); 3) the sample period observed in the present study (the years 2012 to 2017) is significantly different from the period observed by Dechow et al. (1995) (the years 1950 to 1991). The mean value for EM in the present study (0.0955) falls within the range observed within prior studies. Among prior studies based on US samples, the mean value of EM, based on absolute discretionary accruals, range from 0.04 (Litt et al., 2013) to 0.2000 (Kim et al., 2012). The sample size and sample period observed in the present study is different from both Litt et al. (2013) and Kim et al. (2012). While Litt et al. (2013) use a sample of 2,095 observations between the period 2004 and 2006 inclusive, Kim et al. (2012) use a sample of 18,160 observations between the period 1991 and 2009 inclusive. Furthermore, both Litt et al. (2013) and Kim et al. (2012) use the performance adjusted modified Jones model as suggested by Kothari et al. (2005), while I use the original modification of the Jones model as suggested by Dechow et al. (1995). All these factors may have contributed to the mean value of my EM measure

being different from prior studies. However, this is not of concern, as the mean EM in this study falls within the range of mean EM observed among previous studies. Other recent studies, based on US samples, also report mean discretionary accruals-based EM, within the range described above. For example, Guillamón-Saorín et al. (2018) and Buchholz et al. (2020) report mean values of discretionary accruals to be 0.0410 and 0.1500 respectively.

The alternate EM specification, EM\_DD, has a mean value at 0.4717. EM\_DD is measured as the standard deviation of the residual of the accruals quality model by Dechow & Dichev (2002). Dechow & Dichev (2002) report the mean value of EM\_DD to be 0.028, based on 15,234 firm-year observations between 1987 and 1999. As discussed above, the difference in the mean values of EM\_DD reported in the present study may be attributed to the fact that the present study uses a larger sample (that is, 46,816 observations in the full sample, and 27,383 observations with EM\_DD) and observes a different sample period (that is, the years 2012 to 2017) than that observed by Dechow & Dichev (2002). It should be noted that although the sample period for the present study is 2012 to 2017, the EM\_DD measure is based on data from 2009 to 2017, since EM\_DD is based on a 5-year standard deviation of the residual. For similar reasons as described above, the mean EM\_DD reported by Hong & Andersen (2011), 0.0400, is also quite different to the present study. Hong & Andersen (2011) uses a sample of 10,193 firm-year observations from 1995 to 2005 inclusive. However, the mean EM\_DD reported in the present study is consistent with another recent study, Herly et al. (2020) that reports a mean EM\_DD of 0.4741 among firms with accounting restatements,<sup>19</sup> and a mean EM\_DD of 0.4615 among firms with no accounting restatements, based on a sample of 4,187 firms between 2000 and 2014.

The independent variable, CSR, has a mean value of 0.5264, suggesting that on average firms have above 53% on their overall CSR score. The alternate specification of the independent variable, CSR\_COMB, has a mean value of 0.4517, suggesting that on average firms have 45% CSR score when controversies are deducted. The second alternate specification of the independent variable, CSR\_DUM has a mean value of 0.2178, suggesting that on average 22% of the firms have CSR scores higher than the median CSR score for the industry and year, while the remaining 78% firms have CSR score lower than the median. It should be noted that the mean value of CSR largely depends on the CSR measure used, and particularly the data source used to obtain CSR scores. Thus, several prior studies report different CSR mean values. For example, Kim et al. (2012) and Gao & Zhang

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<sup>19</sup> Accounting restatement is defined as a correction of errors or inappropriate information in the financial statements, resulting from unintentional mistake, fraud, or a misapplication of the accounting standards (Herly *et al.*, 2020)

(2015), using the Kinder, Lydenberg, and Domini (KLD) database, report the CSR mean to be -0.0550, and 0.0590 respectively. In contrast, Hussain et al. (2018) report mean values of each of the CSR dimensions, that is, the economic, social and environmental dimensions, as 0.4120, 0.4680 and 0.4530 respectively, using a CSR index drawn from information in annual reports/CSR reports from 100 US firms, and developing an index based on Global Reporting Initiatives (GRI) - G3 guidelines. Although my mean values of CSR and CSR\_COMB are quite close to the individual CSR dimensions means reported by Hussain et al. (2018), I use Thomson Reuters ESG index database to obtain CSR scores. The mean CSR and CSR\_COMB in the present study is consistent with Drempevic et al. (2019), who obtained their CSR scores from the Thomson Reuters database. Using a sample of 27,545 firm-year observations from US firms, Drempevic et al. (2019) report the mean CSR to be 0.5470.

The mean value for the mediating variable, OC, is 0.1884. OC is measured following the approach suggested by Eisfeldt & Papanikolaou (2013). The mean OC in the present study is consistent with prior studies using the same approach to measure OC. For example, using a sample of 143,052 firm-year observations from US firms, Marwick et al. (2020) report mean OC to be 0.2000. Consistently, using a sample of 145,979 firm-year observations from 40 countries, Habib et al. (2020b) report a mean OC of 0.2500. The alternate specification of the mediator, OC\_PT, has a mean value of 1.3110. This is close to the mean OC of 1.7500 reported by Hasan & Cheung (2018).

As for the control variables, the mean value for SIZE is 13.7756, the mean for LEV is 0.2133, the mean for ADJROA and RD are -0.0323 and 0.1544 respectively, and the mean for PR and MB are 0.5671 and 3.3062 respectively.

**Table 0.6 Descriptive Statistics**

The table reports the summary statistics (number of observations, mean, median, minimum and maximum values, and the standard deviation) of the key variables for the period 2002 to 2017. EM and EM\_DD are the two alternate measures of the dependent variable. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). EM\_DD refers to alternate earnings management specification, proxied by accruals quality model by Dechow & Dichev (2002). CSR, CSR\_COMB and CSR\_DUM are the alternate measures of the independent variable. CSR is the ESG score obtained from Thomson Reuters, CSR\_COMB is the ESG combined score from Thomson Reuters, and CSR\_DUM OC is dummy variable taking the value of 1 if the CSR score of the firm is greater median CSR (is based on each year and industry), and 0 otherwise. OC and OC\_PT are the two alternate measures for the mediator, organisation capital. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013). OC\_PT is the alternate measure of organisational capital following Peters & Taylor (2017). SIZE, LEV, ADJROA, RD PR and MB are the control variables. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio.

**Panel A: Full sample - Descriptive Statistics**

	N	Mean	Median	Minimum	Maximum	Std. Dev.
<i>Dependent variables</i>						
EM	27,208	0.0955	0.0461	0.0006	1.0768	0.1566
EM_DD	27,383	0.4717	0.0619	0.0000	13.5023	1.7895
<i>Independent variables</i>						
CSR	20,784	0.5264	0.5203	0.0000	0.9756	0.1757
CSR_COMB	20,784	0.4517	0.4261	0.1672	0.8378	0.1551
CSR_DUM	46,817	0.2178	0.0000	0.0000	1.0000	0.4128
<i>Mediating variables</i>						
OC	37,651	0.1884	0.0490	0.0000	1.9364	0.3378
OC_PT	37,651	1.3110	0.7013	0.0014	19.3431	2.4410
<i>Control variables</i>						
SIZE	35,428	13.7756	13.7889	8.9270	17.9589	1.7848
LEV	37,423	0.2133	0.1857	0.0000	0.9515	0.1971
ADJROA	46,816	-0.0323	-0.0160	-0.9742	0.2976	0.1575
RD	37,566	0.1544	0.0000	0.0000	6.6791	0.7723
PR	37,147	0.5671	0.5893	0.0228	0.9631	0.2392
MB	33,218	3.3062	2.3300	-16.6100	33.1800	5.2143

#### **4.8.2 Correlation**

Table 4.7 illustrates the Pearson's correlation matrix for the main variables. The main dependent variable, EM, is negatively and significantly correlated with CSR (-0.1049), CSR\_COMB (-0.0513), and CSR\_DUM (-0.1179) at the 1% level of significance. The alternate specification of the dependent variable, EM\_DD, is also negatively and significantly correlated with CSR (-0.0448) at the 1% level of significance, and with CSR\_DUM (-0.0111) at the 10% level of significance, but not significantly correlated with CSR\_COMB. The mediating variable, OC, has a positive and significant correlation with EM (0.0269), but a negative and significant correlation EM\_DD (-0.0728) at the 1% level of significance. OC is negatively and significantly correlated with CSR\_DUM (-0.1019) at the 1% level of significance, and with CSR\_COMB (-0.0137) at the 10% level of significance, but not significantly correlated with CSR. The alternate specification of the mediator, OC\_PT, has a positive and significant correlation with EM (0.1240) at the 1% level of significance, but no significant correlation with EM\_DD. OC\_PT has negative and significant correlations with all three measures of the independent variable, that is CSR (-0.0422), CSR\_COMB (-0.0330) and CSR\_DUM (-0.1290), at the 1% level of significance.

The control variable SIZE is negatively and significantly correlated with EM (-0.2532), EM\_DD (-0.0839), OC (-0.2135) and OC\_PT (-0.3979) at the 1% level of significance. SIZE has positive and significant correlations with CSR (0.4961), CSR\_COMB (0.1874) and CSR\_DUM (0.5059) at the 1% level of significance. The control variable LEV has negative and significant correlations with EM (-0.3364), EM\_DD (-0.0701), OC (-0.0543) and OC\_PT (-0.2028) at the 1% level of significance. LEV has positive and significant correlations with CSR (0.0988), CSR\_COMB (0.0717) and CSR\_DUM (0.1228) at the 1% level of significance. ADJROA is positively and significantly correlated with EM (0.2883), EM\_DD (0.1199), OC (0.0636) and OC\_PT (0.1279) at the 1% level of significance. ADJROA is negatively and significantly correlated with CSR (-0.0631), CSR\_COMB (-0.0255) and CSR\_DUM (-0.0609) at the 1% level of significance. RD has strong negative and significant correlations with EM (-0.1174), EM\_DD (-0.0588), OC (-0.1177) and OC\_PT (-0.1410) at the 1% level of significance. RD is also negatively and significantly correlated with CSR (-0.0518) and CSR\_COMB (-0.0400), but positively and significantly correlated with CSR\_DUM (0.0258) at the 1% level of significance. The control variable, PR, is negatively and significantly correlated with EM (-0.2781), EM\_DD (-0.1339), OC (-0.2135) and OC\_PT (-0.2763) at the 1% level of significance. PR has positive and significant correlations with CSR (0.0768), CSR\_COMB (0.0282) and CSR\_DUM (0.1230) at the 1% level of significance. MB has positive and significant correlations with EM (0.0852), EM\_DD (0.0182), OC

(0.0241) and OC\_PT (0.0487) at the 1% level of significance. MB has a negative and significant correlation with CSR (-0.0182) at the 5% level of significance, but no significant correlations with CSR\_COMB and CSR\_DUM.

**Table 0.7 Correlation Matrix**

The table presents the Pearson's correlation matrix between the key variables. EM and EM\_DD are the two alternate measures of the dependent variable. EM refers to earnings management, proxied by Discretionary accruals using the modified Jones model by Dechow et al. (1995). EM\_DD refers to alternate earnings management specification, proxied by accruals quality model by Dechow & Dichev (2002). CSR, CSR\_COMB and CSR\_DUM are the alternate measures of the independent variable. CSR is the ESG score obtained from Thomson Reuters, CSR\_COMB is the ESG combined score from Thomson Reuters, and CSR\_DUM is dummy variable taking the value of 1 if the CSR score of the firm is greater median CSR (is based on each year and industry), and 0 otherwise. OC and OC\_PT are the two alternate measures for the mediator, organisation capital. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Einfeldt & Papanikolaou (2013). OC\_PT is the alternate measure of organisational capital following Peters & Taylor (2017). SIZE, LEV, ADJROA, RD PR and MB are the control variables. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 EM	1												
2 EM_DD	0.1966***	1											
3 CSR	-0.1049***	-0.0448***	1										
4 CSR_COMB	-0.0513***	-0.0093	0.7140***	1									
5 CSR_DUM	-0.1179***	-0.0111*	0.7913***	0.5854***	1								
6 OC	0.0269***	-0.0728***	-0.0048	-0.0137*	-0.1019***	1							
7 OC_PT	0.1240***	-0.0061	-0.0422***	-0.0330***	-0.1290***	0.4143***	1						
8 SIZE	-0.2532***	-0.0839***	0.4961***	0.1874***	0.5059***	-0.2135***	-0.3979***	1					
9 LEV	-0.3364***	-0.0701***	0.0988***	0.0717***	0.1228***	-0.0543***	-0.2028***	0.2912***	1				
10 ADJROA	0.2883***	0.1199***	-0.0631***	-0.0255***	-0.0609***	0.0636***	0.1279***	-0.2180***	-0.4962***	1			
11 RD	-0.1174***	-0.0588***	-0.0518***	-0.0400***	0.0258***	-0.1177***	-0.1410***	0.0934***	-0.0065	-0.0900***	1		
12 PR	-0.2781***	-0.1339***	0.0768***	0.0282***	0.1230***	-0.2135***	-0.2763***	0.3656***	0.2079***	-0.2658***	0.4047***	1	
13 MB	0.0852***	0.0182***	-0.0182**	-0.0066	0.0074	0.0241***	0.0487***	-0.2897***	0.0132**	0.0663***	-0.0780***	-0.1506***	1

\*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively

### **4.8.3 Test of Multicollinearity**

A strong linear relationship between two or more independent variables gives rise to multicollinearity problems. Multicollinearity issues may arise if the independent variables have a correlation coefficient higher than 0.80 (Gujarati, 2009). The variation inflation factor (VIF) may detect possible multicollinearity in the research models. As a general rule of thumb a VIF value of 10 or above indicates the existence of multicollinearity (Takezawa, 2014). The variables used in the present study do not appear to suffer from multicollinearity problems as evident through variation inflation factors (VIF) values being far below the threshold of 10 for all regression models. Table 4.8 shows the results of the VIF analysis of all regression models used in the present study.

Columns (1) and (2) of Table 4.8 report the VIF results of equations (7) and (8) respectively. Equation (7) has a mean VIF of 1.88 (the values ranging from 1.16 to 5.16); and equation (8) has a mean VIF of 1.87 (the values ranging from 1.13 to 5.53). Columns (3) and (4) report the VIF results of equations (7a) and (8a) respectively. Equation (7a) has a mean VIF of 1.87 (the values ranging from 1.08 to 5.17); and equation (8a) has a mean VIF of 1.84 (the values ranging from 1.09 to 5.52); Columns (5) and (6) report the VIF results of equations (7b) and (8b) respectively. Equation (7b) has a mean VIF of 1.76 (the values ranging from 1.11 to 4.4); and equation (8b) has a mean VIF of 1.71 (the values ranging from 1.08 to 4.84).

**Table 0.8 Multicollinearity Test Results**

The table reports the results of the multicollinearity tests based on estimating the variation inflation factor (VIF). Columns (1) and (2) present the VIF results for equations (7) and (8) respectively; Columns (3) and (4) present the VIF results for equations (7a) and (8a) respectively; and Columns (5) and (6) present the VIF results for equations (7b) and (8b) respectively. OC, the mediator, is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013). OC\_PT is the alternate measure of organisational capital following Peters & Taylor (2017). CSR is the ESG score from Thomson Reuters. CSR\_COMB and CSR\_DUM, are the alternate specifications for the main independent variable. CSR\_COMB is the ESG combined score from Thomson Reuters, CSR\_DUM is dummy variable taking the value of 1 if the CSR score of the firm is greater median CSR (is based on each year and industry), and 0 otherwise. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. Year dummies include a set of dummy variables to capture year effects. Industry dummies include a set of dummy variables to capture industry effects, based on 2-digit SIC codes.

	Variation Inflation factor (VIF)					
	(1) Equation (7)	(2) Equation (8)	(3) Equation (7a)	(4) Equation (8a)	(5) Equation (7b)	(6) Equation (8b)
<i>Independent variables</i>						
OC		2.02				
OC_PT				1.43		1.33
CSR	1.45	1.56				
CSR_COMB			1.08	1.09		
CSR_DUM					1.43	1.5
LAGCSR						
SIZE	1.91	2.18	1.49	1.67	1.83	2.15
LEV	1.43	1.32	1.42	1.37	1.42	1.34
ADJROA	1.34	1.4	1.34	1.42	1.45	1.56
RD	1.54	1.57	1.53	1.56	1.59	1.67
MB		1.36		1.32		1.27
PR	2.1		2.08		2.19	
<i>Year dummies</i>						
Dum 1 (2003)	1.28	1.57	1.28	1.18	1.8	1.42
Dum 2 (2004)	1.29	1.42	1.28	1.18	1.82	1.42
Dum 3 (2005)	1.4	1.43	1.39	1.24	1.84	1.44
Dum 4 (2006)	1.45	1.44	1.45	1.29	1.85	1.47
Dum 5 (2007)	1.45	1.38	1.45	1.31	1.86	1.51
Dum 6 (2008)	1.48	1.35	1.48	1.32	1.86	1.52
Dum 7 (2009)	1.55	1.36	1.55	1.35	1.84	1.5
Dum 8 (2010)	1.6	1.4	1.6	1.4	1.85	1.51
Dum 9 (2011)	1.64	1.51	1.65	1.49	1.87	1.57
Dum 10 (2012)	1.65	1.54	1.65	1.53	1.88	1.61
Dum 11 (2013)	1.64	1.55	1.64	1.55	1.89	1.64
Dum 12 (2014)	1.65	1.58	1.65	1.56	1.92	1.68
Dum 13 (2015)	1.64	1.62	1.64	1.59	1.93	1.78
Dum14 (2016)	1.79	1.75	1.79	1.76	1.91	1.84
Dum15 (2017)	1.95	1.89	1.95	1.91	1.9	1.85
<i>Industry dummies</i>						
Dum 1 (sic = 12)	2.16	2.27	2.16	2.29	1.74	1.86
Dum 2 (sic = 13)	1.27	1.24	1.27	1.25	1.17	1.15
Dum 3 (sic = 14)	3.6	3.51	3.59	3.48	2.79	2.68
Dum 4 (sic = 15)	1.19	1.16	1.19	1.14	1.11	1.08
Dum 5 (sic = 16)	2.03	2.02	2.02	2.02	1.64	1.66
Dum 6 (sic = 20)	1.16	1.13	1.16	1.13	1.19	1.19
Dum 7 (sic = 21)	3.24	3.16	3.24	3.13	2.53	2.55
Dum 8 (sic = 23)	1.3	1.24	1.31	1.24	1.16	1.14
Dum 9 (sic = 24)	1.37	1.32	1.37	1.33	1.25	1.21
Dum 10 (sic = 25)	1.17	1.14	1.17	1.15	1.17	1.11

Dum 11 (sic = 26)	1.2	1.2	1.2	1.19	1.22	1.2
Dum 12 (sic = 27)	1.7	1.57	1.7	1.59	1.47	1.37
Dum 13 (sic = 28)	1.82	1.69	1.82	1.66	1.49	1.42
Dum 14 (sic = 29)	5.14	5.37	5.14	5.49	4.16	4.63
Dum 15 (sic = 30)	2.08	2.1	2.08	2.09	1.58	1.66
Dum 16 (sic = 32)	1.4	1.36	1.4	1.35	1.29	1.28
Dum 17 (sic = 33)	1.47	1.47	1.47	1.48	1.35	1.33
Dum 18 (sic = 34)	2.07	2.12	2.07	2.12	1.78	1.83
Dum 19 (sic = 35)	1.64	1.59	1.64	1.57	1.57	1.49
Dum 20 (sic = 36)	3.6	3.69	3.6	3.66	2.78	2.92
Dum 21 (sic = 37)	4.29	4.82	4.29	4.82	3.53	4.12
Dum 22 (sic = 38)	2.96	3.06	2.96	3.05	2.34	2.4
Dum 23 (sic = 39)	3.43	3.44	3.43	3.5	2.98	3.2
Dum 24 (sic = 42)	1.25	1.23	1.25	1.24	1.19	1.17
Dum 25 (sic = 44)	1.41	1.43	1.41	1.43	1.43	1.4
Dum 26 (sic = 45)	1.36	1.36	1.36	1.35	1.29	1.26
Dum 27 (sic = 47)	1.72	1.74	1.73	1.74	1.56	1.67
Dum 28 (sic = 48)	1.24	1.26	1.23	1.25	1.16	1.18
Dum 29 (sic = 49)	3.94	4.1	3.93	4.04	2.85	3.11
Dum 30 (sic = 50)	4.68	4.61	4.67	4.56	3.56	3.54
Dum 31 (sic = 51)	1.71	1.58	1.7	1.54	1.58	1.42
Dum 32 (sic = 52)	1.54	1.5	1.54	1.53	1.43	1.4
Dum 33 (sic = 53)	1.34	1.36	1.34	1.37	1.16	1.19
Dum 34 (sic = 54)	1.64	1.58	1.64	1.68	1.32	1.34
Dum 35 (sic = 55)	1.52	1.51	1.52	1.53	1.31	1.34
Dum 36 (sic = 56)	1.29	1.25	1.28	1.22	1.24	1.17
Dum 37 (sic = 57)	1.54	1.58	1.54	1.61	1.44	1.49
Dum 38 (sic = 58)	1.29	1.33	1.3	1.31	1.19	1.18
Dum 39 (sic = 59)	1.61	1.59	1.62	1.62	1.59	1.51
Dum 40 (sic = 70)	1.69	1.67	1.69	1.68	1.54	1.54
Dum 41 (sic = 72)	1.55	1.5	1.54	1.5	1.41	1.38
Dum 42 (sic = 73)	1.19	1.18	1.19	1.19	1.16	1.14
Dum 43 (sic = 75)	5.16	5.53	5.17	5.52	4.4	4.84
Dum 44 (sic = 78)	1.18	1.14	1.18	1.15	1.13	1.11
Dum 45 (sic = 79)	1.2	1.14	1.2	1.15	1.14	1.11
Dum 46 (sic = 80)	1.28	1.23	1.28	1.24	1.26	1.28
Dum 47 (sic = 82)	1.67	1.6	1.67	1.58	1.58	1.56
Dum 48 (sic = 87)	1.29	1.35	1.29	1.36	1.24	1.29
<b>Mean VIF</b>	<b>1.88</b>	<b>1.87</b>	<b>1.87</b>	<b>1.84</b>	<b>1.76</b>	<b>1.71</b>

#### **4.8.4 Results of ML Estimation of Equations (7) and (8)**

To address research objective 1, I test the direct relationship between CSR and EM, and the indirect relationship between CSR and EM, via the mediating channel OC. To this end, I test the hypotheses, outlined earlier, by estimating equations (7) and (8), using SEM with ML method. The equations are estimated using robust standard errors. Table 4.9 shows the results. Panel A of Table 4.9 shows the results of the relationship between CSR and OC (Column 1), and the direct effect of CSR on EM (Column 2), while Panel B shows the results of the indirect effect of CSR on EM via OC. The discussion of the results in this section is ordered in accordance with the four steps outlined in Section 4.7.6. Thus, I first discuss the results on hypothesis H1.1 (the direct relationship between CSR and EM),

followed by the results of hypothesis H1.2 and H1.3 (the relationships between CSR and OC, and between OC and EM respectively). Finally, I discuss the results on hypothesis H1.4 (the indirect relationship between CSR and EM via OC). Since equations (7) and (8) are estimated together, using SEM with ML method, the presentation of the results in the table are consistent with the equations, rather than the hypotheses.

**Table 0.9 ML Estimation Output of Equations (7) and (8)**

The table presents the ML estimation results of equations (7) and (8). Panel A presents the direct effects by estimating equations (7) and (8) individually in Columns (1) and (2) respectively. Robust standard errors are presented in parenthesis within Panel A. Panel B reports the joint results of OC as a channel between the CSR and EM relationship. The standard errors of the indirect relationship in Panel B, are estimated using the delta method and the bootstrapping technique with 1,000 replications. Panel B Column (1) reports the size of the indirect effect; Columns (2) and (3) show the delta method standard errors and p values respectively; Columns (4) and (5) show the bootstrap standard error and the bias-corrected percentile bootstrap confidence interval respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). CSR is the ESG score obtained from Thomson Reuters. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. The model includes a set of dummy variables to capture year and industry effects.

<b>Panel A: Direct effect</b>		
<i>Variables</i>	(1) OC (Equation 7)	(2) EM (Equation 8)
CONSTANT	0.1788*** (0.0157)	0.1844*** (0.0274)
OC		0.9533*** (0.1088)
CSR	0.0830*** (0.0084)	-0.1074*** (0.0141)
SIZE	-0.0121*** (0.0011)	0.0085*** (0.0021)
LEV	-0.0281*** (0.0092)	0.0104 (0.0123)
ADJROA	0.0226* (0.0124)	-0.0860*** (0.0150)
RD	-0.0092*** (0.0026)	0.0308*** (0.0031)
PR	-0.0898*** (0.0082)	
MB		0.0009*** (0.0002)
Year effects	Yes	Yes
Industry effects	Yes	Yes
Var matrix		
OC	0.0217	
EM		0.0307
N	14,845	14,845
Adjusted R <sup>2</sup>	0.5079	-1.4888

<b>Panel B: Indirect effect</b>					
<i>Variables</i>	(1)	(2)	(3)	(4)	(5)
	EM	Delta method Std error	Del method p-value	Bootstrap Std error	Bootstrap-based 95% confidence interval
CSR	0.0791	0.0125	0.0000	0.0159	(-0.1387, -0.0762)

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

Hypothesis H1.1 (a and b) is tested by estimating equation (8). The result of hypothesis H1.1 (a and b) testing, that is, the direct relationship between CSR and EM, is presented in Column (2) of Panel A. The result shows that CSR has a negative direct effect on EM at the 1% level of significance ( $\beta_2 = -0.1074$ ;  $p < 0.01$ ), supporting hypothesis H1.1b. Consistent with the literature, and with the myopia avoidance hypothesis, the result suggests that managers, engaged in CSR, are likely to be long-term oriented, and thus, they are less likely to manage earnings (for example, see Almahrog et al., 2018; Bozzolan et al., 2015; Calegari et al., 2010; Chen & Hung, 2021; Cho & Chun, 2015; Chun & Cho, 2017; Faisal et al., 2018; Gao & Zhang, 2015; García-Sánchez et al., 2020; Gerged et al., 2020; Gerged et al., 2021; Gras-Gil et al., 2016; Hong & Andersen, 2011; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Litt et al., 2013; Martínez-Ferrero et al., 2015; Palacios-Manzano et al., 2019; Patten & Trompeter, 2003; Scholtens & Kang, 2013; Sial et al., 2019; Wang et al., 2018).

Hypothesis H1.2 is tested by estimating equation (7). The result of hypothesis H1.2 testing, that is, the relationship between CSR and OC, is shown in Column (1) of Panel A. The result shows a positive and significant relationship between CSR and OC at the 1% level of significance ( $\alpha_1 = 0.0830$ ;  $p < 0.01$ ), providing support for hypothesis H1.2, suggesting that firms with higher CSR activities are more likely to have higher OC. This is consistent with the RBV that suggests that CSR has a critical role in building knowledge-based, intangible resources and sustainable business models that are essential elements of OC (for example, see Eisenhardt & Martin, 2000; Nikolaou, 2017; Villalonga, 2004). The control variables SIZE ( $\alpha_2 = -0.0121$ ;  $p < 0.01$ ), LEV ( $\alpha_3 = -0.0281$ ;  $p < 0.01$ ), RD ( $\alpha_5 = -0.0092$ ;  $p < 0.01$ ) and PR ( $\alpha_6 = -0.0898$ ;  $p < 0.01$ ) have negative associations with OC, at the 1% level of significance, while ADJROA ( $\alpha_4 = 0.0226$ ;  $p < 0.01$ ) has a positive association with OC at the 10% level of significance. This is consistent with the literature that indicates that smaller firms and firms with lower LEV have higher OC (see Eisfeldt & Papanikolaou, 2013). The negative relationship between PR and OC suggests that firms with higher OC are likely to have lower investments in physical resources (see Eisfeldt & Papanikolaou, 2013). In conformity with the literature, I find a positive and significant relationship between ADJROA and OC, suggesting that firms with higher financial

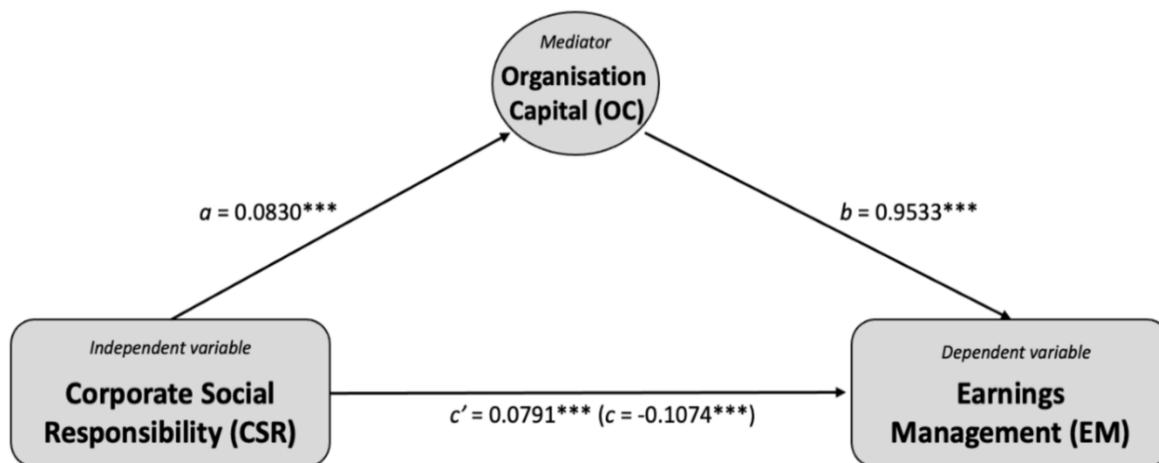
performance have higher OC (see Eisfeldt & Papanikolaou, 2013).

Hypothesis H1.3 is tested by estimating equation (8). The result of hypothesis H1.3 testing, that is, the relationship between OC and EM, is shown in Column (1) of Panel A. The results indicate a positive relationship between OC and EM at the 1% level of significance ( $\beta_1 = 0.9533$ ;  $p < 0.01$ ), providing support for hypothesis H1.3. Consistent with prior studies, and the managerial myopia hypothesis, I find that firms with higher OC are more likely to manage earnings for short-term benefits (for example, see Francis et al., 2008; Malmendier & Tate, 2009). The results regarding controls variables show that SIZE ( $\beta_3 = 0.0085$ ;  $p < 0.01$ ), RD ( $\beta_6 = 0.0308$ ;  $p < 0.01$ ) and MB ( $\beta_7 = 0.0009$ ;  $p < 0.01$ ) are positively related to EM at the 1% level of significance, while ADJROA is negatively related to EM at the 1% level of significance ( $\beta_5 = -0.0860$ ;  $p < 0.01$ ). However, LEV ( $\beta_4 = 0.0104$ ;  $p < 0.01$ ) does not have a statistically significant relationship with EM. This is mostly consistent with the literature that suggest that firms with higher R&D expenses, high growth opportunities, and lower financial performance, may manage more earnings (for example, see Cho & Chun, 2015; Kim et al., 2012; Roychowdhury, 2006).

Hypothesis H1.4 (a and b) is tested by estimating equations (7) and (8). The result of hypothesis H1.4 testing, that is, the indirect relationship between CSR and EM via OC, is shown in Panel B of Table 4.9. As shown in Column (1), the size of the indirect effect is 0.0791. The size of the indirect effect is calculated as the product of  $\alpha_1$  (that is, the coefficient of CSR from equation (8)) and  $\beta_1$  (that is, the coefficient of OC from equation (8)). The coefficients  $\alpha_1$  (0.0830) and  $\beta_1$  (0.9533) are individually shown in Panel A. Thus, the size of the indirect effect is 0.0791 (i.e.,  $\alpha_1 \times \beta_1 = 0.0830 \times 0.9533$ ). The positive coefficient suggests a positive indirect relationship between CSR and OC, via the mediator OC. The statistical significance of the indirect effect is determined in two ways – 1) the delta method, 2) the bootstrapping technique. Panel B Columns (2) and (3) show the standard error and p-values for the indirect effect using the delta method. This suggests a strong positive indirect effect of CSR on EM via the mediating channel OC at the 1% level of significance ( $p < 0.01$ ). Panel B Columns (4) and (5) present the standard error and the 95% confidence interval using the bootstrap technique with 1,000 replications. The results using the bootstrap technique also confirm the positive indirect effect of CSR on EM via OC. The bootstrap-based 95% confidence interval reports the lower and upper bound limits to be -0.1387 and -0.0762 respectively. Since zero does not fall between the lower and upper bound limits of the confidence interval, this suggests that the indirect effect is statistically significant at least at the 5% ( $1 - \alpha$ ) level of significance. Thus, the results support

hypothesis H1.4b, suggesting that managers engaged in CSR may indirectly manage more earnings via OC. This is consistent with the managerial myopia hypothesis.

Overall, the results from estimating equations (7) and (8) suggest that CSR has a negative direct effect on EM, but a positive indirect effect on EM via OC. Figure 4.3 below is a snapshot of the results as discussed in the preceding paragraphs. The size of the direct effect of CSR on EM is -0.1074, while the size of the indirect effect of CSR on EM via the mediator OC is 0.0791. Thus, the size of the total effect of CSR on EM, calculated as the sum of the direct and indirect effects, is -0.0283 (i.e., -0.1074 + 0.0791).



**Figure 0.3 OC as Mediator in the CSR and EM Relationship**

Note: The coefficient 0.0830 represents the size of the effect of CSR on OC (path a); the coefficient 0.9533 represents the size of the effect of OC on EM (path b); the coefficient 0.0791 represents the size of the indirect effect of CSR on EM via the mediator OC (path c'); the coefficient -0.1074 represents the size of the direct effect of CSR on EM (path c).

\*\*\* indicate statistical significance at the 1% level.

#### 4.8.5 Results of ML Estimation of Equations (7a) and (8a) - Sensitivity Analysis Phase 1

To perform sensitivity tests on the analysis, I estimate equations (7a) and (8a) with ML estimation, with robust standard errors. Equations (7a) and (8a) use the alternate specifications of EM, CSR and OC, that is, EM\_DD, CSR\_COMB and OC\_PT respectively. Table 4.10 shows the results of the sensitivity test.

**Table 0.10 ML Estimation Output of Equations (7a) and (8a)**

Panel A presents the direct effects by estimating equations (7a) and (8a) individually in Columns (1) and (2) respectively. Robust standard errors are presented in parenthesis within Panel A. Panel B reports the joint results of OC\_PT as a channel between the CSR\_COMB and EM\_DD relationship. The standard errors of the indirect relationship in Panel B, are estimated using the delta method and the bootstrapping technique with 1,000 replications. Panel B Column (1) reports the size of the indirect effect; Columns (2) and (3) show the delta method standard errors and p values respectively Columns (4) and (5) show the bootstrap standard error and the bias-corrected percentile bootstrap confidence interval respectively. EM\_DD refers to alternate earnings management specification, proxied by accruals quality model by Dechow & Dichev (2002). CSR\_COMB is the ESG combined score from Thomson Reuters. OC\_PT is the alternate measure of organisational capital following Peters & Taylor (2017). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. The model includes a set of dummy variables to capture year and industry effects.

<b>Panel A: Direct effect</b>		
<i>Variables</i>	(1)	(2)
	OC_PT (Equation 8)	EM_DD (Equation 9)
CONSTANT	3.0034*** (0.0824)	4.0973*** (0.4090)
OC_PT		0.3250** (0.1271)
CSR_COMB	0.1879*** (0.0429)	-0.1554* (0.0868)
SIZE	-0.1422*** (0.0052)	0.0177 (0.0229)
LEV	-0.8211*** (0.0485)	0.2615 (0.1636)
ADJROA	-0.5997*** (0.0664)	0.7294*** (0.1493)
RD	-0.0676*** (0.0142)	0.2509*** (0.0276)
PR	-0.6659*** (0.0433)	
MB		-0.0023 (0.0030)
Year effects	Yes	Yes
Industry effects	Yes	Yes
Var matrix		
OC_PT	0.6145	
EM_DD		2.2857
N	14,816	14,816
Adjusted R <sup>2</sup>	0.3068	0.3284

<b>Panel B: Indirect effect</b>					
<i>Variables</i>	(1)	(2)	(3)	(4)	(5)
	EM_DD	Delta method Std error	Delta method p-value	Bootstrap Std error	Bootstrap-based 95% confidence interval
CSR_COMB	0.0611	0.0277	0.028	0.0810	(-0.3298, 0.0190)

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

The result regarding the direct relationship between CSR\_COMB and EM\_DD, obtained from estimating of equation (8a), is shown in Column (2) of Table 4.10. Consistent to my original findings, the results show that that CSR\_COMB has a negative direct influence on EM\_DD at the 10% level of significance ( $\beta_2 = -0.1554$ ;  $p < 0.10$ ).

The result regarding the relationship between CSR\_COMB and OC\_PT, obtained from estimating of equation (7a), is shown in Column (1) of Panel A. Consistent with my original findings, the results show a positive and significant relationship between CSR\_COMB and OC\_PT at the 1% level of significance ( $\alpha_1 = 0.1879$ ;  $p < 0.01$ ). The control variables SIZE ( $\alpha_2 = -0.1422$ ;  $p < 0.01$ ), LEV ( $\alpha_3 = -0.8211$ ;  $p < 0.01$ ), ADJROA ( $\alpha_4 = -0.5997$ ;  $p < 0.10$ ), RD ( $\alpha_5 = -0.0676$ ;  $p < 0.01$ ) and PR ( $\alpha_6 = -0.6659$ ;  $p < 0.01$ ) have negative associations with OC\_PT at the 1% level of significance.

The result regarding the relationship between OC\_PT and EM\_DD, obtained from estimating of equation (8a), is shown in Column (2) of Panel A. Consistent with original findings, the results indicate a positive relationship between OC\_PT and EM\_DD at the 5% level of significance ( $\beta_1 = 0.3250$ ;  $p < 0.05$ ). The control variables ADJROA ( $\beta_5 = 0.7294$ ;  $p < 0.01$ ) and RD ( $\beta_6 = 0.2509$ ;  $p < 0.01$ ) are positively related to EM\_DD at the 1% level of significance. However, SIZE ( $\beta_3 = 0.0177$ ), LEV ( $\beta_4 = 0.2615$ ), MB ( $\beta_7 = -0.0023$ ) do not have a statistically significant relations with EM\_DD.

Panel B of Table 4.10 shows the indirect effect of CSR\_COMB on EM\_DD via OC\_PT as a mediating channel. As shown in Column (1), the size of the indirect effect is 0.0611. The size of the indirect effect is calculated as the product of  $\alpha_1$  and  $\beta_1$ , that is, the coefficients of CSR\_COMB ( $\alpha_1 = 0.1879$ ) from equation (7a) and of OC\_PT ( $\beta_1 = 0.3250$ ) from equation (8a) respectively. The positive coefficient suggests a positive indirect relationship between CSR\_COMB and EM\_DD, via the mediator OC\_PT. Columns (2) and (3) show the standard error and p-values for the indirect effect, using the delta method. This suggests a positive indirect effect of CSR\_COMB on EM\_DD, via the mediating channel OC\_PT at the 5% level of significance ( $p < 0.05$ ). Panel B Columns (4) and (5) present the standard error and the 95% confidence interval using the bootstrap technique with 1,000 replications. The bootstrap-based 95% confidence interval reports the lower and upper bound limits to be -0.3298 and 0.0190 respectively. Since zero falls between the lower and upper bound limits of the confidence interval, this suggests that the indirect effect is no longer statistically significant. Although the bootstrap results show that the indirect effect is not significant, the delta method result shows that the indirect effect is significant, consistent with the original results.

#### **4.8.6 Results of ML Estimation of Equations (7b) and (8b) - Sensitivity Analysis Phase 2**

To perform further sensitivity tests on the analysis, I estimate equations (7b) and (8b) with ML estimation, with robust standard errors. In this phase of the sensitivity test, I use the second alternate measure of CSR (that is, CSR\_DUM). Equations (7b) and (8b) are estimated with the alternate specifications of EM, CSR and OC, that is, EM\_DD, CSR\_DUM and OC\_PT respectively. Table 4.11 shows the results of the sensitivity test phase 2.

**Table 0.11 ML Estimation Output of Equations (7b) and (8b)**

Panel A presents the direct effects by estimating equations (7b) and (8b) individually in Columns (1) and (2) respectively. Robust standard errors are presented in parenthesis within Panel A. Panel B reports the joint results of OC\_PT as a channel between the CSR\_DUM and EM\_DD relationship. The standard errors of the indirect relationship in Panel B, are estimated using the delta method and the bootstrapping technique with 1,000 replications. Panel B Column (1) reports the size of the indirect effect; Columns (2) and (3) show the delta method standard errors and p values respectively Columns (4) and (5) show the bootstrap standard error and the bias-corrected percentile bootstrap confidence interval respectively. EM\_DD refers to alternate earnings management specification, proxied by accruals quality model by Dechow & Dichev (2002). CSR\_DUM is a dummy variable taking the value of 1 if the CSR score of the firm is greater median CSR (based on each year and industry), and 0 otherwise. OC\_PT Is the alternate measure of organisational capital following Peters & Taylor (2017). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. The model includes a set of dummy variables to capture year and industry effects.

**Panel A: Direct effect**

<i>Variables</i>	(1)	(2)
	OC_PT (Equation 8)	EM_DD (Equation 9)
CONSTANT	6.1788*** (0.1219)	-0.0560 (0.8933)
OC_PT		0.6996*** (0.1426)
CSR_DUM	0.3710*** (0.0267)	-0.2351*** (0.0633)
SIZE	-0.3861*** (0.0082)	0.2373*** (0.0586)
LEV	-1.4441*** (0.0751)	0.9087*** (0.2535)
ADJROA	-0.6461*** (0.0884)	0.6459*** (0.1410)
RD	-0.0729*** (0.0177)	0.2020*** (0.0221)
PR	-0.5559*** (0.0666)	
MB		-0.0030 (0.0024)
Year effects	Yes	Yes
Industry effects	Yes	Yes
Var matrix		
OC_PT	2.5202	
EM_DD		3.5128
N	23,395	23,395
Adjusted R <sup>2</sup>	0.2523	-0.1049

**Panel B: Indirect effect**

<i>Variables</i>	(1)	(2)	(3)	(4)	(5)
	EM_DD	Delta method Std error	Delta method p-value	Bootstrap Std error	Bootstrap-based 95% confidence interval
CSR_DUM	0.2596	0.0569	0.0000	0.0685	(-0.3694, -0.1008)

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

The result on the direct relationship between CSR\_DUM and EM\_DD, obtained from estimating equation (8b), is shown in Column (2) of Panel A. Consistent with the original findings, the result shows a negative direct relationship between CSR\_DUM and EM\_DD at the 1% level of significance ( $\beta_2 = -0.2351$ ;  $p < 0.01$ ).

The result on the relationship between CSR\_DUM and OC\_PT, obtained from estimating equation (7b), is presented in Table 4.11 Panel A Column (1). Consistent with my original findings, the result shows a positive and significant relationship between CSR\_DUM and OC\_PT at the 1% level of significance ( $\alpha_1 = 0.3710$ ;  $p < 0.01$ ). The control variables SIZE ( $\alpha_2 = -0.3861$ ;  $p < 0.01$ ), LEV ( $\alpha_3 = -1.4441$ ;  $p < 0.01$ ), ADJROA ( $\alpha_4 = -0.6461$ ;  $p < 0.10$ ), RD ( $\alpha_5 = -0.0729$ ;  $p < 0.01$ ) and PR ( $\alpha_6 = -0.5559$ ;  $p < 0.01$ ) have negative associations with OC\_PT at the 1% level of significance.

The result on the relationship between OC\_PT and EM\_DD, obtained from estimating equation (8b), is shown in Column (2) of Panel A. Consistent with the original findings, the result indicates a positive relationship between OC\_PT and EM\_DD at the 1% level of significance ( $\beta_1 = 0.6996$ ;  $p < 0.01$ ). The control variables SIZE ( $\beta_3 = 0.2373$ ), LEV ( $\beta_4 = 0.9087$ ), ADJROA ( $\beta_5 = 0.6459$ ;  $p < 0.01$ ) and RD ( $\beta_6 = 0.2020$ ;  $p < 0.01$ ) are positively related to EM\_DD at the 1% level of significance. However, MB ( $\beta_7 = -0.0030$ ) does not have a statistically significant relationship with EM\_DD.

The result on the indirect relationship between CSR\_DUM and EM\_DD via OC\_PT, obtained from estimating equations (7b) and (8b), is presented in Panel B of Table 4.11. As shown in Column (1), the size of the indirect effect is 0.2596. The size of the indirect effect is calculated as the product of  $\alpha_1$  and  $\beta_1$ , that is, the coefficients of CSR\_DUM ( $\alpha_1 = 0.3710$ ) from equation (7b) and of OC\_PT ( $\beta_1 = 0.6996$ ) from equation (8b) respectively. The positive coefficient suggests a positive indirect relationship between CSR\_DUM and EM\_DD, via the mediator OC\_PT. Columns (2) and (3) show the standard error and p-values for the indirect effect, using the delta method. This suggests a strong positive indirect effect of CSR\_COM on EM\_DD, via the mediating channel OC\_PT at the 1% level of significance ( $p < 0.01$ ). Panel B Columns (4) and (5) present the standard error and the 95% confidence interval using the bootstrap technique with 1,000 replications. The bootstrap-based 95% confidence interval reports the lower and upper bound limits to be -0.3694 and -0.1008 respectively. Since zero does not fall between the lower and upper bound limits of the confidence interval, this suggests that the indirect effect is statistically significant at least at the 5% level of significance. Thus, the results are consistent with the original findings.

#### 4.8.7 Accounting for Endogeneity – Results from 2SLS Estimation of Equations (7) and (8)

To circumvent the issue that the results from the ML estimation may suffer from endogeneity, I re-estimate equations (7) and (8), using the 2SLS estimation model with instrument variable. As explained in section 4.7.8, following, Nguyen et al. (2019), I use CSR\_M as an instrument. CSR\_M is the median of CSR calculated for each Fama-French 48 industry grouping. Table 4.12 presents the results of the 2SLS estimation of equations (7) and (8). Panel A of Table 4.12 shows the total effects of the 2SLS estimation of equations (7) and (8). Panel B presents the results of the indirect effect of CSR on EM.

**Table 0.12 2SLS Estimation Output of Equations (7) and (8)**

The model uses CSR\_M, measured as the median CSR based on Fama-French 48 industry classification, as an instrument to control for endogeneity of CSR. Panel A presents the direct effects, by estimating equations (7) and (8) individually in Columns (1) and (2) respectively. Standard errors are presented in parenthesis within Panel A. Panel B reports the joint results of the indirect relationship between the CSR and EM, through the mediating channel OC. The standard errors of the indirect relationship in Panel B are estimated using the bootstrapping method with 1,000 replications. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). CSR is the ESG score obtained from Thomson Reuters. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. The model includes a set of dummy variables to capture year and industry effects.

<b>Panel A: Direct effect</b>		
<i>Variables</i>	(1) OC (Equation 7)	(2) EM (Equation 8)
CONSTANT	0.2806*** (0.0239)	-0.0214 (0.0780)
OC		0.7873*** (0.1070)
CSR	0.3554*** (0.0475)	-0.5980*** (0.1391)
SIZE	-0.0308*** (0.0034)	0.0420*** (0.0108)
LEV	-0.0529*** (0.0104)	
ADJROA	0.0203 (0.0129)	-0.0961*** (0.0163)
RD	-0.0096*** (0.0027)	0.0303*** (0.0030)
PR	-0.0650*** (0.0095)	
MB		0.0038*** (0.0008)
Year effects	Yes	Yes
Industry effects	Yes	Yes
1-stage F-stat	109.36	90.71
N	14,845	14,845

Adjusted R <sup>2</sup>	0.4732		-1.3848
<b>Panel B: Indirect effect (bootstrap method)</b>			
	(1)	(2)	(3)
	EM	Bootstrap std error	Bootstrap-based 95% confidence interval
CSR	0.2798	0.2025	-0.9949 -0.2012

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

As shown in Panel A of Table 4.12, the original test results remain consistent after using the 2SLS model to address endogeneity. The result on the direct relationship between CSR and EM, obtained from the estimation of equation (8), is shown in Panel A Column (2). The result shows that CSR has a negative direct influence on EM at the 1% level of significance ( $\beta_2 = -0.5980$ ;  $p < 0.01$ ).

The result on the relationship between CSR and OC, obtained from the estimation of equation (7), is displayed in Panel A Column (1). The results show that CSR has a positive effect on OC at the 1% level of significance ( $\alpha_1 = 0.3554$ ;  $p < 0.01$ ). The control variables SIZE ( $\alpha_2 = -0.0308$ ;  $p < 0.01$ ), LEV ( $\alpha_3 = -0.0529$ ;  $p < 0.01$ ), RD ( $\alpha_5 = -0.0096$ ;  $p < 0.01$ ) and PR ( $\alpha_6 = -0.0650$ ;  $p < 0.01$ ) have negative associations with OC at the 1% level of significance. However, ADJROA does not have a statistically significant relationship with OC ( $\alpha_4 = 0.0203$ ).

The result on the relationship between OC and EM, obtained from the estimation of equation (8), is presented in Panel A Column (2). Consistent with the original findings, the results show that OC has a positive and effect on EM at the 1% level of significance ( $\beta_1 = 0.7873$ ;  $p < 0.01$ ). The controls variables SIZE ( $\beta_3 = 0.0420$ ;  $p < 0.01$ ), RD ( $\beta_6 = 0.0303$ ;  $p < 0.01$ ) and MB ( $\beta_7 = 0.0038$ ;  $p < 0.01$ ) are positively related to EM at the 1% level of significance, while ADJROA is negatively related to EM at the 1% level of significance ( $\beta_5 = -0.0961$ ;  $p < 0.01$ ).

The result relevant to the indirect relationship between CSR and EM via OC, obtained from 2SLS estimation of equations (7) and (8), is reported in Table 4.12 Panel B. As discussed previously, the size of the indirect effect is estimated by calculating the product of the CSR coefficient ( $\alpha_1$ ) from equation (7) and the OC coefficient ( $\beta_1$ ) from equation (8) – that is,  $\alpha_1\beta_1$ . As shown in Table 4.12 Panel A, the CSR coefficient ( $\alpha_1$ ) from equation (7) is 0.3554, while the OC coefficient ( $\beta_1$ ) from equation (8) is 0.7873. Thus, the size of the indirect effect of CSR on EM via OC ( $\alpha_1\beta_1$ ) is 0.2798. As discussed before, I use the bootstrapping method with 1,000 replacements to estimate the standard error of the indirect effect. The lower and upper bound limits of the bootstrap-based 95%

confidence interval are -0.9949 and -0.2012 respectively. Since zero does not fall between the lower and upper bound limits of the confidence interval, this suggests that the indirect effect is statistically significant at least in the 5% ( $1 - \alpha$ ) level of significance. Thus, even after controlling for endogeneity, the results suggest a positive and significant indirect relationship between CSR and EM via OC.

Additionally, to test the validity of the instrument (CSR\_M) used in the 2SLS model, I follow prior studies and test for weak instrument. A weak instrument may cause 2SLS estimation to be inconsistent (Stock & Yogo, 2002). Following prior studies, I use the first-stage F-statistic to detect weak instruments (for example, see Cheung, 2016; Stock & Yogo, 2002). Following the general rule of thumb, to determine that the instrument is not weak, the first-stage F-statistic should be larger than 10 to warrant that the maximum bias in the instrumental variable estimators is less than 10% (Staiger & Stock, 1994). As shown in Table 4.12, the first stage F-statistic is 109.36 for equation (7) and 90.71 for equation (8). Thus, the first stage F-statistic being well above 10 suggests that the instrument, CSR\_M, used in the 2SLS estimation, is not a weak instrument.

Thus, the results remain consistent after controlling for endogeneity.

#### **4.9 Discussion of Findings**

The literature on CSR and EM suggests inconclusive findings on how CSR affects EM. To provide more insights on the CSR-EM relationship, several prior studies have examined various moderating factors affecting the CSR-EM relationship, to address *when* CSR affects EM. However, the questions *why* and *how* CSR affects EM, remain unaddressed. To this end, the first research objective of this study, addressed in this chapter, is to investigate *why* and *how* CSR affects EM, by examining the direct CSR-EM relationship and indirect CSR-EM relationship via OC. In this chapter, I address research objective 1, by answering the two following research questions:

*Research Question 1.1: Does CSR have a significant direct effect on EM?*

*Research Question 1.2: Does CSR have a significant indirect effect on EM via OC?*

Using a sample of 46,816 firm-year observations, the results find support all main hypotheses. In regard to the research question 1.1, the study finds that CSR has a negative and significant direct effect on EM. In regard research question 1.2, the study finds that CSR has a positive and significant indirect effect on EM via OC. In addressing research question 1.2, the study also examined the two

indirect paths involved in the indirect CSR-EM relationship via OC, that is, 1) the relationship between CSR and OC; and 2) the relationship between OC and EM. The results suggest positive and significant relationships between CSR and OC and between OC and EM.

Table 4.13 shows a summary of the research questions, hypotheses, and findings. Table 4.13 is an extension to Table 4.5 (presented earlier, outlining the research questions and hypotheses testing).

**Table 0.13 Summary of Research Questions, Hypotheses and Results**

Research Question	Hypothesis	Theory	Expected sign	Results	Conclusion
1.1. Does CSR have a significant <i>direct</i> effect on EM?	H1.1a: Consistent with the managerial myopia hypothesis, there is a positive and significant <i>direct</i> relationship between CSR and EM.	Managerial myopia hypothesis	$\beta_2 = +$ (Equation 8)	Negative and significant direct relationship between CSR and EM, consistent with the myopia avoidance hypothesis	CSR has a significant <i>direct</i> (negative) effect on EM
	H1.1b: Consistent with the myopia avoidance hypothesis, there is a negative and significant <i>direct</i> relationship between CSR and EM.	Myopia avoidance hypothesis	$\beta_2 = -$ (Equation 8)		
1.2. Does CSR have a significant <i>indirect</i> effect on EM via OC?	H1.2: Consistent with the RBV theory, there is a positive and significant relationship between CSR and OC.	RBV theory	$\alpha_1 = +$ (Equation 7)	Positive and significant relationship between CSR and OC, consistent with the RBV theory	CSR has a significant <i>indirect</i> (positive) effect on EM via OC
	H1.3: Consistent with the managerial myopia hypothesis, there is a positive and significant relationship between OC and EM.	Managerial myopia hypothesis	$\beta_1 = +$ (Equation 8)	Positive and significant relationship between OC and EM, consistent with the managerial myopia hypothesis	
	H1.4a: Consistent with the managerial myopia hypothesis, there is a positive and significant <i>indirect</i> relationship between CSR and EM, via the mediator OC.	Managerial myopia hypothesis	$\alpha_1\beta_1 = +$ (Equations 7 and 8)	Positive and significant indirect relationship between CSR and EM via OC, consistent with the managerial myopia hypothesis	
	H1.4b: Consistent with the myopia avoidance hypothesis, there is a negative and significant <i>indirect</i> relationship between CSR and EM, via the mediator OC.	Myopia avoidance hypothesis	$\alpha_1\beta_1 = -$ (Equations 7 and 8)		

To address research questions 1.1 and 1.2, I test four hypotheses. The findings support all of my hypotheses. The result suggests a negative and significant direct relationship between CSR and EM. The result is consistent with prior studies (for example, see Gargouri et al., 2010; Heltzer, 2011; Kyaw et al., 2017; Yip et al., 2011). Consistent with the myopia avoidance hypothesis, the result suggests that managers engaged in CSR are long-term oriented, and thus, less likely to manage earnings. Managers' myopia avoidant behaviour may be explained in two ways. First, managers engaged in CSR may have greater concerns for maintaining long-term relationships with stakeholders, and therefore, they avoid EM which is an agency cost that may hamper their relationships with stakeholders, that is, relationship-driven myopia avoidance) (for example, see Bozzolan et al., 2015; Chih et al., 2008). Second, managers engaged in CSR may have stronger ethical and moral values, and thus, they may avoid EM, which is an unethical act, that is, value-driven myopia avoidance) (for example, see Grougiou et al., 2014; Kim et al., 2012; Litt et al., 2013). Thus, in response to research question 1.1, the results suggest that CSR has a significant *direct* (negative) effect on EM.

The result regarding the indirect relationship between CSR and EM via OC, is totally different and in contrast with the direct CSR-EM relationship. The results find a positive and significant indirect relationship between CSR and EM, through the mediating channel OC. The finding provides a new insight to the widely debated CSR-EM literature, by identifying a new indirect channel (that is, OC) through which CSR affects EM. The findings suggest that although CSR has a negative (direct) effect on EM in general, this changes when firms have high OC. This is because OC acts as an indirect channel/tool which managers may utilise to manage more earnings. In other words, managers engaged in CSR may take advantage of their firms' unique abilities (OC), to manage more earnings. Managers engaged in CSR may take advantage of their firms' unique abilities (OC), to manage more earnings. This is consistent with the managerial myopia hypothesis, suggesting that managers in firms with high OC, engaged in CSR, tend to be short-term oriented. This perspective can be explained in two ways. First, managers engaged in CSR may have incentives to please multiple stakeholders by meeting short-term targets, to uphold their reputation (Chih et al., 2008; Francis et al., 2008; Gargouri et al., 2010; Nikolov, 2018);. While CSR creates incentives to manage earnings for short-term benefits, OC may create further incentives as OC may create greater expectations and higher standards from investors and analysts (for example, see Malmendier & Tate, 2009). Thus, both CSR and OC create more incentives for EM, that is, incentive-driven myopia. Second, managers engaged in CSR may manage more earnings due to greater opportunities arising from the positive

image created by their CSR engagement (Kim et al., 2012; Muttakin et al., 2015). OC may create additional EM opportunities, as discussed earlier. Managers in firms with high OC may have unique abilities to manage earnings, resulting from their superior techniques, processes and knowledge (for example, see Demerjian et al., 2013; Gul et al., 2018). Thus, managers engaged in CSR may take advantage of the additional opportunities arising from their firms' unique abilities (OC), to manage more earnings, that is, opportunity-driven myopia. Hence, in response to research question 1.2, the findings suggest that CSR has a significant indirect (positive) effect on EM via OC.

In the process of examining the indirect relationship between CSR and EM via OC, the study also examines the two indirect paths involved. In regard to the first indirect path, the results suggest a positive and statistically significant relationship between CSR and OC. The result is consistent with the literature suggesting that CSR has a positive effect on intellectual capital components, including OC (for example, see Altuner et al., 2015; Biswas & Suar, 2016; Casalegno et al., 2017; Chung et al., 2015; Hawn & Ioannou, 2016; Hur et al., 2014; Martínez et al., 2014; Massaro et al., 2018; Zhang et al., 2014). The result is supported by the RBV hypothesis. According to RBV, firms may use CSR to enhance their intangible resources, including OC. Thus, the result suggests that CSR becomes embedded in the organisational practices and culture, becoming a part of the firm's identity, thereby improving OC (organisational design and processes, and management practices, knowledge and culture).

In regard to the second indirect path, the results show a positive and statistically significant relationship between OC and EM. The result is consistent with the literature suggesting that various components of intellectual capital escalate EM (for example, see Al-dhamari & Ku Ismail, 2015; Chaney et al., 2011; Francis et al., 2008; Malmendier & Tate, 2009). Consistent with the managerial myopia hypothesis, the result suggests that managers, in firms with high OC, may be short-term oriented due to greater incentives and opportunities. First, managers, in firms with high OC, may experience greater pressures to meet short-term targets. These greater pressures may arise from higher expectations from investors and analysts (for example, see Malmendier & Tate, 2009). Thus, managers in firms with high OC may have more incentives to manage earnings to meet short-term targets and stakeholder expectations, as failing to meet targets repeatedly may tarnish their reputation (for example, see Francis et al., 2008; Malmendier & Tate, 2009). Thus, the result suggests that managers may take advantage of their firms' unique abilities (OC) to obtain short-term goals, such as meet targets, and safeguard their reputation. Higher OC may mean that managers have superior techniques, knowledge, and better understanding of the firm's internal

control system, creating more opportunities to manage earnings in ways that are difficult to detect. This indicates the importance of better auditing and other monitoring techniques to detect EM in firms with high OC.

Overall, the results addressing research objective 1 suggest that CSR has a negative direct effect on EM, but a positive indirect effect on EM via OC. The direct negative relationship between CSR and EM addresses the existing debate on the CSR-EM relationship, through a managerial behaviour perspective, suggesting that managers engaged in CSR are likely to be myopia avoidant (long-term oriented). The indirect positive relationship between CSR and EM via OC, suggests that managers engaged in CSR may become more opportunistic and myopic (short-term oriented) when their firm has high OC. Overall, the negative direct relationship between CSR and EM is consistent to the myopia avoidance hypothesis, suggesting that managers engaged in CSR are less likely to manage earnings because – 1) their genuine concerns about maintaining long-term relationships with stakeholders lead them to reduce agency costs, such as EM (relationship-driven myopia avoidance); and/or 2) their strong ethical and moral values lead them to avoid unethical acts, such as EM (value-driven myopia avoidance). For firms with high OC, managerial behaviour may change. The positive indirect relationship between CSR and EM is consistent to the managerial myopia hypothesis, suggesting that managers engaged in CSR, may opportunistically utilise their firms' unique abilities (OC) to manage more earnings. This may result from – 1) greater incentives to manage earnings to meet short term targets and please stakeholders, as well as uphold managerial reputation (incentive-driven myopia), and/or 2) greater opportunities to manage earnings from lower scrutiny resulting from CSR performance creating a positive image (opportunity-driven myopia). While CSR itself may create incentives for EM, managers engaged in CSR may have limited opportunities to manage earnings. High OC may add to these incentives and opportunities. Managers in firms with high OC may experience greater pressures and higher expectations from stakeholders due to their firms' unique abilities. Failure to meet these expectations may tarnish managers' reputation, and thus, managers have incentives to manage earnings and report favourable financial information. Furthermore, the unique abilities of the firms (such as, superior, techniques, processes, designs, managerial practices and knowledge, that is, high OC) provide more EM opportunities. Managers in firms with high OC have better knowledge and understanding of the firms' internal control systems, and thus manage earnings using more sophisticated techniques. Thus, the results suggest that while managers engaged in CSR may avoid EM in general, high OC creates an indirect medium that increases opportunities for these managers to manage earnings. The results should be interpreted

with caution as the results do not imply that OC is a context/factor that moderates (that is, strengthens or weakens) the relationship between CSR and EM. Rather, the empirical analysis suggests that OC is an indirect channel that assists managers, engaged in CSR, to manage earnings for short-term benefits, by opportunistically using the firms' unique abilities (that is, OC

The indirect CSR-EM relationship provides a new insight to the CSR-EM literature, addressing the questions *why* and *how* CSR affects EM. In response to the question '*why* CSR affects EM', the results suggest that managers engaged in CSR may have greater incentives to manage earnings to meet short-term goals, in order to please stakeholders, and uphold their reputation. In response to the question '*how* CSR affects EM', the results suggest that managers engaged in CSR may take advantage of their firms' unique abilities (OC), to manage earnings (indirectly). The findings highlight the role of OC in managers' myopic behaviour (short-term orientation). While prior studies have explained several benefits of OC (for example, see Black & Lynch, 2005; Lev & Radhakrishnan, 2005; Lev et al., 2009; Sydler et al., 2014; Tronconi & Marzetti, 2011), the present study highlights that OC may escalate managerial opportunistic motives and myopic or short-term behaviour, as managers may take advantage of their firms' unique abilities to manage more earnings.

#### **4.10 Chapter Summary**

This study addresses research objective 1, by investigating *why* and *how* CSR affects EM, by examining the direct CSR-EM relationship and indirect CSR-EM relationship via OC. Using a sample of 46,816 firm-year observations from non-financial US firms for the period 2002-2017 inclusive, I find evidence of a negative and significant direct relationship between CSR and EM, and a positive and significant indirect relationship between CSR and EM via OC. Using SEM with ML method I find support for all of my hypothesis. The findings show that my results are not sensitive to other measures of the dependent, independent and mediating variables. I address endogeneity by estimating a 2SLS model using an instrumental variable. The findings remain unchanged after controlling for endogeneity. Overall, the findings are consistent with existing theories. The result suggests that in general managers engaged in CSR tend to be myopia avoidant (long-term oriented) and are less likely to manage earnings (direct negative relationship). This negative direct relationship may be due to relationship-driven myopia avoidance and/or value-driven myopia avoidance. However, in firms with high OC, managers engaged in CSR tend to be myopic (short-term-oriented) and are more likely to manage earnings indirectly by taking advantage of their firm's unique abilities

(OC). The positive indirect relationship may be due to incentive-driven myopia and/or opportunity-driven myopia.

# CHAPTER 5 : EARNINGS MANAGEMENT, CORPORATE SOCIAL RESPONSIBILITY AND ORGANISATION CAPITAL: THE IMPACT OF FINANCIAL DISTRESS

## 5.1 Introduction to the Chapter

This chapter addresses the second research objective, that is, *when* Corporate Social Responsibility (CSR) has a *direct effect* on Earnings Management (EM), and when CSR has an *indirect effect* on EM via Organization Capital (OC), by examining the context Financial Distress (FD). Research objective 2 is addressed by answering the following two research objectives:

*Research Question 2.1:* Does FD have a significant effect on the *direct* CSR-EM relationship?

*Research Question 2.2:* Does FD have a significant effect on the *indirect* CSR-EM relationship via OC?

This chapter is organised as follows: Sections 5.2 and 5.3 discuss the background and justification for, and contribution of, this study respectively. Section 5.4 discusses the theoretical background, followed by Section 5.5, which comprises the literature review and development of hypotheses on the effect of FD on relationships between CSR and EM, CSR and OC, and OC and EM. Section 5.6 presents the conceptual framework for the study. Section 5.7 discusses the data and research methodology adopted for this study. This is followed by results and findings in Sections 5.8, and the discussion of the findings in Section 5.9. The chapter ends with a chapter summary in Section 5.10.

## 5.2 Background and Justification

### 5.2.1 Background of the Study

In the current era, the pandemic outbreak of the novel coronavirus (COVID-19), and the rising rates of worldwide infections and death have led countries to shut down their international borders, hindering business operations and productions significantly (Barua, 2020). In the year 2020, countries across the entire globe started experiencing significant decline in their economic activities, moving towards a recession or perhaps an economic depression (Barua, 2020). Furthermore, the loss of consumer confidence across the globe is quite concerning, as it suggests that even after the world recovers from the pandemic, the economic recovery may take even longer. As the world faces such unprecedented times, a global economic depression may be inevitable (Barua, 2020). History

has taught us that FD is closely linked to economic crisis. The last few decades have brought up numerous cases of firms from all over the world experiencing FD (Bender, 2013). Generally, economic downturns increase the risks of firms going into FD, as evidenced during the Asian Financial Crisis in 1997 and the Global Financial Crisis (GFC) during 2007 and 2008 (Thim et al., 2011). Thus, with the economic crisis caused by the outbreak of COVID-19, firms all over the globe face an even higher risk of experiencing FD and possible bankruptcy. Hence, FD is a relevant topic of discussion in the present-day.

FD may result from a range of internal firm-level factors and broader macroeconomic factors (Habib et al., 2020a; Ikpesu et al., 2020). The firm-level determinants of FD may include: 1) financial factors such as, liquidity concerns (Wesa & Otinga, 2018), low profitability and revenue growth (Ikpesu & Eboiyehi, 2018), high leverage (Kristanti et al., 2016), declining share prices<sup>20</sup> (Idrees & Qayyum, 2018), significant book-tax difference<sup>21</sup> (Noga & Schnader, 2013), higher investments in research and development (R&D)<sup>22</sup> (Zhang, 2015), 2) non-financial factors such as, difficulties in recovering accounts receivables from outstanding customers, poor demand and sales, incompetence of the management team, and other uncontrollable events, such as fire and other disasters, strikes and loss of owner (Ikpesu et al., 2020), 3) corporate governance and ownership structures, such as, weak internal control systems (Simpson & Gleason, 1999) and concentrated ownership<sup>23</sup> (Lee & Yeh, 2004), and 4) certain CEO characteristics such as, CEO overconfidence<sup>24</sup> (Ho et al., 2016), CEO gender<sup>25</sup> (Darrat et al., 2016) and CEO duality<sup>26</sup> (Daily & Dalton, 1994). The macroeconomic factors, causing FD include a country's overall economic conditions, reflected by changes in inflation, interest rates, employment rates and macro-economic policies (Ikpesu et al., 2020; Liou, 2007).

There are various interpretations of FD by different authors. Baldwin & Mason (1983) define FD as

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<sup>20</sup> Low liquidity levels pose higher risks of firms failing to make regular repayments of debts; low profitability and low revenue growth may affect a firm's ability to repay debts; high leverage is an indication of higher indebtedness, posing higher risks of FD; decline in share prices may lead existing shareholders to withdraw their investments, adversely affecting the firm's stability and increasing FD risks (Ikpesu et al., 2020).

<sup>21</sup> Book-tax difference, referred to the difference between a firm's book income and taxable income, is a poor financial condition, and poses more FD risks (Noga & Schnader, 2013).

<sup>22</sup> R&D investments are associated with uncertain returns, thus increasing FD risks (Zhang, 2015).

<sup>23</sup> Ownership concentration, or block ownership, may increase the likelihood of collusion between owners and managers to obtain private control benefits, increasing FD risks.

<sup>24</sup> Ho, Huang, Lin and Yen (2016) find that banks with overconfident CEOs suffered more significantly during the GFC.

<sup>25</sup> Prior studies show that females are more risk-averse, are less likely to be over-confident, and are more likely to comply with regulations in contrast to males. Thus, male CEOs are perceived to create higher FD risks in contrast to female CEOs (Darrat et al., 2016).

<sup>26</sup> CEO duality, referred to as the separation of decision management from decision control, may lead CEOs to take actions to obtain private benefits of control, increasing FD risks (Daily & Dalton, 1994).

a situation when firms are unable to meet their outstanding financial obligations. Choy et al., 2011 explain FD as the inadequacy of a firm's operating cash flows in compensating their current obligations. Thakor, 2014 classifies FD into four categories, namely, 1) a decline in performance, indicated by low profitability, declining revenue growth and/or declining share prices (Ikpesu et al., 2020), 2) failure, indicated by a situation when the revenue or return on investment is lower than the cost of the investment (Ikpesu et al., 2020), 3) insolvency indicated by an inability to pay its current debts, primarily due to low liquidity (Habib et al., 2020a); 4) defaults indicated by a failure to meet periodic repayments on debts (Habib et al., 2020a). According to Balasubramanian et al., 2019, FD represents a situation when a firm faces negative net worth, that is, when the firm's liabilities exceed its liquidated value of total assets. Ikpesu et al., 2020 define FD as a situation where a firm experiences "a constant loss, breach of loan contract and difficulty in honouring organisational commitment" (p.103).

Persistent FD exposes firms to higher risks of bankruptcy and default (Habib et al., 2020a; Ohlson, 1980). Hence, the term *FD* is often used interchangeably with terms such as corporate failure, insolvency, default and bankruptcy (for example, see Altman, 1968; Ohlson, 1980). Corporate failures resulting from persistent FD may result in significant financial loss for stakeholders, particularly investors and creditors (Habib et al., 2020a; Jacoby et al., 2019). While administrative and legal expenses are some of the apparent direct costs attributable to the bankruptcy procedure (Altman, 1984), there may be substantial indirect costs resulting from FD (Habib et al., 2020a). Such indirect costs may include loss of sales due to customers switching to competitor firms (Altman, 1984; Habib et al., 2020a; Hoshi et al., 1990; Purnanandam, 2008), loss of key employees (Purnanandam, 2008), loss of valuable suppliers (Purnanandam, 2008) or restricted credits offered by suppliers due to negative speculation regarding the firm's financial condition (Hoshi et al., 1990), and forgone investment opportunities due to difficulties in obtaining loans (Pindado & Rodrigues, 2005).

A firm's FD not only adversely affects the firm itself, but also adversely affects the economy since investors and creditors experience substantial financial losses as a result (Habib et al., 2013). Thus, FD has been a cause of concern for investors and governments for a long time (Habib et al., 2013). From a micro level perspective, managers in financially distressed firms, often find their reputation at stake, in addition to facing risks of reductions in bonuses (Jacoby et al., 2019). Thus, managers within financially distressed firms may be more inclined to report more positive information about the firm's future in order to alleviate negative market reactions (Rogers & Stocken, 2005). Similarly,

it is also evident that financially distressed firms disclose good news more readily, but disclose bad news in a less timely manner (Charitou et al., 2011).

Prior studies have highlighted several incentives that lead managers to manage earnings during FD. For example, Burgstahler & Dichev (1997) suggest that EM incentives may arise from managers trying to avoid reporting losses, as management is often under pressure to report incremental earnings in the annual report. The interest in examining financial choices of financially distressed firms is not new in academic literature. Watts & Zimmerman (1986) and DeAngelo (1988) are two of the pioneers in raising concerns about changing accounting choices in financially distressed firms. The phenomenon of changing financial choices by distressed firms has led to numerous studies examining this issue more closely (Charitou et al., 2007). A common theme evident from these prior studies is that managerial incentives of distressed firms determine the financial reporting choices by management (for example, see DeAngelo et al., 1994; DeFond & Jiambalvo, 1994; Dichev & Skinner, 2002; Healy & Palepu, 1990; Sweeney, 1994). FD is a condition that may trigger incentives for managers to manage earnings (Gul et al., 2018). In particular, the literature suggests that managers in financially distressed firms have greater incentives to manage earnings in order to conceal or delay the exposure of the firm's financially distressed state (Charitou et al., 2007). Charitou et al. (2011) suggest two possible reasons behind the increased EM among distressed firms. First, out of genuine concern for the firm's survival in the short run, managers, acting as agents of the shareholders, may have incentives to manage earnings to avoid debt covenant violations, rather than being driven by self-serving motives (Charitou et al., 2011; Dichev & Skinner, 2002; Sweeney, 1994). Similarly, managers may also manage earnings to obtain waivers from debt covenant violations (Jaggi & Lee, 2002) or to conceal the firm's distress and obtain better renegotiation terms (Burgstahler & Dichev, 1997; DeAngelo et al., 1994; Rosner, 2003). Second, managers may have more opportunistic self-serving reasons to manage earnings. For example, managers may manage earnings upwards to increase their short-term compensation (Altman, 1984), to avoid losing their jobs, or to enhance their stock based compensation by inflating share prices (Charitou et al., 2011). Such rent extraction managerial behaviour to use EM as a short-term solution during FD is consistent with the managerial myopia hypothesis. While such incentives exist regardless of managerial ability, Gul et al. (2018) posit that managerial ability presents more opportunities to manage earnings and conceal opportunistic practices since more able managers have superior knowledge and understanding of the financial reporting practices and the firm's internal control weaknesses. Gul et al. (2018) find that higher managerial ability leads to higher EM

in financially distressed firms.

### **5.2.2 Justification of the Study**

The main purpose of this study is to examine the CSR-EM relationship further, and address *when* CSR affects EM directly, and *when* CSR affects EM indirectly. For this purpose, I examine the CSR-EM relationship in the context of FD. The motivation for choosing FD in this study mainly arises from the increasing relevance of this issue due to the worldwide Covid-19 pandemic outbreak. The pandemic outbreak has severely affected businesses worldwide, as trading has become restricted with country-wide restrictions as well as international border restrictions (Barua, 2020). Thousands of businesses have shut down and thousands are still experiencing financial struggle or distress. As of August 31, 2020, 97,966 businesses in USA alone have shut down permanently due to the pandemic, and the numbers are expected to continue increasing (see Sundaram, 2020).

Due to the growing relevance of FD for firms, I have chosen to examine the effect of FD on the CSR-EM relationship, to discover whether or not managerial behaviour (that is, managerial myopia and myopia avoidance) changes under crisis situations. While EM has been a widely researched topic in accounting research for several decades, the topic has gained increased attention following major corporate scandals such as Enron, WorldCom, and Xerox (Charitou et al., 2011). These scandals have also drawn attention to failing firms' motivations to manage earnings (Rosner, 2003). FD creates more motivations for EM, as managers may engage in income-increasing EM to conceal the distressed state of the firm (Rosner, 2003). However, when the financial challenges are more severe and no longer temporary, managers may cross the line and resort to fraudulent actions involving more material earnings overstatements (Argenti, 1976). Thus, EM engagement in financially distressed firms should be carefully considered, as it may be an indication of potential corporate failure (Argenti, 1976).

Prior studies suggest that FD creates more incentives for EM (for example see Charitou et al., 2007, 2011; Chen et al., 2010; DeAngelo et al., 1994; DeFond & Jiambalvo, 1994; Habib et al., 2013; Jacoby et al., 2019; Jaggi & Lee, 2002; Li et al., 2020; Rosner, 2003; Sweeney, 1994). This suggests that managers' behaviour, and underlying motives, change when they are under crisis, such as FD. Since the present study explains the CSR-EM relationship from the managerial behaviour perspectives, I posit that it is important to look at situations that may change managerial behaviour. However, the effect of FD on the relationship between CSR and EM is yet to be explored. My second research objective is to fill this gap in the literature and examine the effect of FD on the direct CSR-EM

relationship and the indirect CSR-EM relationship via OC. My results from Chapter 4 show a negative direct relationship between CSR and EM. Consistent with the myopia avoidance hypothesis, the results suggest that managers engaged in CSR are more concerned about maintaining long-term relationships with stakeholders, and therefore less likely to manage earnings for short-term objectives, that is, they are myopia avoidant (long-term oriented). In the present study, I examine whether managers' myopia avoidance and the direct CSR-EM relationship remain the same when the firm experiences FD. Additionally, the results from Chapter 4 also show that there is a positive indirect relationship between CSR and EM, through OC as a mediator. Consistent with the managerial myopia hypothesis, this suggests that managers engaged in CSR initiatives may take advantage of their firm's unique abilities (OC) to manage more earnings for short-term objectives, that is, they are myopic (short-term oriented). In the present study, I examine whether manager's myopic behaviour and the indirect CSR-EM relationship via OC remain the same, when the firm experiences FD. Examining the effect of FD on the direct and indirect CSR-EM relationships will provide further understanding on the CSR-EM relationship in a crisis context. In particular, this will address the questions *when* CSR affects EM directly, and *when* CSR affects EM indirectly, in context of FD.

### **5.3 Contribution of the Study**

The present study makes a number of contributions to the CSR-EM literature, theory and methodology. First, the present study contributes to the existing literature on four key research areas – CSR, EM, OC and FD, by linking these concepts together. Prior studies examining CSR and EM have examined the moderating effect of a multitude of factors, including country-level factors, such as investor protection (Martínez-Ferrero et al., 2015; Scholtens & Kang, 2013) and institutional framework (Kyaw et al., 2017); industry-level factors, such as, political environment (Yip et al., 2011) and powerful stakeholders (Muttakin et al., 2015); and firm-level factors, such as, various forms of ownership (Choi et al., 2013). However, to the best of my knowledge, this is the first study to examine FD as a context. Thus, the present study enriches the existing literature on the CSR-EM relationship by examining a new conditional factor (FD) that may affect the relationship.

Second, the present study examines the effect of FD, not only on the direct CSR-EM relationship, but also on the indirect CSR-EM relationship via OC. To the best of my knowledge, this is the first study to examine a contextual effect on the indirect CSR-EM relationship. Considering FD as the context, the study examines the direct and indirect CSR-EM relationships using two contrasting

managerial behaviour perspectives - the managerial myopia hypothesis and the myopia avoidance hypothesis, to provide better understanding of managerial behaviour during crisis. Furthermore, examining the effect of FD will provide insight into – 1) *when* CSR has a direct effect on EM; and 2) *when* CSR has an indirect effect on EM via OC, in the context of FD.

The study also makes several methodological contributions. To the best of my knowledge, this is the first study to examine a *moderated mediation effect*, by examining the moderating effect of FD on the indirect relationship between CSR and EM, mediated by OC. In the process, I first examine the existence of first stage moderation, by examining whether FD moderates the relationship between CSR and OC. My results from Chapter 4 indicate that firms with high CSR have better OC, as CSR creates intangible resources, such as, knowledge developments, that are critical for the sustainability of the business models (Villalonga, 2004). The present study examines how FD affects the relationship between CSR and OC. To the best of my knowledge, this is the first study to examine the moderated effect of FD on the relationship between CSR and OC. Next, the study examines second stage moderation by examining whether FD moderates the relationship between OC and EM. My results in Chapter 4 report that firms with superior OC are more likely to manage earnings. FD, on the other hand, also creates managerial incentives to manage earnings (for example, see Burgstahler & Dichev, 1997; Charitou et al., 2011; DeAngelo et al., 1994; Dichev & Skinner, 2002; Jaggi & Lee, 2002; Rosner, 2003; Sweeney, 1994). Thus, prior studies have examined both OC and FD individually as factors that create EM incentives. However, to the best of my knowledge, the interaction effect of OC and FD on EM remains unaddressed to date. Thus, by including FD as a moderator, the present study explores if FD strengthens or weakens the relationship between OC and EM.

## **5.4 Theoretical Background**

This section discusses the theoretical background of this study. The main relationships tested in this study may be explained with four theories – 1) the resource-based view (RBV) theory, 2) the slack resource theory, 3) the managerial myopia hypothesis, and 4) the myopia avoidance hypothesis.

The RBV theory explains the relationship between CSR and OC, while the slack resource theory explains how the CSR and OC relationship may change during FD. The managerial myopia hypothesis and the myopia avoidance hypothesis present two opposing perspectives on managers' likelihood of engaging in EM. These two theories explain the potential relationship between OC and EM, and between CSR and EM. These theories are also further extended to explain how these relationships

may change during FD.

#### **5.4.1 Resource-Based View (RBV) Theory**

As discussed in greater detail in Chapter 4, the RBV theory suggests that CSR activities enhance intangible assets, specifically knowledge development (Eisenhardt & Martin, 2000; Nikolaou, 2017; Villalonga, 2004), that in turn improves a firm's OC, including superior managerial quality practices, more knowledgeable workforce, and efficient organisational processes and designs (Branco & Rodrigues, 2006; Orlitzky, 2005). CSR actions and ethical orientation become embedded in the firm's identity, the organisational design, systems, practices, and policies (Dutton & Dukerich, 1991; Starik & Rands, 1995). Thus, CSR practices are likely to blend into the organisational process and become part of the structural capital or organisation capital.

While the RBV explains the positive relationship between CSR and OC, this may or may not hold when the firm experiences FD. There are two opposing possibilities. First, the interaction of FD and CSR may enhance OC. Financially distressed firms may increase their CSR practices as a turnaround strategy. When experiencing FD, managers may use CSR activities to improve their relationships with stakeholders as a means to obtain possible salary renegotiation with employees and unions, to reduce negative publicity, to reduce costs in employee redundancy, and to obtain better credit terms (Habib et al., 2020a). Thus, consistent with the RBV perspective, I expect FD to positively affect (strengthen) the relationship between CSR and OC. However, the second perspective is a contrasting view that may be explained by the slack resource theory, discussed below.

#### **5.4.2 Slack Resource Theory**

The RBV discussed above is based on the assumption that the firm has the capability and 'slack' (that is, excess) resources required to exploit its unique resources as opportunities, and achieve sustainable competitive advantage (Huang & Li, 2012). 'Slack' (also known as surplus or residual resources) is defined as "the difference between total resources and total necessary payments" of a firm (Cyert & March, 1963, p. 42). Similar to obtaining any other asset, OC also requires some form of investment and resource allocation (Carlin et al., 2012). However, the outcome or value created by OC may not be realised immediately (Brynjolfsson et al., 2002). For example, investment in a new business model or organizational process may take years to be realised, and only some of these investments may turn out to be profitable (Brynjolfsson et al., 2002). Hence, rational decision making is essential as managers need to weigh the possible failure risks before making a decision on such investments (Brynjolfsson et al., 2002). Thus, according to the slack resource theory, firms,

undergoing FD have fewer slack resources, and are therefore less likely to make investments in enhancing OC (or intangible assets in general).

Furthermore, the slack resource theory posits that less profitable firms have fewer surplus (i.e. slack) resources to spend on CSR in comparison to more profitable firms with greater slack resources (for example see Campbell, 2007; Chan et al., 2017). These studies suggest that in crisis situations, firms may react differently as priorities change. Thus, consistent with the slack resource theory, as firms' priorities change during FD, I expect the relationship between CSR and OC to become weaker.

The discussion above suggests that the moderating effect of FD on the relationship between CSR and OC may be explained by two contrasting perspectives. The RBV theory suggests that FD may strengthen the relationship between CSR and OC, while the slack resource theory suggests a contrasting perspective that FD weakens the relationship between CSR and EM. In the next two sections, I present two contrasting perspectives on discuss managerial behaviour that explain CSR-EM relationship during FD – 1) managerial myopia hypothesis; and 2) myopia avoidance hypothesis.

### **5.4.3 Managerial Myopia Hypothesis**

Managerial myopia, or short termism, is a term used to describe managerial preference towards actions or behaviour that are focussed on realising short-term objectives. Such a short-term focus often results in unfavourable consequences for the firm's ability to create long-term value (Hayes & Abernathy, 1980). The literature suggests that when firms experience FD, managerial myopic behaviour becomes more prevalent (Gu et al., 2020). FD represents a situation when the firm faces financial difficulties or constraints. FD may have substantial implications on the firm, and its stakeholders, including higher risks of bankruptcy (Habib et al., 2020a; Ohlson, 1980), loss of customers and sales (Altman, 1984; Habib et al., 2020a; Hoshi et al., 1990; Purnanandam, 2008), loss of key employees and valuable suppliers (Purnanandam, 2008), and financial losses for the stakeholders (Habib et al., 2020a; Jacoby et al., 2019). The literature suggests that FD may shift management's focus to short-term survival issues, and thus managers may engage in EM in order to increase short-term compensation (Altman, 1984), avoid breach of loan contracts (Charitou et al., 2011; Dichev & Skinner, 2002; Sweeney, 1994), safeguard their employment or inflate stock prices and gain from stock-based compensation (Charitou et al., 2011), obtain waivers from debt covenant violations (Jaggi & Lee, 2002) or conceal the firm's distress and obtain better renegotiation terms (Burgstahler & Dichev, 1997; DeAngelo et al., 1994; Rosner, 2003).

As discussed in greater detail in Chapter 4, managers in firms with high OC are more likely to manage earnings for two main reasons – 1) greater market pressures to achieve short-term targets (Malmendier & Tate, 2009), and to safeguard their reputation that may be damaged by repeated inability to meet targets (Francis et al., 2008); and 2) greater opportunities to manage earnings due to superior abilities, such as superior managerial practices, processes, techniques and knowledge about the firm and its internal control systems (Demerjian et al., 2013; Gul et al., 2018). Chapter 4 results support this view, suggesting a positive relationship between OC and EM. This is consistent with the managerial myopia hypothesis. The short-term behaviour of managers in high OC firms is likely to be even stronger among financially distressed firms. As discussed above, FD on its own creates incentives for managers to manage earnings, while OC provides more opportunities for managers to manage earnings. Thus, consistent with the managerial myopia hypothesis, I expect the interaction of FD and OC to escalate managers' myopic behaviour, and lead to higher EM.

The managerial myopia hypothesis may also explain the relationship between CSR and EM. One of the perspectives of the CSR-EM relationship suggests that managers in firms engaged in CSR are more likely to manage earnings due to – 1) incentive-driven myopia resulting from greater incentives arising from pressures to meet short-term targets and please stakeholders (Chih et al., 2008; Gargouri et al., 2010; Habbash & Haddad, 2020), a need to safeguard their reputation (Francis et al., 2008), and/or increase their compensation-based bonuses (Narayanan, 1985; Schotter & Weigelt, 1992); and/or 2) opportunity-driven myopia arising from greater opportunities to manage earnings. Firms engaged in CSR initiatives are often perceived as doing things the right way, thus reducing stakeholders' scrutiny of managers, which opens up more opportunities to manage earnings (Kim et al., 2012; Muttakin et al., 2015). Thus, managers involved in CSR initiatives may manage earnings more, and use their CSR activities as a defensive shield to hide their engagement in EM (Bozzolan et al., 2015; Gao & Zhang, 2015; Prior et al., 2008). Thus, consistent with the managerial myopia hypothesis, this view suggests that managers engaged in CSR activities are more likely to manage earnings for short-term gains. Chapter 4 results show that there is a negative direct relationship between CSR and EM, but a positive indirect relationship between CSR and EM via OC. The negative direct relationship is consistent with the myopia avoidance hypothesis, that I discuss in the next section. The positive indirect relationship suggests that managers engaged in CSR may leverage on their firm's OC to manage earnings for short-term gains. This is consistent with the managerial myopia hypothesis. The present study examines whether this managerial myopia (that is, the positive indirect relationship) changes during FD.

There can be two opposing possibilities. First, FD may worsen the opportunistic use of CSR to manage earnings by strengthening the positive indirect relationship between CSR and EM via OC, making managerial myopia more prominent. As discussed above, FD generally creates more managerial incentives to manage earnings. Thus, it can be expected that the positive indirect relationship between CSR and EM via OC, becomes more pronounced during FD, consistent with the managerial myopia hypothesis. As both OC and FD create more EM incentives during FD, managers may be expected to use CSR more opportunistically to manage earnings, leveraging from the greater EM opportunities provided by OC.

The second possibility is a contrasting perspective that leads to the expectation that FD may improve the opportunistic use of CSR to manage earnings, that is managers' myopic actions may reduce during FD. There are a number of reasons behind this perspective. First, as managers in high OC firms are more knowledgeable, I expect that managers may have a better understanding of the adverse consequences of EM. Particularly when experiencing FD, managers in high OC firms may refrain from such risk-taking opportunistic actions (that is, EM), and thus manage less earnings. Second, managers' priorities may change when their firm experiences FD. During FD, managers may be more concerned about safeguarding their jobs, as opposed to their reputation, which may also explain why they manage earnings less. Third, as the slack resource theory suggests, managers may engage less in CSR during FD. Thus, it can be expected that during FD, when funds are tight, any expenditures on CSR engagements would likely result from genuine concerns for stakeholders, rather than from opportunistic motives.

The next section discusses the myopia avoidance hypothesis that suggests a contrasting perspective on managers' likelihood of managing earnings.

#### **5.4.4 Myopia Avoidance Hypothesis**

Myopia avoidance is a term that suggests that managers would avoid myopic or short termism behaviour and actions, focussing more on long-term objectives. Thus, the myopia avoidance hypothesis poses a contrasting perspective to the managerial myopia hypothesis, suggesting that managers are more long-term oriented and are less likely to be driven solely by short-term goals, and thus, less likely to manage earnings (Chih et al., 2008).

As discussed in the previous section, Chapter 4 results show that managers in high OC firms are more likely to manage earnings. However, managers may react differently in crisis situations, such

as FD. Therefore, from a contrasting perspective, I expect that managers in high OC firms will manage earnings less during FD. With their higher knowledge and skills, they are able to exert higher levels of accuracy in their financial reporting estimations (for example, see Demerjian et al., 2013). When experiencing FD, it is plausible that managers in high OC firms know better than to manage earnings as a short-term solution to hide or delay their firms' distressed state. Thus, it can be expected that these managers will take actions that would help the firm towards long-term recovery. This view is consistent with the myopia avoidance hypothesis.

The myopia avoidance hypothesis also presents a contrasting perspective on the relationship between CSR and EM. The contrasting perspective indicates that managers involved in CSR activities, are long-term oriented, and are less likely to manage earnings to meet short-term objectives (Chih et al., 2008; Choi & Pae, 2011). The lower EM may arise because managers engaged in CSR – 1) have genuine concerns of sustaining long-term relationships with their stakeholders, that is, relationship-driven myopia avoidance (Bozzolan et al., 2015; Chih et al., 2008); and/or 2) have strong ethical and moral values, that is, value-driven myopia avoidance (Litt et al., 2013). Chapter 4 results show a negative direct relationship between CSR and EM, consistent with the myopia avoidance hypothesis. The present study examines whether managers' avoidance of myopia (that is, the negative direct CSR-EM relationship) still holds when the firm experiences FD. I expect that managers who are genuinely motivated by their ethical and moral obligations, and who genuinely care about their stakeholders will continue to be driven by their long-term orientation and avoid using CSR opportunistically to manage earnings.

## **5.5 Literature Review and Empirical Evidence**

### **5.5.1 *FD Literature***

FD has been a prevalent topic of discussion for several decades (Geng et al., 2015). Persistent FD can increase the firms' likelihood of bankruptcy and default (Habib et al., 2020a; Ohlson, 1980). FD, or corporate failure, not only affects the firm in question, but also has significant implications for stakeholders, such as, financial institutions, investors, creditors, and the government, as well as for the broader economy (Geng et al., 2015; Habib et al., 2020a). Financial institutions may suffer significant losses from the inability to recover loans from financially distressed firms (Balasubramanian et al., 2019). Creditors also suffer similar risks of being unable to recover the credits offered to distressed firms. Furthermore, FD may have broader social, political and economic

impacts. (Balasubramanian et al., 2019).

Although FD affects several external parties, the most significant costs of FD are borne by the firms themselves. The direct costs of FD or bankruptcy include explicit expenses, such as, legal, filing, accounting fees, trustee expenses and other reorganisation or liquidation related administrative expenses (Altman, 1984). Additionally, the negative publicity creates a perception that the firm is likely to default, and this may lead to several indirect costs including, lost profits, lost sales, difficulties in obtaining credit, etc. (Altman, 1984). Altman (1984) adds that the indirect costs also include managerial opportunity costs arising firm lost managerial efforts. These indirect costs are relevant not only to firms that actually fail, but also firms that have high probabilities of failure or bankruptcy (Altman, 1984).

A large body of literature focusses on how FD affects EM or the quality of financial information (for example see (Charitou et al., 2007, 2011; Chen et al., 2010; DeAngelo et al., 1994; DeFond & Jiambalvo, 1994; Habib et al., 2013; Jacoby et al., 2019; Jaggi & Lee, 2002; Li et al., 2020; Rosner, 2003; Sweeney, 1994)). I discuss these studies in Section 5.5.2. Apart from financial reporting consequences, prior studies have identified several other consequences of FD, such as high level of management turnover (Gilson, 1989), dividend reductions (DeAngelo & DeAngelo, 1990), risks of acquisition by another firm (Theodossiou et al., 1996), higher use of trade credit (Molina & Preve, 2012), and higher likelihood of tax avoidance (Richardson et al., 2015).

The present study examines the consequences of FD on OC and FD by examining interlinks between FD, CSR, OC and EM. Specifically, I examine how FD interacts with CSR and OC and in turn affects EM, that is the moderating role of FD in the direct relationship between CSR and EM, and in the indirect relationship between CSR and EM via OC. To that effect, the remainder of this section is arranged as follows: Section 5.5.2 discusses the effect of FD on EM, Section 5.5.3 discusses the direct effect of CSR on EM, and how FD affects this relationship; Section 5.5.4 discusses the indirect effect of CSR on EM via OC, and the interaction effect of FD on this relationship. In section 5.5.4, I also discuss the indirect paths involved, that is, the effect of CSR and OC, and the effect of OC on EM, and the interaction of FD both of these relationships. Each of the sections discuss the relevant empirical literature from which a hypothesis is developed to be tested in this study.

### **5.5.2 The Effect of FD on EM**

I have identified 11 studies examining the effect of FD on EM. Table 5.1 summarises the relevant

literature discussing the relationship between FD and EM.

**Table 5.1 Summary of Key Literature on FD and EM**

(1)	(2)	(3)	(4)	(5)	(6)
Authors (Year)	Country Sample (Period)	Research Objective	Research method	Theories supported	Key findings
DeAngelo et al. (1994)	USA 76 firms (1980 - 1985)	Examine EM level in financially distressed firms	<b>Method:</b> Level of EM in sample of distressed firms <b>EM measure:</b> Bowen et al. (1986) <b>FD measure:</b> Firms with persistent losses for at least 3 years and cash dividend reductions	Stakeholder conflict perspective	Large negative accruals during the dividend reduction year and the following 2 years
DeFond & Jiambalvo (1994)	USA 94 firms (1985 - 1988)	Examine EM in firms with debt-covenant violations	<b>Method:</b> Time-series and cross-sectional models – sample t-tests and Wilcoxon tests <b>EM measure:</b> Jones (1991a) <b>FD measure:</b> Firms with reports of debt covenant violations in annual reports	Positive accounting theory	Positive abnormal total accruals in the year before violation. Positive abnormal working capital accruals in the year of violation and the year before.
Sweeney (1994)	USA 130 firms (1980 - 1989)	Examine accounting changes in firms with debt-covenant violations	<b>Method:</b> Firms with first time debt-covenant violations matched with a control firm sample <b>EM measure:</b> Income-increasing accounting procedures <b>FD measure:</b> Debt covenant violations	Covenant-based hypothesis	Higher income-increasing accounting changes in firms approaching default
Jaggi & Lee (2002)	USA 216 firms (1989 - 1996)	Examine EM in financially distressed firms	<b>Method:</b> Sample split based on FD measure <b>EM measure:</b> Dechow et al. (1995); Kasznik (1999); Kothari et al. (2005) <b>FD measure:</b> Firms with debt covenant violations and firms with debt restructuring	Positive accounting theory	Higher income-increasing accruals in distressed firms if they can obtain debt covenant violations waivers. Higher income-decreasing accruals in distressed firms if debt restructuring or renegotiation takes place.
Rosner (2003)	USA 2,500 observations/ 293 firms (1985 – 1997)	Examine EM in financially distressed firms	<b>Method:</b> 42 non-sanctioned and 51 SEC-sanctioned firms matched with 293 control firms from USA (year of bankruptcy + 6 preceding years) <b>EM measure:</b> <b>FD measure:</b> McKeown et al. (1991)	n/a	Bankrupt firms have significant income-increasing accrual EM in non-going-concern years, in contrast to non-failing firms
Charitou et al. (2007)	USA 455 firms (1986 - 2001)	Examine EM in financially distressed firms	<b>Method:</b> Level of EM in sample of distressed firms <b>EM measure:</b> Jones (1991a); Teoh et al. (1998) <b>FD measure:</b> Bankruptcy filing	n/a	Higher income-decreasing EM one year prior to bankruptcy filing. Income-increasing EM 3-5 years prior to bankruptcy filing

Chen et al. (2010)	<i>China</i> 34 firms (2002 - 2006)	Examine EM in financially distressed firms	<b>Method:</b> Level of EM in sample of distressed firms <b>EM measure:</b> Dechow et al. (1995) <b>FD measure:</b> ST ('Special Treatment' status) firms	n/a	More EM before and after being classified as special treatment (ST), to avoid continued ST status and risk of being de-listed
Charitou et al. (2011)	<i>USA</i> 15,049 firms (1990 - 2004)	Examine EM in financially distressed firms	<b>Method:</b> Level of EM in sample of distressed firms <b>EM measure:</b> Small positive earnings <b>FD measure:</b> Debt Default likelihood	n/a	Distressed firms manage earnings toward a positive target more than healthy firms
Habib et al. (2013)	<i>New Zealand</i> 767 observations (2000 - 2011)	Examine EM in financially distressed firms	<b>Method:</b> OLS <b>EM measure:</b> Dechow et al. (1995) <b>FD measure:</b> Hopwood et al. (1994); McKeown et al. (1991)	Managerial opportunism perspective	Managers in financially distressed firms engage in more income-decreasing EM; GFC had a small effect on the association between EM and FD.
Jacoby et al. (2019)	<i>China</i> 292,223 observations (1998 - 2009)	Examine EM in financially distressed firms, and the joint moderating effect of political affiliation and regional development	<b>Method:</b> OLS <b>EM measure:</b> Charitou et al. (2011) <b>FD measure:</b> Altman (2005)	Agency theory	Positive relationship between FD and EM, weakened by political affiliations
Li et al. (2020)	<i>China</i> 15,769 observations (2007 - 2015)	Examine EM in financially distressed firms, and the moderating effect of internal control quality	<b>Method:</b> OLS <b>EM measure:</b> <b>FD measure:</b> Zang (2012)	n/a	More accruals-based EM and less REM in financially distressed firms. Internal control moderates the FD-EM relationship by reducing both accruals-based EM and REM

As illustrated in Table 5.1 Column (2), the majority of prior studies (7 of the 11 studies) examining the FD-EM relationship are based on samples from the USA (see Charitou et al., 2007, 2011; DeAngelo et al., 1994; DeFond & Jiambalvo, 1994; Jaggi & Lee, 2002; Rosner, 2003; Sweeney, 1994). Habib et al. (2013) is the first study to examine the FD-EM relationship in a developed country outside USA. Specifically, Habib et al. (2013) examines a sample of firms from New Zealand. Chen et al. (2010) is the first study to examine the effect of FD on EM using an emerging market sample, that is, China. Following this, two more recent studies have examined the FD-EM relationship in China (see Jacoby et al., 2019; Li et al., 2020).

Column (3) of Table 5.1 shows the research objectives of prior studies. The majority of prior studies examines the level of EM in financially distressed firms (see Charitou et al., 2007, 2011; Chen et al., 2010; DeAngelo et al., 1994; DeFond & Jiambalvo, 1994; Habib et al., 2013; Jaggi & Lee, 2002; Rosner, 2003; Sweeney, 1994). Only recently, there appears to be some research attention to examining the moderating effect on the FD-EM relationship of factors, such as, political affiliation and regional development (see Jacoby et al., 2019), and internal control quality (see Li et al., 2020).

As shown in Column (4) of Table 5.1, there is no agreed measurement for FD. Prior studies have used various methods for measuring FD, including persistent losses (see Chen et al., 2010; DeAngelo et al., 1994), dividend reductions (see DeAngelo et al., 1994), debt covenant violations and/or debt default possibilities (see Charitou et al., 2011; DeFond & Jiambalvo, 1994; Dichev & Skinner, 2002; Jaggi & Lee, 2002; Sweeney, 1994), debt restructuring (see Jaggi & Lee, 2002), bankruptcy filing (see Charitou et al., 2007), Altman Z-score and/or variations of the z-score (see Jacoby et al., 2019; Li et al., 2020), and FD classification based on McKeown et al. (1991) (see Habib et al., 2013; Rosner, 2003). The present study, following Rosner (2003) and Habib et al. (2013), uses the FD classification approach introduced by McKeown et al. (1991). This is discussed in greater detail in Section 5.7.5

As evident from Column (6) of Table 5.1, there is consensus in the literature that FD has a positive effect on EM. DeAngelo et al. (1994) find significant income-decreasing accruals during the year of dividend reduction, and two years following the dividend reduction. The results suggest that managers may deflate reported earnings to portray the firm's financial challenges and possibly acquire better renegotiation terms (DeAngelo et al., 1994).

Several studies suggest that EM incentives in financially distressed firms arise due to the possibility of debt covenant violations (or debt defaults) (for example, see Charitou et al., 2011; DeFond & Jiambalvo, 1994; Jaggi & Lee, 2002; Sweeney, 1994). Sweeney (1994) finds higher income-increasing

accounting choices among firms prior to default. DeFond & Jiambalvo (1994) also find higher income-increasing accruals management one year prior to and during the year of debt covenant violations. Jaggi & Lee (2002) report higher income-increasing discretionary accruals in instances when the firms are able to obtain waivers. The results indicate that when the firm experiences a temporary FD, and is able to secure waivers for debt covenant violations, managers may inflate reported earnings as a means of providing assurance to their creditors that the firm is in a less severe distress (Jaggi & Lee, 2002). In contrast, the study also reports higher income-decreasing EM in instances when debt restructuring or renegotiation takes place (Jaggi & Lee, 2002). The authors explain that renegotiation of debt covenants takes place when the firm experiences more severe FD. In such situations, managers may be more inclined to deflate their reported earnings to emphasise on their financial difficulties in attempts to obtain better and more favourable debt contract renegotiation terms. Charitou et al. (2011) finds that firms, with possibilities of debt default, are likely to avoid reporting negative earnings, and manage earnings to a positive target. Jacoby et al. (2019) also report similar EM behaviour (that is, EM towards a positive target) among financially distressed private firms in China, using the Altman Z-score.

Charitou et al. (2007) report that managers are more inclined to engage in income-increasing discretionary accruals management 3 to 5 years prior to the firm's bankruptcy filing. In contrast, managers are more likely to engage in income-decreasing discretionary accruals management during the year immediately before the firm's bankruptcy filing. As the probability of bankruptcy filing gets larger, managers may be more manage earnings downwards to portray to the stakeholders that the firm is in FD, and thus prompt market reaction. Other studies report higher EM during the time that firms experience FD (for example, see Chen et al., 2010; Habib et al., 2013; Li et al., 2020; Rosner, 2003). Rosner (2003) finds evidence of higher income-increasing accruals management by firms in their non-going concern years (that is, failing firms). Chen et al. (2010) suggest that during FD, firms are more likely to inflate earnings via EM to avoid risks of being de-listed. In contrast, Habib et al. (2013) find that managers in financially distressed firms are more likely to manage earnings using income-decreasing discretionary accruals. The results suggest that during FD, investors are more likely to anticipate EM and thus scrutinise financial statements more meticulously, thus providing managers with fewer opportunities to inflate earnings. Li et al. (2020) find that distressed firms are more likely to manage earnings using discretionary accruals in contrast to real earnings management (REM), as the latter involves actual changes to business operations that may be more costly. Thus, distressed firms are more likely to engage in the less costly method

of managing earnings via using discretionary accruals that involve changes in accounting policies, estimates, etc. (Li et al., 2020).

As discussed in the preceding paragraphs, the literature shows that when firms experience FD, managers may behave more opportunistically (Gul et al., 2018; Habib et al., 2013; Rosner, 2003). Managers in financially distressed firms may manage more earnings for various reasons, such as to avoid debt covenant violations and the resulting loss of key stakeholders (Dichev & Skinner, 2002; Sweeney, 1994), obtain debt covenant waivers or better renegotiation terms (DeAngelo et al., 1994; Jaggi & Lee, 2002), avoid bankruptcy, acquisition or takeover (Rogers & Stocken, 2005), avoid threats of getting the firm delisted (Chen et al., 2010), or more self-serving motives, such as saving their employment, and enhancing their compensation-based bonuses by temporarily inflating share prices (Charitou et al., 2011). Managing earnings during FD is a short-term solution to delay the consequences of FD, or to temporarily conceal the distressed state from stakeholders (Rosner, 2003). This short-term orientation of managers during FD is consistent with the managerial myopia hypothesis. Consistent with this perspective, and with the literature, I test the following hypothesis:

H2.1: Consistent with the managerial myopia hypothesis, there is a positive and significant relationship between FD and EM.

### **5.5.3 The Direct Effect of CSR on EM**

There is an abundance of literature on the relationship between CSR and EM, reporting mixed findings. A detailed discussion of the literature on CSR and EM has been presented in Chapters 2.

Some studies report a *positive direct relationship* between CSR and EM (for example, see Buerthey et al., 2020; Habbash & Haddad, 2020; Hickman et al., 2021; Pratiwi & Siregar, 2019; Riahi-Belkaoui, 2003). The positive relationship suggests that managers engaged in CSR may manage more earnings due to: 1) *pressures arising from the need to please multiple stakeholders* (Chih et al., 2008; Habbash & Haddad, 2020; Kyaw et al., 2017); or 2) *opportunistic motives* of managers to use CSR activities as a defensive shield, while they manage earnings for short-term objectives, such as meeting short-term targets (Buerthey et al., 2020; Jordaan et al., 2018; Mohamed et al., 2020; Riahi-Belkaoui, 2003). The positive CSR-EM relationship is consistent with the managerial myopia hypothesis, suggesting that managers are more driven by short-term orientations.

However, the majority of prior studies report a *negative direct relationship* between CSR and EM (for example, see Almahrog et al., 2018; Bozzolan et al., 2015; Calegari et al., 2010; Chen & Hung,

2021; Cho & Chun, 2015; Chun & Cho, 2017; Faisal et al., 2018; Gao & Zhang, 2015; García-Sánchez et al., 2020; Gerged et al., 2020; Gerged et al., 2021; Gras-Gil et al., 2016; Hong & Andersen, 2011; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Litt et al., 2013; Martínez-Ferrero et al., 2015; Palacios-Manzano et al., 2019; Patten & Trompeter, 2003; Scholtens & Kang, 2013; Sial et al., 2019; Wang et al., 2018). The negative relationship suggests that managers engaged in CSR activities – 1) care more about sustaining long-term relationships with stakeholders (Almahrog et al., 2018; Amar & Chakroun, 2018; Cho & Chun, 2015; Choi et al., 2018; Chun & Cho, 2017; Faisal et al., 2018; Gras-Gil et al., 2016; Hong & Andersen, 2011; Joubert, 2020; Velte, 2019)), and/or 2) are driven by their ethical and moral values (Calegari et al., 2010; Gao & Zhang, 2015; García-Sánchez et al., 2020; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Martínez-Ferrero et al., 2015; Mohamed et al., 2020; Palacios-Manzano et al., 2019; Rezaee et al., 2020; Scholtens & Kang, 2013; Sial et al., 2019)). The negative CSR-EM relationship is consistent with the myopia avoidance hypothesis, suggesting that managers have a more long-term orientation. A number of studies also suggest that the CSR-EM relationship is *contextual*, based on various other factors (for example, see Amar & Chakroun, 2018; Chih et al., 2008; Choi et al., 2018; Gargouri et al., 2010; Gong & Ho, 2018; Heltzer, 2011; Jordaan et al., 2018; Kim et al., 2019; Kolsi & Attayah, 2018; Kyaw et al., 2017; Liu & Lee, 2019; Mohamed et al., 2020; Muttakin et al., 2015; Rezaee et al., 2020; Velte, 2019, 2021; Yip et al., 2011; Zhang et al., 2021), such as *the EM measure* used (see Chih et al., 2008; Jordaan et al., 2018; Kolsi & Attayah, 2018; Velte, 2019, 2021; Zhang et al., 2021), *the CSR dimension* used (see Amar & Chakroun, 2018; Gargouri et al., 2010), *the level of stakeholder scrutiny in particular industries* (see Muttakin et al., 2015; Yip et al., 2011), *institutional framework/development* (see Kim et al., 2019; Kyaw et al., 2017), *state versus private ownership* (see Kim et al., 2019; Li et al., 2020; Liu & Lee, 2019; Rezaee et al., 2020), and *mandatory CSR disclosures* (see Gong & Ho, 2018; Wang et al., 2018).

While my findings from Chapter 4 and majority of the literature suggests that CSR has a negative direct effect on EM, a different stream of literature suggests a positive effect of FD on EM (for example, see Burgstahler & Dichev, 1997; Charitou et al., 2011; DeAngelo et al., 1994; Dichev & Skinner, 2002; Jaggi & Lee, 2002; Rosner, 2003; Sweeney, 1994). I have not identified any study examining the interaction of CSR and FD on EM. FD is a crisis situation, and managers may react differently in crisis situations. Thus, FD may have two possible contrasting effects on the relationship between CSR and EM. First, consistent to the managerial myopia hypothesis, since financially distressed firms create more EM incentives, and reduce CSR initiatives due to lack of slack resources (Campbell, 2007), the presence of FD may weaken the negative relationship between CSR and EM.

Managers in financially distressed firms may shift their focus, from sustaining their relationships with their stakeholders, to short-term survival issues of the firm. Second, a contrasting perspective suggests the relationship between CSR and EM to be stronger in financially distressed firms. Consistent with the myopia avoidance hypothesis, this view suggests that managers in CSR firms are likely to remain long-term oriented, even during FD. Their ethical values and their concern to maintain strong long-term relationships with stakeholders will discourage them from managing earnings. In the present study, I examine whether this negative direct CSR-EM relationship stays the same or changes (that is, either strengthens or weakens) when firms experience FD. Therefore, to address research question 1, I test the following hypothesis:

H2.2: FD has a significant moderating effect on the *direct* relationship between CSR and EM.

#### **5.5.4 The Indirect Paths in the CSR-EM Relationship via OC**

To discuss the indirect effect of CSR on EM via the mediating channel OC, it is important to first discuss each of the paths through which CSR indirectly affects EM via OC, that is, the effect of CSR on OC and the effect of OC on EM. The following paragraphs discuss the relevant literature on the two indirect paths leading to the discussion on the overall indirect CSR-EM relationship via OC.

##### ***The effect of CSR on OC***

Prior studies have examined the relationship between CSR and intellectual capital (or intangibles), but there is no literature linking CSR specifically to OC. A detailed discussion of prior literature on CSR and intellectual capital has been presented in Chapter 4. The literature suggests that CSR has a positive effect on the broader intellectual capital (for example, see Altuner et al., 2015; Hawn & Ioannou, 2016), and specific components of intellectual capital, such as high performance work system outcomes (specifically, employee satisfaction, commitment and organisational citizenship behaviour) (Zhang et al., 2014), human capital (see Casalegno et al., 2017; Pedrini, 2007) and various relational (or customer) capital aspects, including, brand equity (Hur et al., 2014), brand image (Martínez et al., 2014), customer satisfaction (Chung et al., 2015), customer/brand loyalty (Chung et al., 2015; Martínez et al., 2014), and employer branding (that is, making the firm more likely to attract talented workforce) (Biswas & Suar, 2016).

The literature is quite consistent in reporting a positive relationship between CSR and intellectual capital. However, there is a gap in the literature regarding the relationship between CSR and OC (see Chapter 4 for a more elaborate discussion). My analysis in Chapter 4 examines how CSR affects

OC, a specific component of intellectual capital, as opposed to the broader category of intellectual capital. While the literature suggests that CSR enhances intellectual capital components such as relational capital and human capital, I reason that CSR first affects the organisational practices and processes, that is, OC. According to the RBV, CSR initiatives by managers are likely to blend into the organisational practices and processes (Branco & Rodrigues, 2006; Orlitzky, 2005), and become part of organisation (or structural) capital (Dutton & Dukerich, 1991; Starik & Rands, 1995). Furthermore, CSR has the capability of creating intangible resources, such as, knowledge development for businesses, which are essential for business sustainability, and thus enhance OC (Eisenhardt & Martin, 2000; Nikolaou, 2017; Villalonga, 2004). Consistent with this view and with the RBV theory, my results in Chapter 4 suggest a positive relationship between CSR and OC. In the present study, I examine how FD affects the positive relationship between CSR and OC. To that effect, I first examine the effect of FD on OC. To the best of my knowledge, no prior studies have examined the relationship between FD and OC.

Despite a lack of prior evidence on a direct link between FD and OC, studies have examined various facets of managerial and employment changes when firms experience FD. Given that OC represents managerial quality practices, training, and the overall organisational process, design and culture, this part of the literature review discusses prior studies examining changes in the management and employment structure in financially distressed firms.

Brickley (2003) informs that CEO turnover is higher in financially distressed firms. Firms experiencing FD not only find it challenging to retain high level managers or CEOs, but also other employees, as well as finding it difficult to attract new employees. Baghai et al. (2020) report that distressed firms lose their ability to retain their skilled workers. As highly skilled and talented workers are more likely to be employed in strategic positions within the firm, they have higher knowledge of the extent of FD, and also face risks of reputational damage. These may lead them to decide to leave the distressed firm (Baghai et al., 2020). Brown & Matsa (2016) find that there are fewer and lower quality job applicants interested in firms experiencing FD. Brown & Matsa (2016) explain that job applicants are more likely to decline to seek employment in financially distressed firms in order to avoid the unemployment risks that they may face as an employee in a distressed firm.

Despite the argument in the literature that FD leads firms to face challenges in attracting and retaining their skilled employees, this does not necessarily insinuate that FD damages OC. OC features an integration of managerial quality practices, knowledge, organizational process, design

and culture (for example, see Attig & Cleary, 2014, 2015; Bloom et al., 2010; Bloom & Van Reenen, 2007; Carlin et al., 2012). It is a more permanent intangible resource that remains within the organisational structure, and is not transferable with managerial turnover (Attig & Cleary, 2014; Carlin et al., 2012). The literature suggests that higher managerial ability leads to more appropriate choice of investment and use of resources, thus positively affecting financial performance (Demerjian et al., 2012). More able managers would work to reduce risks of FD (Leverty & Grace, 2012). Thus, it can be expected that firms facing distress risk would benefit by having more capable managers in their workforce, as higher managerial ability, knowledge and better organisational design and processes may assist with their distress recovery strategies. Among other things, OC is also a proxy of management quality practices, which may be closely linked to the ability of managers. Thus, according to this view, I expect that financially distressed firms will focus on improving their OC as a distress recovery strategy. This is consistent with the suggestions by Dreyer & Grønhaug (2004) that during uncertain times, firms should improve their knowledge resources. As these knowledge resources are firm-specific, they are difficult to be copied by competitors, thus providing firms with sustained competitive advantage. This is supported by the RBV that suggests that higher OC is critical for firms in achieving sustained competitive advantage to combat and recover from FD (Dreyer & Grønhaug, 2004). Thus, it can be expected that firms facing uncertain times, such as those caused by FD, are likely to focus on improving their knowledge-based resources, such as managerial quality practices, knowledge, organisational process and designs (that is, OC).

While the above perspective is consistent with the RBV theory, a contrasting perspective suggests that OC may deteriorate during FD. Firms may change their existing organisational practices, as they adopt different strategies to cope with the distress. According to the slack resource theory, during FD, firms may reduce investments in intangibles, such as OC. Investments in OC, such as adoption of a new business model or process, may take years to implement, while some may even fail (Brynjolfsson et al., 2002). During FD, when the firm has financial constraints, they will most likely refrain from such investments.

Based on the conflicting views suggested in the literature, the present study examines whether FD leads firms to an improvement or a deterioration of OC. To test these opposite views, I propose the following competing hypotheses:

H2.3a: Consistent with the RBV theory, there is a positive and significant relationship between FD and OC.

H2.3b: Consistent with the slack resource theory, there is a negative and significant relationship between FD and OC.

My next hypothesis tests the effect of FD on the relationship between CSR and OC, which is the first stage moderation. Prior studies have examined the effect of CSR on intangibles in general (for example, see Biswas & Suar, 2016; Hawn & Ioannou, 2016; Hur et al., 2014), but not specifically on OC. My results in Chapter 4 indicate that firms with high CSR have better OC, as CSR creates intangible resources, such as, knowledge developments, that are critical for the sustainability of the business models (Villalonga, 2004). To the best of my knowledge, the study undertaken in Chapter 4 was pioneer in examining the relationship between CSR and OC. Consequently, the present study is the first to study how a firm-specific event, namely FD affects the relationship between CSR and OC.

Consistent with the RBV, my results from Chapter 4 already report a positive relationship between CSR and OC. However, this positive relationship may change when CSR interacts with FD. Prior studies report CSR has a negative effect on FD (for example, see, Al-Hadi et al. (2019); Chan et al. (2017)). Al-Hadi et al. (2019) provide multiple interpretations to this result. First, the negative relationship between CSR and FD may suffer from a reverse causality problem, suggesting that financially distressed firms are less likely to invest in CSR initiatives, as a means of saving money. Second, large firms and firms in the maturity stage of their life cycle, are generally more financially stable, and have slack (or excess) resources to invest in CSR initiatives. Furthermore, these mature firms are better able to attract CEOs with more experience, knowledge and skills. Thus, the negative relationship between CSR and FD may be a result of superior management in these firms reducing FD risks, as opposed to CSR having a direct effect of FD risk (Al-Hadi et al., 2019). The present study focuses on the effect of the interaction between CSR and FD on OC. Originating from the literature on FD and CSR, I expect two contrasting possibilities. Consistent to the slack resource theory, financially distressed firms generally have lower CSR, since these firms have fewer slack (or surplus) resources to spend on CSR initiatives in contrast to profitable firms' resources (Campbell, 2007). The slack resource theory also implies a negative relationship between FD and OC. Thus, according to the slack theory, OC is likely to deteriorate in financially distressed firms with lower CSR, that is, FD is likely to weaken the relationship between CSR and OC. An opposing perspective suggests that FD may strengthen the positive relationship between CSR and OC. During FD, firms may participate in more CSR initiatives, and build better relationships with stakeholders, as a turnaround strategy to obtain benefits such as salary renegotiations with employees and unions, to combat negative

publicity, reduce employee redundancy costs, etc. Consistent to the RBV, and discussed previously, high CSR generally leads to higher OC. Thus, according to the RBV, the interaction of FD and CSR is likely to have a positive effect on OC, that is, FD is likely to strengthen the relationship between CSR and OC. Thus, I expect the interaction of FD and CSR to have an effect (that is, either weakening or strengthening effect) on OC. To this end, I test the following hypothesis to test the existence of the first stage moderation:

H2.4: FD has a significant moderating effect on the relationship between CSR and OC.

### ***The effect of OC on EM***

This section entails a brief discussion of the relevant literature on the relationship between OC and EM. A detailed discussion of the literature has been presented in Chapter 4.

With the growing interest in intellectual capital (or intangibles), much research attention has been drawn towards explaining how intangibles affect financial reporting quality (for example, see Bhandari et al., 2018; Francis et al., 2008; Malmendier & Tate, 2009; Shust, 2015). Among these, some studies have examined the relationship between managerial aspects of intellectual capital and EM, suggesting mixed results. For example, Francis et al. (2008) and Malmendier & Tate (2009) find that reputable CEOs are more likely to manage earnings. However, Demerjian et al. (2013) find that managers with higher ability have a positive influence on the quality of earnings, including accruals quality. Studies examining the link of EM with relational capital (another component of intellectual capital) also report mixed results (for example, see Al-dhamari & Ku Ismail, 2015; Bhandari et al., 2018; Chaney et al., 2011). Chaney et al. (2011), using an international sample involving 19 countries, suggest that firms with political connections are more likely to manage earnings. Consistent with this, Al-dhamari & Ku Ismail (2015) report lower earnings quality (that is lower quality accruals) among politically connected Malaysian firms. However, Bhandari et al. (2018) suggest that CEOs with external connections are less likely to manage earnings. Another stream of literature examines the relationship of research and development (R&D) expenses (a commonly used proxy for intangible intensity) with EM (for example see, Hao & Li, 2016; Shust, 2015). Shust (2015) finds higher EM among more R&D intensive firms. Similarly, Hao & Li (2016) report higher discretionary accruals among innovative firms with higher R&D expenses.

While there is an abundance of studies examining how various aspects of intellectual capital affect EM, investigation of how OC effects EM is lacking. This is particularly important given that both OC

and EM are results of managerial actions and decisions. EM is a result of discretionary actions by managers, while OC refers to managerial practices, internal networks, the business processes, etc. In contrast, other forms of intellectual capital, such as customer capital or human capital, may not be direct results of managerial practices. My results in Chapter 4 report a positive relationship between OC and EM, suggesting that managers in firms with high OC are more likely to manage earnings due to their exposure to greater market pressures, in order to safeguard their reputation, meet short-term earnings targets, or for other purposes, and also due to their greater ability and more sophisticated techniques to manage earnings. This is consistent with the managerial myopia hypothesis, as the positive relationship between OC and EM suggests that managers are more focussed on obtaining short-term goals.

The present study examines the effect of FD on the relationship between OC and EM. A similar examination was undertaken by Gul et al. (2018), suggesting that higher managerial ability makes managers more proficient in managing earnings. Although FD always creates EM incentives regardless of managerial ability, having more able managers provides more opportunities for EM (Gul et al., 2018). My study is different from Gul et al. (2018) in two ways. First, I examine the interaction effect of OC and FD. Despite including managerial ability as one of its components, OC encompasses much more than managerial ability. As discussed above, OC is an amalgamation of managerial quality practices, knowledge, processes and culture. Second, Gul et al. (2018) examine the moderating role of managerial ability on the relationship between FD and EM, while I incorporate FD as a moderator in the relationship between OC and EM. I expect that FD may affect the relationship between OC and EM in either of two opposing ways. First, consistent to the managerial myopia hypothesis, EM engagement by managers become more prevalent during FD. Consistent with the interpretation provided by Gul et al., 2018, this view suggests that while OC on its own creates opportunities for EM, FD creates further incentives for EM. Since both OC and FD, individually, increase EM, the interaction effect of OC and FD is likely also have a positive impact on EM, making the opportunistic use of OC even worse. However, a different perspective suggests that during FD, while many firms may engage in more EM, firms with high OC may refrain from managing earnings. High OC firms are likely to have managers that are more knowledgeable and skilled, as well as better organisational processes and managerial practices. As per the myopia avoidance hypothesis, during FD, these managers may stop focussing on short term goals, and shift their focus on strategies that may aid the firm's long-term survival. Based on these opposing views, I expect FD to have an effect (that is, either a strengthening or a weakening effect) on the relationship

between OC and EM. Thus, to test the existence of second-stage moderation, I test the following hypothesis:

H2.5: FD has a significant moderating effect on the relationship between OC and EM.

The above discussion covers the relevant literature and hypothesis development relevant to the two indirect paths in the indirect relationship between CSR and EM via OC. By examining the indirect paths individually, the present study examines the overall moderating effect of FD on the indirect.

### ***The indirect effect of CSR on EM via OC***

To the best of my knowledge, the study undertaken in Chapter 4 was the pioneer in examining the indirect relationship between CSR and EM. Despite a lack of evidence in the literature on the indirect effect of CSR on EM via OC, prior studies suggest that CSR has positive effect on OC, while OC in turn has a positive effect on EM. Deriving from this notion, in Chapter 4, my test of the indirect relationship between CSR and EM, via the channel OC, finds a positive indirect relationship. The result is consistent with the managerial myopia hypothesis, suggesting that while CSR enhances OC, OC creates more incentives and opportunities for EM, leading to a positive indirect relationship between CSR and EM

As discussed in the preceding paragraphs, CSR is an essential element that provides firms with competitive advantage through the creation of intangible resources, such as knowledge development (Eisenhardt & Martin, 2000; Nikolaou, 2017; Villalonga, 2004). CSR activities are likely to blend into the organisational practices and processes (Branco & Rodrigues, 2006; Orlitzky, 2005), becoming an integral part of the firms' identity and structure (Dutton & Dukerich, 1991; Starik & Rands, 1995). Thus, consistent with the RBV theory, I find a positive relationship between CSR and OC in Chapter 4. Chapter 4 results also show that OC, in turn, has a positive effect on EM. Consistent with the managerial myopia hypothesis, managers in firms with high OC may choose to manage earnings to safeguard their reputation by meeting short-term targets (that is, more incentives) (Francis et al., 2008; Malmendier & Tate, 2009). Furthermore, high OC may also mean that managers have superior ability and techniques (that is, more opportunities) to manage earnings more easily (Demerjian et al., 2013). Thus, CSR improves OC, and OC, in turn enhances EM engagement by managers. Consistent with the managerial myopia hypothesis, this suggests that managers, engaged in CSR activities, may leverage on OC, to opportunistically manage more earnings for short-term goals. The present study examines whether or not this positive indirect CSR-EM relationship via OC

changes or not when firms experience FD.

Based on the literature, I expect that FD may have either a positive effect (consistent with the RBV theory) (for example, see Dreyer & Grønhaug, 2004; Bhojraj & Sengupta, 2003; Leverty & Grace, 2012) or a negative effect (consistent with the slack resources hypothesis) (for example, see Brynjolfsson et al., 2002) on OC, and a positive effect on EM. Thus, I expect that the positive indirect relationship between CSR and EM via OC to change during FD. During FD, managers' priorities may change. They may become more opportunistic, strengthening the positive indirect relationship, between CSR and EM via OC. Contrastingly, managers may become more risk-averse, weakening the positive indirect relationship, between CSR and EM via OC. To test the moderated mediation effect of FD (that is, the moderating effect of FD on the indirect CSR-EM relationship via OC), and to address research question 2, I test the following hypothesis:

H2.6: FD has a significant moderating effect on the *indirect* relationship between CSR and EM, via the mediator OC.

## 5.6 The Conceptual Framework

Figure 5.1 depicts the conceptual framework, showing the main relationships tested in this study. The main purpose of this study is to examine the moderating effect of FD on the direct relationship between CSR and EM, and on the indirect relationship between CSR and EM via OC.

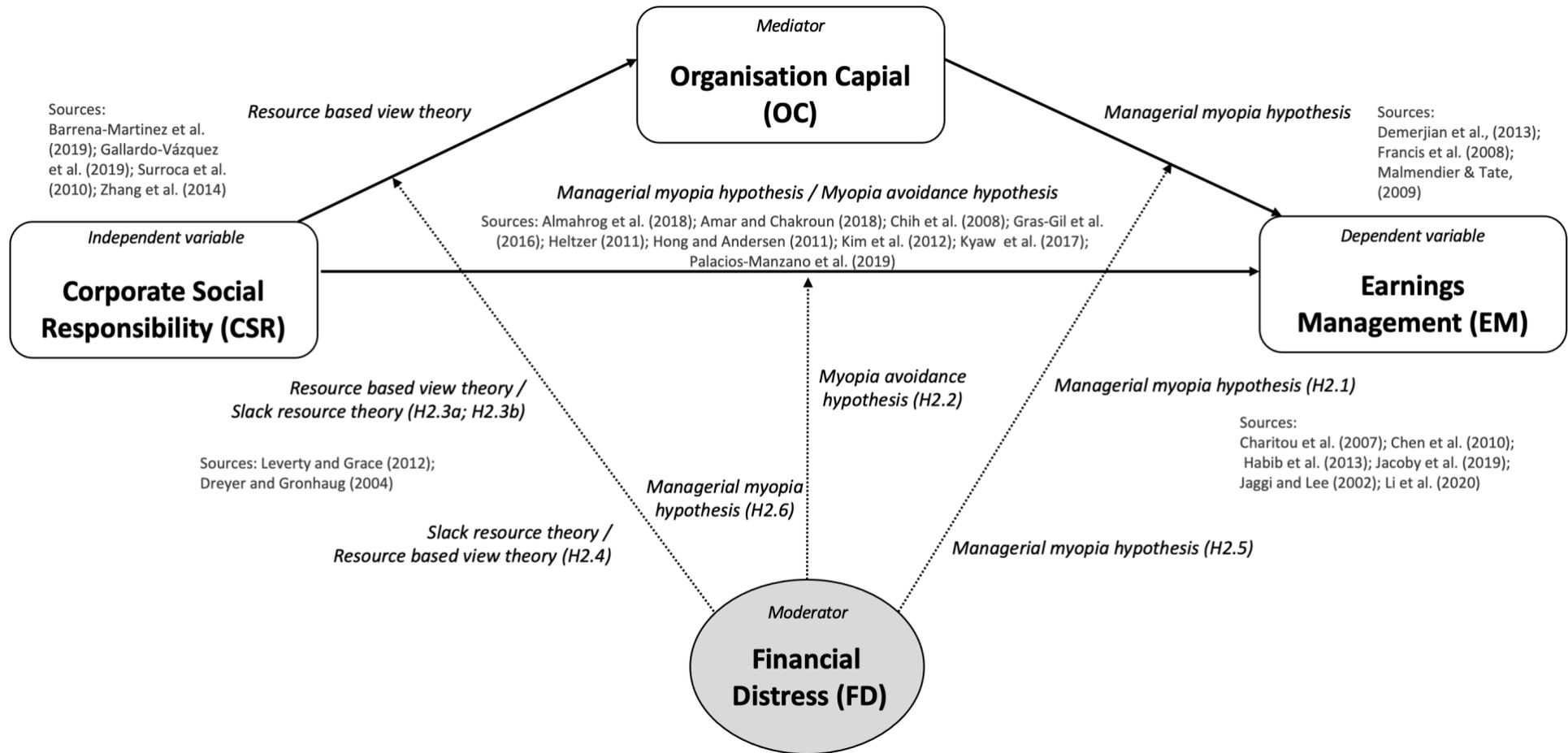


Figure 5.1 The Conceptual Framework

## **5.7 Data and Methodology**

### **5.7.1 Data and Sample**

The sample selection procedure for the present study is the same as that of Chapter 4, with the one exception that the present study utilises firms for which FD data is available. The sample is made up of US non-financial firms listed on the Datastream International Database. The final sample, involving publicly listed US firms, is selected based on the following criteria: 1) the firm must be publicly listed; 2) the firm must have CSR information for at least one of the observed years; 3) the firm must be a non-financial firm (therefore, firms with SIC codes between 6000 and 6799 are excluded); 4) each two-digit Standard Industrial Classification (SIC) code grouping must have a minimum of 8 firms; 5) the firm must have the variables required for classifying FD. The FD classification procedure, and the variables required for this, are discussed in greater detail in Section 5.7.5. However, in order to meet the fifth criteria, the firm must have at least one of the following: i) working capital in the observed year (that is, current assets and current liabilities); ii) net income before extraordinary items and preferred dividends in the observed year; and iii) operating cash flow in the observed year.

The sample period for the present study involves the years 2002 to 2017 inclusive, since 2002 is the earliest year when CSR data is available for US firms. For the hypotheses testing, the present study utilises the full sample, as well as two subsamples, namely distressed and non-distressed samples. The subsamples are obtained by splitting the full sample based on the FD classification. The distressed sample comprises all firm year observations classified as financially distressed, while the non-distressed sample comprises of all firm-year observations classified as healthy (or non-financially distressed). The procedure used to classify observations into financially distressed and non-distressed firms is discussed in detail in Section 5.7.5.

Table 5.2 below shows details of the sample used in the present study. Panel A of Table 5.2 shows the sample selection procedure. The initial sample size was 61,952 firm-year observations from 3,872 firms. The exclusion of financial firms (13,584 firm years from 849), firms with missing financial data over the sample period (800 firm years) and firms with less than 8 firms in their 2-digit SIC grouping (752 firm-years from 47 firms) yields a sample size of 46,816 firm-year observations from 2,926 firms. A further exclusion of 10,005 firm-year observations with missing variables required to

measure FD yields a final unbalanced sample<sup>27</sup> of 36,811 firm-year observations from 2,918 firms. The number of observations in any given regression varies depending on the model-specific data requirements. Table 5.2 Panel B reports the distribution of the sample by the Fama-French 12 industry groups. The sample is unevenly distributed across industries, with the 'Other' and 'Business equipment industries' being dominant at 18.69% and 16.22% respectively. The 'other' industry classification includes mines, construction, building materials, transportation, hotels, bus services and entertainment businesses. Table 5.2 Panel C illustrates the year distribution of the full sample and the two subsamples. The full sample of 2,918 firms has unequal numbers of firm-year observations each year, with 2015 having the highest number of observation (2,577 observations, that is, 7% of the total number of observations). The two subsamples are unevenly distributed with 38.57% of the full sample comprising of distressed firms, while 61.43% of the full sample comprising of non-distressed (healthy) firms.

The data utilised in this study are obtained from Datastream. The financial statement data are collected from Datastream's Worldscope database. The data for CSR are collected from the Thomson Reuters ESG index, while the data on Consumer Price Index (CPI) (used for measuring OC) is obtained from Datastream. All data are collected for the period 1998 to 2018 inclusive, to enable the use of lagged data, as well as measure EM\_DD (the alternate measure of EM that is based on a 5-year standard deviation of the accruals quality model, as discussed in the next section). Appendix A1 shows the list of data for this study. Appendix A1 presents a list the data used in the present study, along with the years of observation.

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<sup>27</sup> The final sample selection criterion means that any firm-year, where FD cannot be measured due to missing data on the relevant variables, is dropped. This yields an unbalanced sample in contrast to the balanced sample used in Chapter 4.

**Table 5.2 Sample Selection and Distribution of the Sample**

<b>Panel A: Data and Sample</b>						
<b>Description</b>	<b>Number of Observations</b>		<b>Number of firms</b>			
Initial sample (data available in Datastream)	61,952		3,872			
Less:						
Financial firms	<u>(13,584)</u>		<u>(849)</u>			
	48,368		3,023			
Firms with missing financial data for sample period	<u>(800)</u>		<u>(50)</u>			
	47,568		2,973			
Firms with less than 8 firms in their 2-digit SIC grouping	<u>(752)</u>		<u>(47)</u>			
	46,736		2,973			
Firms with missing FD data	<u>(10,005)</u>		<u>(8)</u>			
<b>Total</b>	<b>36,811</b>		<b>2,918</b>			
<b>Panel B: Industry Distribution</b>						
<b>Industry name</b>	<b>Total number of observations</b>		<b>% of observations</b>			
Consumer nondurables	2,386		6.48			
Consumer durables	1,300		3.53			
Manufacturing	4,628		12.57			
Oil, gas and coal extraction and products	2,330		6.33			
Chemicals and allied products	1,575		4.28			
Business equipment	5,971		16.22			
Telephone and television transmission	1,835		4.98			
Utilities	2,195		5.96			
Wholesale, retail and some services	3,770		10.24			
Healthcare, medical equipment and drugs	3,942		10.71			
Other	<u>6,879</u>		<u>18.69</u>			
<b>Total</b>	<b>36,811</b>		<b>100%</b>			
<b>Panel C: Year distribution</b>						
<b>Year</b>	<b>Full sample</b>		<b>Distressed sub-sample</b>		<b>Non-distressed sub-sample</b>	
	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>
2002	1,993	5.41	893	44.81	1100	55.19
2003	2,042	5.55	920	45.05	1122	54.95
2004	2,102	5.71	836	39.77	1266	60.23
2005	2,160	5.87	692	32.04	1468	67.96
2006	2,201	5.98	730	33.17	1471	66.83
2007	2,217	6.02	702	31.66	1515	68.34
2008	2,222	6.04	770	34.65	1452	65.35
2009	2,232	6.06	932	41.76	1300	58.24
2010	2,293	6.23	965	42.08	1328	57.92
2011	2,330	6.33	798	34.25	1532	65.75
2012	2,410	6.55	846	35.10	1564	64.90
2013	2,462	6.69	917	37.25	1545	62.75
2014	2,543	6.91	994	39.09	1549	60.91
2015	2,577	7.00	1,006	39.04	1571	60.96
2016	2,551	6.93	1,114	43.67	1437	56.33
2017	2,476	6.73	1,084	43.78	1392	56.22
<b>Total</b>	<b>36,811</b>	<b>100</b>	<b>14,199</b>	<b>38.57</b>	<b>22,612</b>	<b>61.43</b>

### 5.7.2 Dependent Variable

The dependent variable for this study is EM. As discussed in Chapters 3 and 4, EM is proxied by discretionary accruals using the modified Jones model developed by Dechow et al. (1995), as shown by the following equation:

$$TA_{it} = \alpha_1 (1/A_{it-1}) + \alpha_2 (\Delta REV_{it} - \Delta REC_{it}) + \alpha_3 PPE_{it} + \varepsilon_{it} \quad (1)$$

where

$TA_{it}$  = total accruals in year  $t$  for firm  $i$  scaled by total assets at  $t - 1$ ;

$\Delta REV_{it}$  = change in revenues (revenues in year  $t$  less revenues in year  $t - 1$ ) for firm  $i$  scaled by total assets at  $t - 1$ ;

$\Delta REC_{it}$  = change in accounts receivables (net receivables in year  $t$  less net receivables in year  $t - 1$ ) for firm  $i$  scaled by total assets at  $t - 1$ ;

$PPE_{it}$  = gross property, plant and equipment in year  $t$  for firm  $i$  scaled by total assets at  $t - 1$ ;

$A_{it-1}$  = total assets in year  $t - 1$  for firm  $i$ ;

$\varepsilon_{it}$  = error term in year  $t$  for firm  $i$ .

Following prior studies, equation (1) is estimated for each year and each two-digit SIC code, for which there are at least eight firm year observations per regression. The absolute value of the residual from equation (1) (that is, the absolute value of discretionary accruals) generates the magnitude of EM in the present study. A higher value of the residual indicates poor mapping of accruals into cash flows (that is, higher EM).

Following Dechow et al. (1995), the total accruals (TA) for equation (1) is estimated using the equation below:

$$TA_{it} = (\Delta CA_{it} - \Delta CL_{it} - \Delta Cash_{it} + \Delta ST\ Debt_{it} - DEP_{it})/A_{it-1} \quad (2)$$

where

$\Delta CA_{it}$  = change in current assets (current assets in year  $t$  less current assets in year  $t - 1$ ) for firm  $i$ ;

$\Delta Cash_{it}$  = change in cash (cash in year  $t$  less cash in year  $t - 1$ ) for firm  $i$ ;

$\Delta CL_{it}$  = change in current liabilities (current liabilities in year  $t$  less current liabilities in year  $t - 1$ ) for firm  $i$ ;

$\Delta ST Debt$  = change in short-term debts (short-term debts in year  $t$  less short-term debts in year  $t - 1$ ) for firm  $i$  (missing values for short-term debts are replaced with zero);

$DEP_{it}$  = depreciation and amortization expenses in year  $t$  for firm  $i$ ;

$A_{it-1}$  = total assets in year  $t - 1$  for firm  $i$ .

Like my method described in Chapter 4, to check the sensitivity of the regression analyses, I use alternate measures of the key variables (the dependent, independent and mediator variables). As an alternate measure of EM, I use the accruals quality model by Dechow & Dichev (2002), and include the modification suggested by Francis et al. (2005) by including change in revenue and property plant and equipment. Thus, to measure the alternate EM measure, EM\_DD, I estimate the following equation for each year and 2-digit SIC code:

$$TA_{it} = \beta_0 + \beta_1 CFO_{it-1} + \beta_2 CFO_{it} + \beta_3 CFO_{it+1} + \beta_4 \Delta REV_{it} + \beta_5 PPE_{it} + \varepsilon_{it} \quad (3)$$

where

$TA_{it}$  = total accruals (as measured in equation (2)) in year  $t$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$CFO_{it-1}$  = cash flow from operations in year  $t-1$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$CFO_{it}$  = cash flow from operations in year  $t$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$CFO_{it+1}$  = cash flow from operations in year  $t+1$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$\Delta REV_{it}$  = change in sales revenue (sales revenue in year  $t$  less sales revenue in year  $t - 1$ ) for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$PPE_{it}$  = gross property, plant and equipment in year  $t$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$\varepsilon_{it}$  = error term in year  $t$  for firm  $i$ .

As discussed in Chapter 4, EM\_DD (the alternate measure for EM) is measured as the 5-year standard deviation of the residual  $\varepsilon_{it}$  from equation (3) using the Dechow & Dichev (2002) model

(EM\_DD). A higher value indicates higher EM, whereas a lower value indicates lower EM and better-quality accruals.

### 5.7.3 Independent Variable

The independent variable, CSR, is based on the ESG scores obtained from Thomson Reuters. The ESG scores measurement by Thomson Reuters is discussed in detail in Chapter 3. The ESG scores are firm level data, available annually from 2002 onwards (Thomson Reuters, 2018).

To check the sensitivity of the regression analysis, the ESG combined score from Thomson Reuters (CSR\_COMB) is used as an alternate measure of the independent variable CSR. Chapter 3 details the measurement procedure for the ESG combined score by Thomson Reuters. The ESG Combined score (CSR\_COMB in the present study) is different from the ESG score (CSR in the present study), as CSR\_COMB incorporates ESG controversies as well as scores on the individual CSR dimensions. These differences have been clarified in detail in Chapter 3.

### 5.7.4 Mediating Variable

As discussed in Chapter 4, the mediating variable in this study is OC measured on the basis of SG&A expenses, consistent with prior studies (for example, see Eisfeldt & Papanikolaou, 2013; Hasan & Cheung, 2018; Lev & Radhakrishnan, 2005). Following Eisfeldt & Papanikolaou (2013), the stock of organisation capital is measured for each year by accumulating the deflated value of SG&A, as shown below:

$$OC_{it} = OC_{i,t-1} (1 - \delta_0) + \frac{SGA_{i,t}}{cpi_t} \quad (4)$$

Consistent with Eisfeldt & Papanikolaou (2013), the initial stock of organisation capital is measured as shown below:

$$OC_{ito} = \frac{SGA_{i,t}}{g + \delta_0} \quad (5)$$

where

$OC_{i,t}$  = stock of organization capital in year  $t$  for firm  $i$ , divided by total assets (following Eisfeldt and Papanikolaou (2013));

$\delta_0$  = depreciation rate of OC (15%) consistent with prior studies (for example, see

Eisfeldt & Papanikolaou, 2013; Hasan & Cheung, 2018);

$SGA_{i,t}$  = SG&A expense in year  $t$  for firm  $i$ ; Missing values are replaced with 0;

$cpi_t$  = consumer price index (CPI) for year  $t$ , computed as the 12-month average CPI;

$g$  = average real growth of SG&A, which is 12.22% in my estimates. The average real growth of SG&A expense is calculated as:  $\frac{[(\text{Growth rate of SGA between 2001 and 2002}) - 1]}{1 + \text{inflation rate between 2001 and 2002}}$ .

As discussed in Chapter 4, I use OC\_PT as an alternate measure for OC. I follow Peters & Taylor (2017), and set the initial stock of OC\_PT<sub>it0</sub> at 0. Following Peters & Taylor (2017), OC\_PT is estimated using the following equation:

$$OC\_PT_{i,t} = OC\_PT_{i,t-1}(1 - \delta_0) + SGA_{i,t} \quad (6)$$

where

$OC\_PT_{i,t}$  = stock of organization capital in year  $t$  for firm  $i$ , divided by total assets (following Peters & Taylor, 2017);

$\delta_0$  = depreciation rate of OC (20%) consistent with Peters & Taylor (2017);

$SGA_{i,t}$  = SG&A expense in year  $t$  for firm  $i$ ; Missing values are replaced with 0;

### 5.7.5 Moderating Variable

The moderating variable in the present study is FD. Proxy for FD used in the present study is based on the FD classification approach suggested by McKeown et al. (1991). McKeown et al. (1991) categorise a firm's financial condition into four classifications: 1) stressed/bankrupt (SB); 2) non-stressed/bankrupt (NSB); stressed/non-bankrupt (SNB); and 4) non-stressed/non-bankrupt (NSNB). McKeown et al. (1991) performed an examination of bankrupt firms where auditors had failed to issue going-concern issues prior to bankruptcy. The stressed/non-stressed classification is based on ex ante indications of potential bankruptcy within the financial statements, while the bankrupt/non-bankrupt classification is based on ex post bankruptcy condition of a firm (Habib et al., 2013; McKeown et al., 1991; Rosner, 2003).

Prior studies show various approaches for measuring FD. The most prominent approaches involve sample selection with FD indicators (for example, see Charitou et al., 2007, 2011; Chen et al., 2010; DeAngelo et al., 1994; DeFond & Jiambalvo, 1994; Jaggi & Lee, 2002; Sweeney, 1994) and accounting ratios, such as, the Altman z-score (for example, see Jacoby et al., 2019; Li et al., 2020; Lin et al.,

2016a; Rakshit & Paul, 2020), Ohlson score (for example, Kwak & Mo, 2018; Lin et al., 2016a) and Zmijewski score (for example, see Carcello & Neal, 2003; Guillamón-Saorín et al., 2018). Prior studies using the sample selection approach select samples with certain FD indicators, such as bankruptcy filing and debt covenant violations. As Rosner (2003) suggest, this may create selection bias, as the samples do not include non-distressed firms. The FD classification by McKeown et al. (1991), used in the present study, allows the inclusion of both financially distressed and non-distressed firms, allowing better understanding of how FD may have a moderating effect on the CSR-EM relationship. The second prominent approach for measuring FD among prior studies, that is, accounting ratios, (specifically Altman z-score, Ohlson score and Zmijewski score) provide a basis for future predictability of bankruptcy or financial distress. In contrast, the FD classification by McKeown et al. (1991), used in the present study, provides an ex ante and ex post indicator of FD, as discussed earlier. Thus, due to the limitations of the other approaches of measuring FD, the present study follows the FD classification approach by McKeown et al. (1991).

Following prior studies, I use FD classification based on five criteria (for example, see Giroux & Wiggins, 1984; Habib et al., 2013; Hopwood et al., 1994; McKeown et al., 1991; Rosner, 2003; Ward, 1994). According to prior studies, a firm is classified as distressed if it exhibits at least one of the following distress signals (Habib et al., 2020a):

- (i) negative working capital in the current year (working capital is calculated as current assets minus current liabilities in year t for firm i);
- (ii) a bottom-line net loss in the most recent year (determined by negative net income before extraordinary items and preference dividends in year t for firm i);
- (iii) both negative working capital and net loss experienced in the most recent years;
- (iv) negative operating cash flow;
- (v) both negative operating cash flow and a bottom-line net loss in the most recent year.

Essentially, the present study defines a firm to be financially distressed if it exhibits one or more of the following distress signals:

- (i) negative working capital in the current year (working capital is calculated as current assets minus current liabilities in year t for firm i);

- (ii) a bottom-line net loss in the most recent year (determined by negative net income before extraordinary items and preference dividends in year  $t$  for firm  $i$ );
- (iii) negative operating cash flow.

The moderating variable FD is defined as a dummy variable, taking the value of 1 if the firm is financially distressed (based on the 3 criteria discussed above), and the value 0 otherwise, that is, if the firm is considered to be non-distressed.

### **5.7.6 Control Variables**

To avoid problems arising from possible misspecification, the study uses several control variables that influence OC and EM. Since the dependent variable and mediating variables in the present study are the same as those used in Chapter 4, the control variables are also the same as those used in Chapter 4.

Prior studies show that firm size, performance, leverage and research and development (R&D) intensity may affect both EM and OC (see Chih et al., 2008; Eisfeldt & Papanikolaou, 2013; Kim et al., 2012; Roychowdhury, 2006; Scholtens & Kang, 2013). To control for firm size, the study uses SIZE, measured as the natural logarithm of market value of equity. To control for firm performance, the study uses ADJROA, measured as the industry-adjusted return on assets (ROA) (measured as the return on ROA for each firm-year minus the median ROA for each year and 2-digit SIC code). To control for leverage, the study uses LEV, measured as long-term debts divided by total assets. To control for R&D intensity, the study uses RD, measured as the total R&D expenses divided by net sales

Similar to Chapter 4, SIZE, ADJROA, LEV and RD are common control variables for all equations, that is, equations with EM and OC as the dependent variables. Two other control variables, PR (Physical Resources) and MB (Market to Book ratio) are used. PR is a control variable only for equations with OC as the dependent variable, while MB is a control variable only for equations with EM as the dependent variable.

Since the literature suggests that physical resources may be negatively associated with OC (Eisfeldt & Papanikolaou, 2013), the study controls for physical resources, using PR, measured as the difference between total assets and current assets, divided by total assets.

Since prior studies suggest EM may be associated with more growth opportunities (Roychowdhury, 2006), the study controls for growth opportunities using MB, measured as the Market to Book Ratio (that is, the market value of equity divided by the book value of equity).

Following prior studies, I include a range of dummy variables representing year effects and industry effects at two-digit SIC level, to control for unobserved heterogeneity (for example, see (Cheung, 2016). Following Cheung (2016), and as discussed in Chapter 4, I do not specify firm-level fixed effects in the regression estimations, as 1) it may cause a loss of information (see Guenster et al., 2011; and 2) using fixed-effects with ML estimation error may cause incidental parameter problem, leading the ML estimators to be inconsistent (see Lancaster, 2000; Neyman & Scott, 1948).

Following prior studies, to minimise the undesirable influence of outliers, all variables are winsorized at the 1st and 99th percentiles (for example, see Attig & Cleary, 2014; Cheung, 2016; Hasan & Cheung, 2018; Kim et al., 2012). Table 5.4 details all the variables used in the present study, along with their definitions and measurement methods.

**Table 5.3 Definition and Measurement of Variables**

Variable	Symbol	Definition and Method of measurement
<b>Dependent Variable</b>		
Earnings Management	EM	Absolute value of discretionary accruals using the modified Jones model (Dechow et al., 1995): $TA_{it} = \alpha_i [1/A_{it-1}] + \beta_{1i} (\Delta REV_{it} - \Delta REC_{it}) + \beta_{2i} (PPE_{it}) + \varepsilon_{it}$
Earnings Management alternate measure	EM_DD	Accruals quality model following Dechow & Dichev (2002): $TA_{it} = \beta_0 + \beta_{1i} CFO_{it-1} + \beta_{2i} CFO_{it} + \beta_{3i} CFO_{it+1} + \beta_{4i} \Delta REV_{it} + \beta_{5i} PPE_{it} + \varepsilon_{it}$
<b>Independent Variable</b>		
Corporate Social Responsibility	CSR	ESG score from Thomson Reuters ESG index.
Corporate Social Responsibility alternate measure	CSR_COMB	ESG Combined score from Thomson Reuters ESG index.
Corporate Social Responsibility alternate measure	CSR_DUM	Dummy variable equals 1 if the from Thomson Reuters ESG score is greater than the median (by year and industry classification), and 0 otherwise.
<b>Mediating Variable</b>		
Organization Capital	OC	Perpetual inventory method developed by Eisfeldt & Papanikolaou (2013): $OC_{i,t} = OC_{i,t-1} (1 - \delta_0) + \frac{SGA_{i,t}}{cpi_t}$
Organization Capital alternate Measure	OC_PT	Perpetual inventory method developed by Peters & Taylor (2017): $OC_{PT_{i,t}} = OC_{PT_{i,t-1}} (1 - \delta_0) + SGA_{i,t}$
<b>Moderating Variable</b>		
Financial Distress	FD	Dummy variable, taking the value of 1 if the firm is financially distressed, and 0 otherwise. Following prior studies, (for example, see Giroux & Wiggins, 1984; Habib et al., 2013; Hopwood et al., 1994; McKeown et al., 1991; Rosner, 2003; Ward, 1994), an observation is classified as financially distressed if it exhibits at least one of the following distress signals: (i) negative working capital (that is, CA – CL) in the most recent year; (ii) a bottom-line net loss (that is, negative NI) in the most recent year; (iii) both negative working capital and net loss experienced in the most recent years; (iv) negative operating cash flow (i.e., negative CFO); (v) both negative operating cash flow and a bottom-line net loss in the most recent year.
<b>Control Variables</b>		
Firm Size	SIZE	Natural logarithm of market of market value of equity.
Firm Leverage	LEV	Long-term debts divided by total assets.
Firm Performance	ADJROA	Industry adjusted earnings before interest and tax scaled by lagged total assets.
Research and Development Intensity	RD	Research and Development expense divided by total sales.
Physical Resources	PR	Capital intensity measured as total assets minus current assets divided by total assets.
Firm Growth Opportunities	MB	Market to Book ratio.
YEAR	YEAR	Dummy variables to control for the year effect.
INDUSTRY	IND	Dummy variables to control for industry effect (two-digit SIC code).
<b>Instrument Variable (for 2SLS)</b>		
Industry Median CSR	CSR_M	Following Nguyen et al. (2019), the industry median of CSR (based on Fama-French 48 industry classification) is used an instrument for CSR to address endogeneity.

### 5.7.7 Preliminary Analysis

Since the present study uses a sample that is different from the sample used in Chapter 4, the present study first undertakes a preliminary analysis, to test the basic mediating relationship, that is, the direct relationship between CSR and EM, and the indirect relationship between CSR and EM via OC. As part of the preliminary analysis, I estimate the following equations as structural equation model using the ML method, with robust standard errors:

$$OC_{it} = \alpha_0 + \alpha_1 CSR_{it} + \alpha_2 SIZE_{it} + \alpha_3 LEV_{it} + \alpha_4 ADJROA_{it} + \alpha_5 RD_{it} + \alpha_6 PR_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (7)$$

$$EM_{it} = \beta_0 + \beta_1 OC_{it} + \beta_2 CSR_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 ADJROA_{it} + \beta_6 RD_{it} + \beta_7 MB_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (8)$$

where

$EM_{it}$  = Earnings management in year  $t$  for firm  $i$ , proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995);

$OC_{it}$  = Stock of organization capital in year  $t$  for firm  $i$ , divided by total assets following Eisfeldt & Papanikolaou (2013);

$CSR_{it}$  = The ESG score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ADJROA_{it}$  = Industry-adjusted ROA in year  $t$  for firm  $i$ , measured as the industry median income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$PR_{it}$  = Physical resources in year  $t$  for firm  $i$ , measured as total assets minus current assets, scaled by total assets;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ .

To test the sensitivity of the results to alternate measures of the main variables, the study uses alternate specifications of the dependent, independent and mediating variables (EM\_DD,

CSR\_COMB, and OC\_PT respectively). The following equations are estimated, as SEM using ML method, with robust standard errors, as part of the sensitivity test:

$$OC\_PT_{it} = \alpha_0 + \alpha_1 CSR\_COMB_{it} + \alpha_2 SIZE_{it} + \alpha_3 LEV_{it} + \alpha_4 ADJROA_{it} + \alpha_5 RD_{it} + \alpha_6 PR_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (7a)$$

$$EM\_DD_{it} = \beta_0 + \beta_1 OC\_PT_{it} + \beta_2 CSR\_COMB_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 ADJROA_{it} + \beta_6 RD_{it} + \beta_7 MB_{it} + \text{Year \& Industry dummies} + \varepsilon_{it} \quad (8a)$$

where

$EM\_DD_{it}$  = Earnings management in year  $t$  for firm  $i$ , proxied by accruals quality model by Dechow & Dichev (2002);

$OC\_PT_{it}$  = Alternate measure for Stock of organization capital in year  $t$  for firm  $i$ , divided by total assets following Peters & Taylor (2017);

$CSR\_COMB_{it}$  = The ESG combined score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ADJROA_{it}$  = Industry-adjusted ROA in year  $t$  for firm  $i$ , measured as the industry median of income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$PR_{it}$  = Physical resources in year  $t$  for firm  $i$ , measured as total assets minus current assets, scaled by total assets;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ .

### 5.7.8 Research Models

This section discusses the research models used in this study to answer research objective 2, that is, to investigate *when* CSR has a *direct effect* on EM, and when CSR has an *indirect effect* on EM via OC, by examining the context FD. To address research objective 2, I state the following two research questions:

*Research Question 2.1:* Does FD have a significant effect on the *direct* CSR-EM relationship?

*Research Question 2.2:* Does FD have a significant effect on the *indirect* CSR-EM relationship via OC?

To address these research questions, I follow the moderated mediation approach using the PROCESS model 59 developed by Hayes (2013) and estimate the following equations as Structural Equations Modelling (SEM), using Maximum Likelihood (ML) method of estimation, with robust standard errors:

$$OC_{it} = \alpha_0 + \alpha_1 CSR_{it} + \alpha_2 FD_{it} + \alpha_3 CSR_{it} * FD_{it} + \alpha_4 SIZE_{it} + \alpha_5 LEV_{it} + \alpha_6 ADJROA_{it} + \alpha_7 RD_{it} + \alpha_8 PR_{it} + Year \& Industry\ dummies + \varepsilon_{it} \quad (9)$$

$$EM_{it} = \beta_0 + \beta_1 OC_{it} + \beta_2 CSR_{it} + \beta_3 FD_{it} + \beta_4 OC_{it} * FD_{it} + \beta_5 CSR_{it} * FD_{it} + \beta_6 SIZE_{it} + \beta_7 LEV_{it} + \beta_8 ADJROA_{it} + \beta_9 RD_{it} + \beta_{10} MB_{it} + Year \& Industry\ dummies + \varepsilon_{it} \quad (10)$$

where

$EM_{it}$  = Earnings management in year  $t$  for firm  $i$ , proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995);

$OC_{it}$  = Stock of organization capital in year  $t$  for firm  $i$ , divided by total assets following Einfeldt & Papanikolaou (2013);

$FD_{it}$  = Dummy variable taking the value 1 if the firm  $i$  is financially distressed in year  $t$  and taking the value 0 otherwise. The FD classification is based on prior studies (for example, Giroux & Wiggins, 1984; Habib et al., 2013; Hopwood et al., 1994; McKeown et al., 1991; Rosner, 2003; Ward, 1994);

$CSR_{it}$  = The ESG score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ADJROA_{it}$  = Industry-adjusted ROA in year  $t$  for firm  $i$ , measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ ;

$PR_{it}$  = Physical resources in year  $t$  for firm  $i$ , measured as total assets minus current assets, scaled by total assets.

Equations (9) and (10) are estimated as part of the hypotheses testing, to address the research questions 2.1 and 2.2. Both equations utilise dummy variables to control for the effects of year and industry (using 2-digit SIC codes). The analyses follow several steps, as discussed below. A summary of this discussion is provided in Table 5.4.

### ***Step 1: Tests for hypotheses H2.1 and H2.2***

This section discusses step 1 of the research analysis, where I address research question 2.1 by examining the moderating effect of FD on the direct relationship between CSR and EM. In this step, I test hypotheses H2.1 and H2.2 by estimating equation (10). To establish a moderating effect, first a relationship has to be established between the dependent variable (EM) and the independent variable (CSR) and between the dependent variable (EM) and the moderator (FD). Hypothesis H2.1 tests the relationship between FD and EM, while hypothesis H2.2 tests the moderating effect of FD on the relationship between CSR and EM.

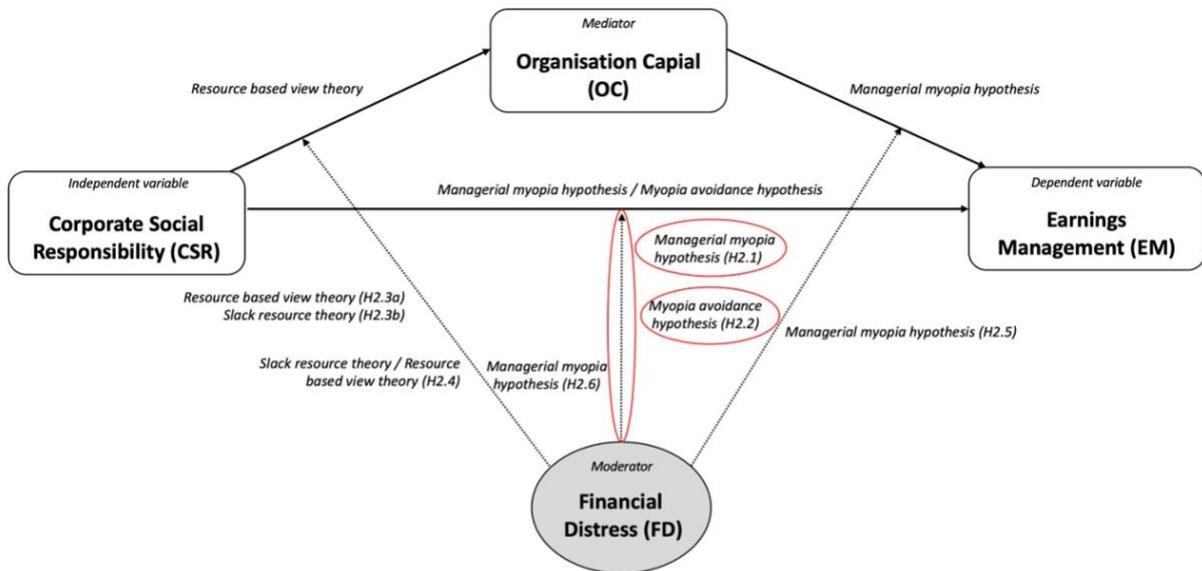
The direct (unconditional) relationship between CSR and EM has already been tested in Chapter 4. The results in Chapter 4 suggest a negative direct relationship between CSR and EM, consistent with the myopia avoidance hypothesis. Owing to the fact that the present study uses a different sample from the sample in Chapter 4, I report the unconditional direct effect of CSR on EM again. However, this is not part of the hypothesis testing of the present study. The direct effect of CSR on EM is captured by the coefficient  $\beta_2$  from equation (10).

Next, the analysis focusses on testing the relationship between the moderator (FD) and the dependent variable (EM). Hypothesis H2.1 tests the effect of FD on EM. The effect of FD on EM is captured by the coefficient  $\beta_3$  in equation (10). If the coefficient  $\beta_3$  is positive and statistically significant, this will support hypothesis H2.1, consistent with the managerial myopia hypothesis. Finding support for hypothesis H2.1 will partially address research question 2.1.

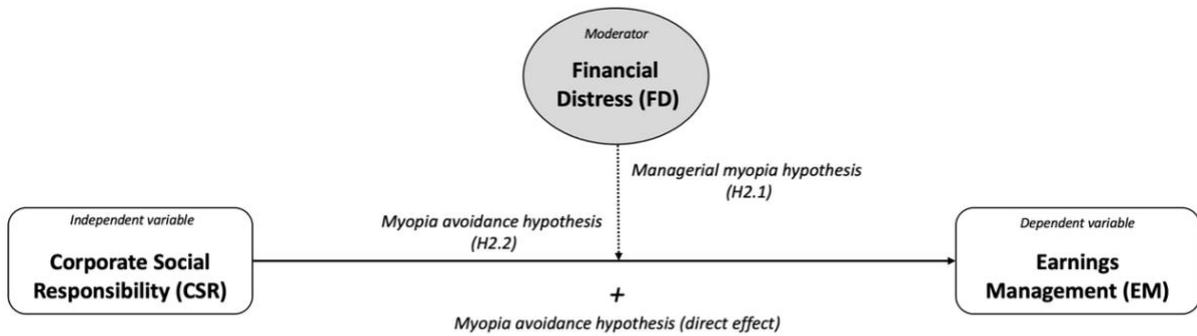
To fully address research question 2.1, the next step is critical, that is, the test of the moderating effect of FD on the direct relationship between CSR and EM (Hypothesis 2.2). This moderating effect of FD is captured by the coefficient  $\beta_5$  from equation (10). If the coefficient  $\beta_5$  is statistically significant, this will suggest that FD has a moderating effect on the direct relationship between CSR and EM, thus providing support for hypothesis H2.2. A negative and significant coefficient  $\beta_5$ , will suggest that FD has a negative (strengthening) effect on the direct negative CSR-EM relationship. This will indicate strengthening of the myopia avoidance behaviour of managers. Contrastingly, a

positive and significant coefficient  $\beta_5$ , will suggest that FD has a positive (weakening) effect on the direct negative CSR-EM relationship. This will indicate weakening of myopia avoidance behaviour of managers. The direct effect of CSR on EM, conditional on FD, is estimated as the sum of the coefficients,  $\beta_2 + \beta_5 FD_{it}$ , from equation (10). The conditional effect examines whether the direct relationship between CSR and EM changes with the level of FD. A statistically significant change on the conditional direct effect of CSR on EM will provide support for hypothesis H2.2, and will address research question 2.1, suggesting that FD has a moderating effect on the direct relationship between CSR and EM. However, if the conditional direct effect of CSR on EM is not statistically significant, hypothesis H2.1 will be rejected, suggesting that FD does not have a moderating effect on the direct relationship between CSR and EM.

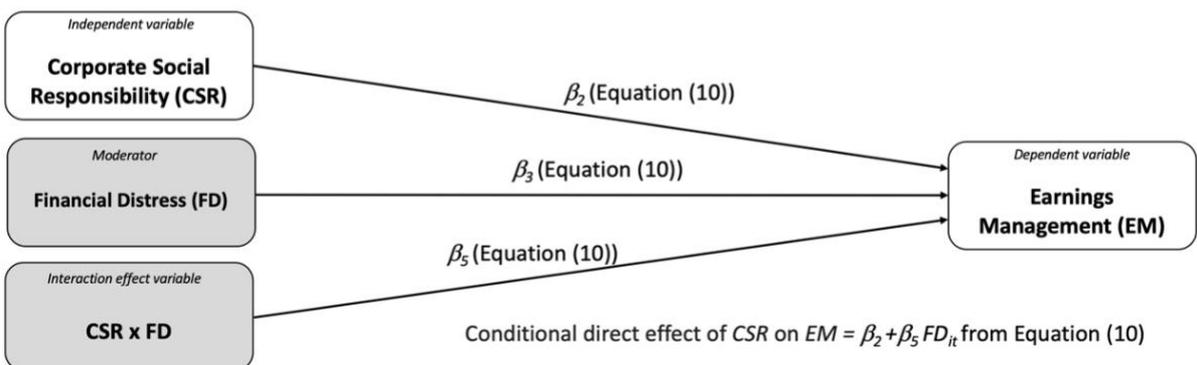
Figure 5.2 shows the conceptual and statistical diagrams highlighting the relationships tested in hypotheses H2.1 and H2.2. Panel A of Figure 5.2 shows the full conceptual framework, highlighting the section that is relevant to the hypotheses H2.1 and H2.2; Panel B of Figure 5.2 shows a simplified version of the conceptual framework, showing only the section relevant to the hypotheses H2.1 and H2.2; Panel C of Figure 5.2 shows the statistical diagram relevant to the test of the hypotheses H2.1 and H2.2.



Panel A Full Conceptual Framework highlighting the sections relevant to Hypotheses H2.1 and H2.2



Panel B Simplified Conceptual diagram for Hypotheses H2.1 and H2.2



Panel C Statistical diagram for Hypotheses H2.1 and H2.2

Figure 5.2 Conceptual Diagram for Hypotheses H2.1 and H2.2

## **Step 2: Tests for hypotheses H2.3 (a and b) and H2.4**

This section discusses step 2 of the research analysis, I examine the existence of first stage moderation, as a first step to addressing research question 2.2. In this step, I examine whether FD moderates the relationship between CSR and OC, by estimation equation (9). Hypotheses H2.3a and H2.3b test the relationship between FD and OC, while hypothesis H2.4 tests the moderating effect of FD on the relationship between CSR and OC.

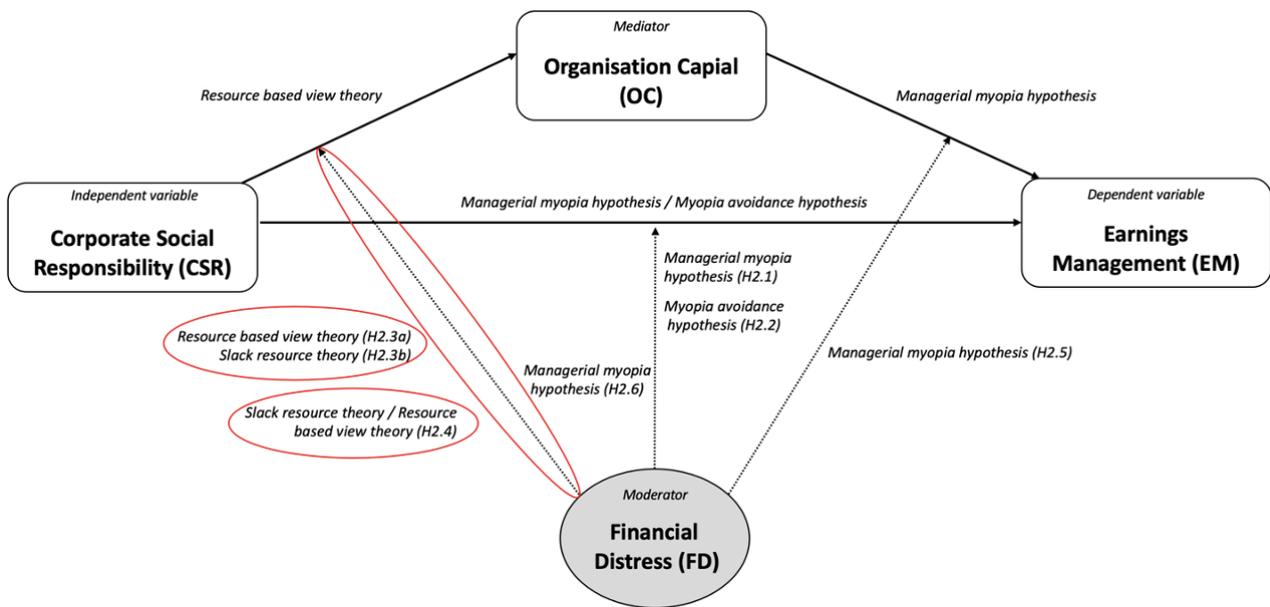
As discussed in the previous paragraphs, to establish a moderating effect, I first test the relationship between the dependent (that is, OC in this scenario) and independent variables (that is, CSR) and between the dependent variable (OC) and the moderator (FD). The unconditional effect of CSR on OC is captured by the coefficient  $\alpha_1$  from equation (9). I have already tested the unconditional effect of CSR and OC in the analysis reported in Chapter 4. Chapter 4 findings suggest a positive relationship between CSR and OC, consistent with the RBV theory. Given that the present study uses a different sample from the one utilized in Chapter 4, I report the effect of CSR on OC again, despite this not being part of the hypothesis testing of the present study.

Next, to test hypotheses H2.3a and H2.3b, I test the relationship between OC and FD. This effect is captured by the coefficient  $\alpha_2$  in equation (9). If the the coefficient  $\alpha_2$  is positive and significant, this will suggest that FD has a positive effect on OC, thus providing support for H2.3a, consistent with the RBV theory. Alternatively, if the coefficient  $\alpha_2$  is negative and significant, this will suggest that FD has a negative effect on OC, thus providing support for H2.3b, consistent with the slack resource theory. Testing hypotheses H2.3 (a and b) is the first step to addressing research question 2.2. If either of the hypotheses, H2.3a or H2.3b, is accepted, this will suggest that FD affects OC.

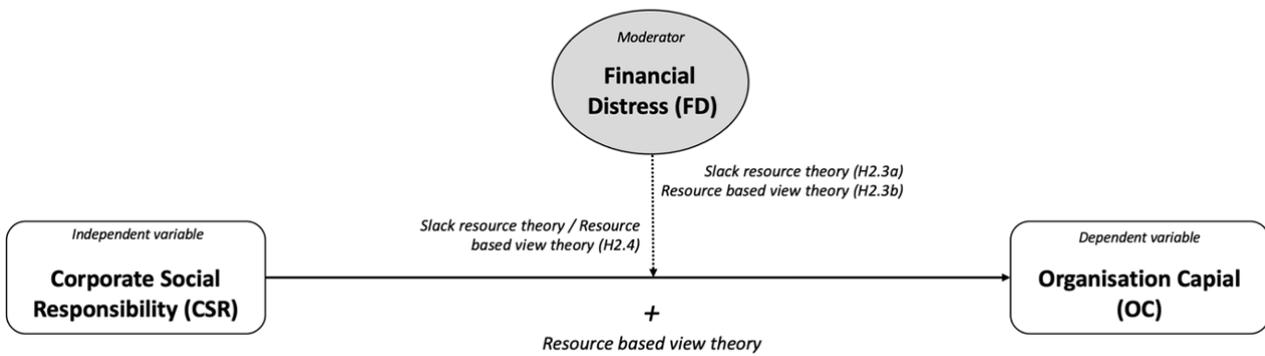
Hypothesis H2.4 tests whether FD has a moderating effect on the relationship between CSR and OC. The moderating effect of FD on the relationship between CSR and OC is captured by the coefficient  $\alpha_3$  from equation (9). If the the coefficient  $\alpha_3$  is statistically significant, this will suggest that FD has a moderating effect on the CSR and OC relationship, thus providing support for H2.4. In particular, a positive and significant coefficient on  $\alpha_3$  will suggest that FD has a positive (strengthening) effect on the CSR-OC relationship, while a negative and significant coefficient on  $\alpha_3$  will suggest that FD has a negative (weakening) effect on the CSR-OC relationship. The effect of CSR on OC, conditional on FD, is estimated as the sum of the coefficients,  $\alpha_1 + \alpha_3 FD_{it}$ , from equation (9). The conditional effect assesses if the relationship between CSR and OC changes with the level of FD. If there is a

statistically significant change in conditional effect of CSR on OC, this will suggest that FD has a moderating effect on the CSR and OC relationship, and thus provide support for hypothesis H2.4, the existence of the first stage moderation by FD on the indirect relationship between CSR and EM via OC. However, if the conditional effect of CSR on OC does not change significantly with the level of FD, then hypothesis H2.4 will be rejected, suggesting that FD does not moderate the relationship between CSR and OC.

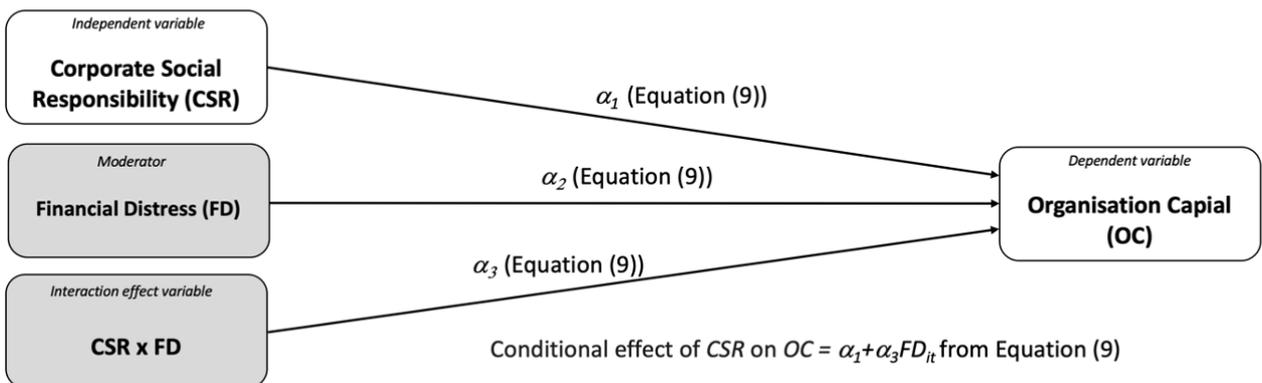
Figure 5.3 illustrates the conceptual and statistical diagrams highlighting the relationships tested in hypotheses H2.3a, H2.3b and H2.4. Panel A of Figure 5.3 illustrates the full conceptual framework, highlighting the section that is relevant to the hypotheses H2.3 (a and b) and H2.4; Panel B of Figure 5.3 shows a simplified version of the conceptual framework, showing only the section relevant to the hypotheses H2.3 (a and b) and H2.4; Panel C of Figure 5.3 shows the statistical diagram relevant to the tests of the hypotheses H2.3a, H2.3b and H2.4.



Panel A Full Conceptual Framework highlighting the sections relevant to Hypotheses H2.3 (a & b) and H2.4



Panel B Simplified Conceptual diagram for Hypotheses H2.3 (a & b) and H2.4



Panel C Statistical diagram for Hypotheses H2.3 (a & b) and H2.4

Figure 5.3 Conceptual Diagram for Hypotheses H2.3 (a and b) and H4

### **Step 3: Tests for hypotheses H2.5**

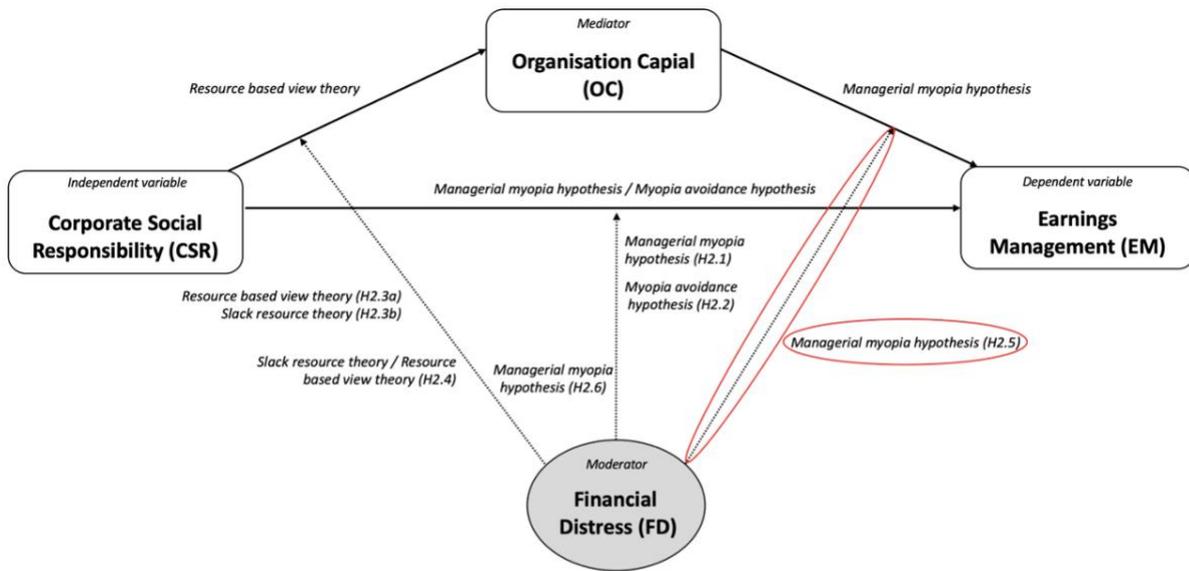
This section discusses step 3 of the research analysis, and examines the existence of second stage moderation, as a second step towards addressing research question 2.2. In this step, I examine whether FD moderates the relationship between OC and EM by estimation equation (10). Hypothesis H2.5 tests the moderating effect of FD on the relationship between OC and EM.

In this part of the analysis, I first test the relationship between the dependent variable (EM) and the independent variable (OC in this scenario), that is, the unconditional effect of OC on EM. This is captured by the coefficient  $\beta_1$  from equation (10). Chapter 4 has already tested the unconditional effect of OC on EM, reporting a positive relationship, consistent with the managerial myopia hypothesis. The present study reports the effect of OC on EM again, despite this not being part of the hypothesis testing of the present study.

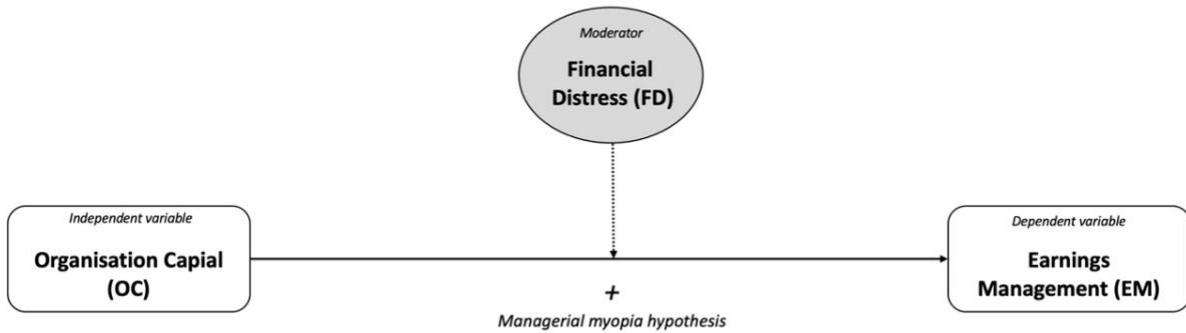
The moderating effect of FD on the relationship between OC and EM is captured by the coefficient  $\beta_4$  from equation (10). If the coefficient  $\beta_4$  is statistically significant, this will suggest that FD has a moderating effect on the relationship between OC and EM, thus providing support for H2.5. If the coefficient  $\beta_4$  is positive and significant, this will suggest that FD has a positive (strengthening) effect on the relationship between OC and EM. Contrastingly, if the coefficient  $\beta_4$  is negative and significant, this will suggest that FD has a negative (weakening) effect on the OC and EM relationship. The effect of OC on EM conditional on FD is estimated as the sum of the coefficients,  $\beta_1 + \beta_4 FD_{it}$  from equation (10). The conditional effect assesses if the relationship between OC and EM changes with the level of FD. If there is a statistically significant change in conditional effect of OC on EM, this will suggest that FD has a moderating effect on the OC and EM relationship, and thus provide support for hypothesis H2.5. If the analysis finds support for hypothesis H2.5, this will suggest the existence of second stage moderation by FD on the indirect relationship between CSR and EM via OC. However, if the conditional effect of OC on EM does not change significantly with the level of FD, then hypothesis H2.5 will be rejected, suggesting that FD does not have a moderating effect on the relationship between OC and EM.

Figure 5.4 shows the conceptual and statistical diagrams highlighting the relationships tested in hypothesis H5. Panel A of Figure 5.4 shows the full conceptual framework, highlighting the section that is relevant to the hypothesis H2.5; Panel B of Figure 5.4 shows a simplified version of the conceptual framework, showing only the section relevant to the hypothesis H2.5; and Panel C of

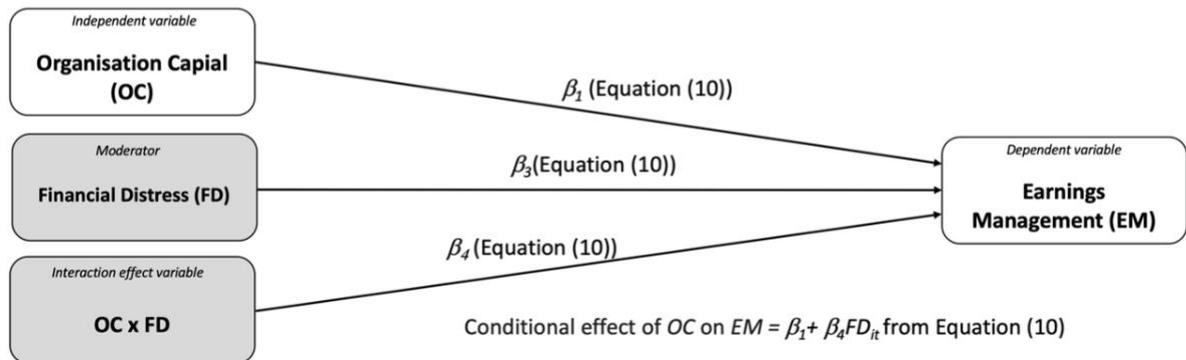
Figure 5.4 shows the statistical diagram relevant to the tests of the hypothesis H2.5.



Panel A Full Conceptual Framework highlighting the sections relevant to Hypothesis H2.5



Panel B Simplified Conceptual diagram for Hypothesis H2.5



Panel C Statistical diagram for Hypothesis H2.5

Figure 5.4 Conceptual Diagram for Hypotheses H2.5

#### **Step 4: Tests for hypothesis H2.6**

This section discusses step 4 of the research analysis, where I address research question 2.2, and examine whether FD moderates the indirect relationship between CSR and EM via OC (hypothesis H2.6), by estimating equations (9) and (10).

The unconditional indirect effect of CSR on EM, via the mediating channel OC, has already been tested in Chapter 4, suggesting a positive indirect relationship between CSR and EM, consistent with the managerial myopia hypothesis. In this Chapter, I report the unconditional indirect effect of CSR on EM again. However, this is not part of the hypothesis testing of the present study.

The moderating effect is captured by the indirect effect of CSR on EM, conditional on FD, which is estimated as  $(\alpha_1 + \alpha_3FD_{it})(\beta_1 + \beta_4FD_{it})$  from equations (9) and (10). A statistically significant coefficient provides support for hypothesis H2.6. If the coefficient is positive and significant, this will suggest that FD strengthens the positive indirect relationship between CSR and EM, consistent with the managerial myopia hypothesis. In contrast, if the coefficient is negative and significant, this will suggest that FD weakens the positive indirect relationship between CSR and EM, consistent with the myopia avoidance hypothesis. Similar to Chapter 4 and to prior studies, the statistical significance of the indirect effect is tested in two ways – 1) by estimating the standard errors of the indirect effect using the multivariate delta method, 2) by adopting bootstrapping technique. As discussed in Chapter 4, the bootstrapping technique typically uses 1,000 replacements (for example, see Cheung, 2016), however for moderated mediation effects, Hayes (2009) suggests using at least 5,000 replacements. Thus, the present study uses bootstrapping technique with 5,000 replacements. If the indirect effect of CSR on EM via OC conditional on FD is statistically significant, then the result will provide support for hypothesis H2.6, and thus address research question 2.2, suggesting that FD has a moderating effect on the indirect relationship between CSR and EM via OC. However, if the conditional indirect effect of CSR on EM via OC is not statistically significant, then hypothesis H2.6 will be rejected, suggesting that FD does not have a moderating effect on the indirect relationship between CSR and EM via OC.

Figure 5.5 shows the conceptual and statistical diagrams highlighting the relationships tested in hypothesis H2.6. Panel A of Figure 5.5 shows the conceptual framework. The full conceptual framework is relevant when examining the indirect relationship between CSR and EM via OC. Panel B of Figure 5.5 shows the statistical diagram relevant to the test of the hypothesis H2.6.

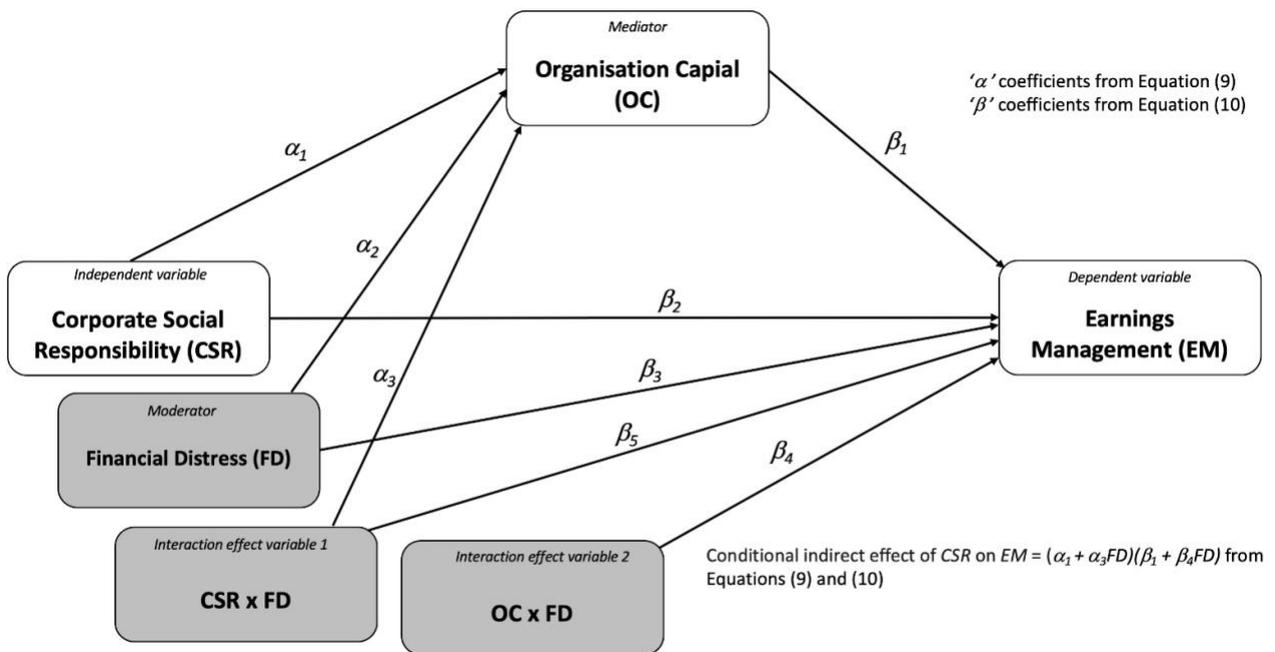
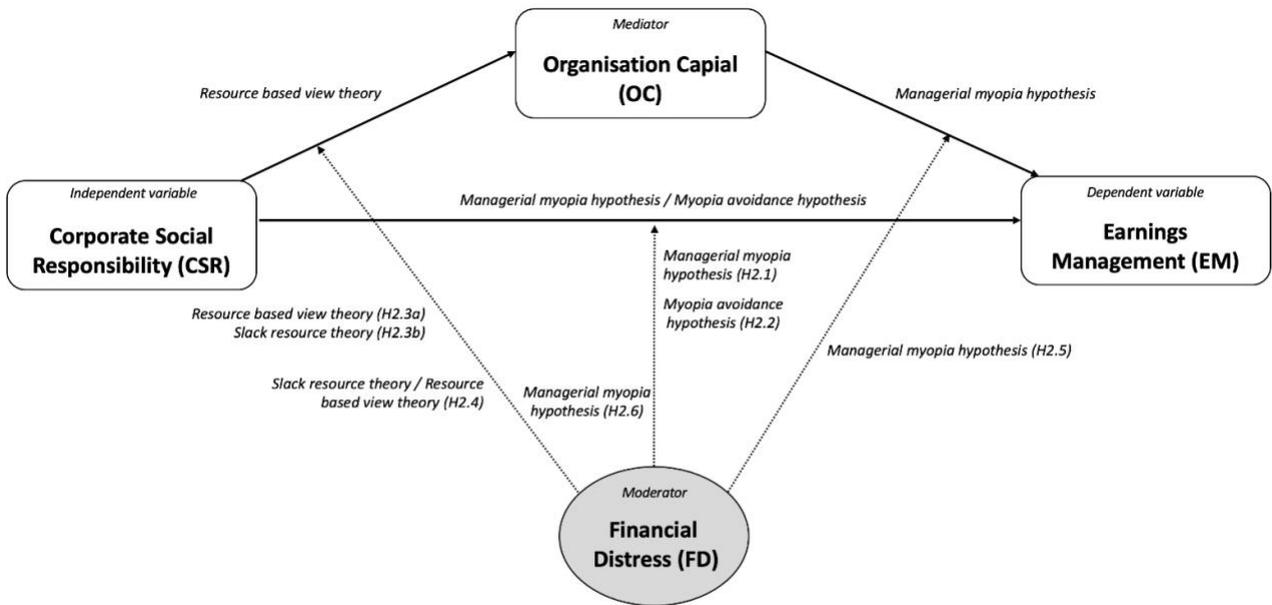


Figure 5.5 Conceptual Diagram for Hypothesis H2.6

This section details the steps involved in the hypothesis testing. Table 5.4 presents a summary of the hypothesis testing, linked to the research questions and theories.

**Table 5.4 Summary of Research Questions and Hypotheses Testing**

Research Question	Hypothesis	Theory	Expected sign
2.1. Does FD moderate the <i>direct</i> relationship between CSR and EM?	H2.1: Consistent with the managerial myopia hypothesis, there is a positive and significant relationship between FD and EM.	Managerial myopia hypothesis	$\beta_3 = +$ (Equation (10))
	H2.2: FD has a significant moderating effect on the <i>direct</i> relationship between CSR and EM.	Myopia avoidance hypothesis (stronger)	$\beta_5 = -$ (Equation (10))
		Myopia avoidance hypothesis (weaker)	$\beta_5 = +$ (Equation (10))
2.2. Does FD have a significant effect on the <i>indirect</i> CSR-EM relationship via OC?	H2.3a: Consistent with the RBV theory, there is a positive and significant relationship between FD and OC.	Slack resource theory	$\alpha_2 = -$ (Equation (9))
	H2.3b: Consistent with the resource-based view (RBV) theory, there is a positive and significant relationship between FD and OC.	RBV theory	$\alpha_2 = +$ (Equation (9))
	H2.4: FD has a significant moderating effect on the relationship between CSR and OC.	Slack resource theory	$\alpha_3 = -$ (Equation (9))
		RBV theory	$\alpha_3 = +$ (Equation (9))
	H2.5: FD has a significant moderating effect on the relationship between OC and EM.	Managerial myopia hypothesis	$\beta_4 = +$ (Equation (10))
		Myopia avoidance hypothesis	$\beta_4 = -$ (Equation (10))
	H2.6: FD has a significant moderating effect on the <i>indirect</i> relationship between CSR and EM, via the mediator OC.	Managerial myopia hypothesis (stronger)	$(\alpha_1 + \alpha_3 FD)(\beta_1 + \beta_4 FD) = +$ (Equations (9) and (10))
		Managerial myopia hypothesis (weaker)	$(\alpha_1 + \alpha_3 FD)(\beta_1 + \beta_4 FD) = -$ (Equations (9) and (10))

### 5.7.9 Sensitivity Tests

To test the sensitivity of the results, I re-estimate equations (9) and (10), using the alternate measures of the EM, CSR and OC, that is, EM\_DD, CSR\_COMB, and OC\_PT respectively. Thus, as part of the sensitivity test, I estimate equations (10a) and (10b), as SEM using ML method, with robust standard errors:

$$OC\_PT_{it} = \alpha_0 + \alpha_1 CSR\_COMB_{it} + \alpha_2 FD_{it} + \alpha_3 CSR\_COMB_{it} * FD_{it} + \alpha_4 SIZE_{it} + \alpha_5 LEV_{it} + \alpha_6 ADJROA_{it} + \alpha_7 RD_{it} + \alpha_8 PR_{it} + Year \& Industry \text{ dummies} + \varepsilon_{it} \quad (9a)$$

$$EM\_DD_{it} = \beta_0 + \beta_1 OC\_PT_{it} + \beta_2 CSR\_COMB_{it} + \beta_3 FD_{it} + \beta_4 OC\_PT_{it} * FD_{it} + \beta_5 CSR\_COMB_{it} * FD_{it} + \beta_6 SIZE_{it} + \beta_7 LEV_{it} + \beta_8 ADJROA_{it} + \beta_9 RD_{it} + \beta_{10} MB_{it} + Year \& Industry \text{ dummies} + \varepsilon_{it} \quad (10a)$$

where

$EM\_DD_{it}$  = Earnings management in year  $t$  for firm  $i$ , accruals quality model by Dechow & Dichev (2002);

$OC\_PT_{it}$  = Stock of organization capital in year  $t$  for firm  $i$ , divided by total assets following Peters & Taylor (2017);

$FD_{it}$  = Dummy variable taking the value 1 if the firm  $i$  is financially distressed in year  $t$  and taking the value 0 otherwise. The FD classification is based on prior studies (for example, Giroux & Wiggins, 1984; Habib et al., 2013; Hopwood et al., 1994; McKeown et al., 1991; Rosner, 2003; Ward, 1994);

$CSR\_COMB_{it}$  = The ESG combined score from Datastream in year  $t$  for firm  $i$ ;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ADJROA_{it}$  = Industry-adjusted ROA in year  $t$  for firm  $i$ , measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ ;

$PR_{it}$  = Physical resources in year  $t$  for firm  $i$ , measured as total assets minus current assets, scaled by total assets.

Equations (9a) and (10a) utilise dummy variables to control for the effects of year and industry (using 2-digit SIC codes). The analyses for equations (9a) and (10a) follow the same 4-step process discussed in the previous section.

#### **5.7.10 Accounting for Endogeneity**

As discussed in Chapter 4, the independent variable CSR may be subject to endogeneity. Following prior studies (for example, Bhandari et al., 2018; Bozzolan et al., 2015; Cheung, 2016; Grougiou et al., 2014), I adopt the same approach as the one discussed in Chapter 4, and re-estimate equations (9) and (10) as 2SLS models with an instrumental variable. Following, Nguyen et al. (2019), I use CSR\_M as an instrument. CSR\_M is the median of CSR calculated for each Fama-French 48 industry grouping.

#### **5.7.11 Robustness Check**

As a robustness check, I estimate the base model equations (7) and (8) using a split sample approach. The full sample is split into 2 subsamples, namely distressed and non-distressed samples. The distressed subsample includes all observations with FD = 1 (that is, observations classified as financially distressed), while the non-distressed subsample includes all observations with FD = 0 (that is, observations classified as non-distressed). The FD classification used for the sample split is the primary FD measure that is based on prior studies (for example, Giroux & Wiggins, 1984; Habib et al., 2013; Hopwood et al., 1994; McKeown et al., 1991; Rosner, 2003; Ward, 1994).

Additionally, I perform a further test for addressing endogeneity by re-estimating equations (7) and (8) using Generalised Method of Moments (GMM) technique, following the approach suggested by (Lewbel, 2012). This additional endogeneity test is performed on the 2 subsamples, namely distressed and non-distressed samples. The results are reported in Appendix A2.

## 5.8 Results and Findings

### 5.8.1 Descriptive Statistics

Table 5.5 presents the descriptive statistics for all the variables in the sample. Panel A shows the number of observations, mean, median, maximum and minimum values and standard deviation of the variables for the full sample.

As shown in Panel A, the mean value for the dependent variable, EM is 0.0857. This is very close to the mean EM from Chapter 4 (0.0955). As discussed in Chapter 4, the mean value for EM in the present study (0.0857) falls within the range observed within prior studies. The mean value for the alternate measure of EM, EM\_DD, has a mean value at 0.4711. This is also very close to the mean EM\_DD from Chapter 4 (0.4717), and thus, as discussed in Chapter 4, the mean EM\_DD in the present study (0.4711) is quite close to prior studies, such as, Hong & Andersen (2011) and Herly et al. (2020). The independent variable, CSR, has a mean value of 0.5260, suggesting that on average firms have above 53% on their overall CSR score. The alternate specification of the independent variable, CSR\_COM, has a mean value of 0.4508, suggesting that on average firms have 45% CSR score when controversies are deducted. These mean values are consistent with the mean CSR (0.5264) and mean CSR\_COMB (0.4517) reported in Chapter 4, and quite close to prior studies, such as, Hussain et al. (2018) and Dremptic et al. (2019). The mediating variable, OC, has a mean value of 0.1917, while the alternate measure OC\_PT has a mean value of 1.2754. These values are also close to the mean OC (0.1884) and OC\_PT (1.3110) in Chapter 4, and close to prior studies, such as, Marwick et al. (2020) and Hasan & Cheung (2018). The mean value of the moderator, FD, is 0.3857. The moderator, FD, is defined as a dummy variable showing the classification of firms as financially distressed and non-distressed. The mean value of 0.3857 suggests that approximately 39% of the total sample observations are categorized as financially distressed firms, while the remaining 61.42% are categorized as non-distressed. As for the control variables, the mean values for SIZE and LEV are 13.8117 and 0.2122 respectively. The means for ADJROA and RD are -0.0266 and 0.1485 respectively, and the means for PR and MB are 0.5684 and 3.3288 respectively.

Table 5.5 Panel B presents the descriptive statistics (that is, number of observations, mean and standard deviation) for each of the two subsamples, namely distressed and non-distressed subsamples. The mean value for EM is 0.1121 in the distressed subsample, and 0.0686 in the non-distressed subsample. The mean value for EM\_DD is 0.5859 in the distressed subsample, and 0.3984 in the non-distressed subsample. Clearly there is a difference in the mean values of the dependent

variable (EM and EM\_DD) across the two subsamples, as both EM and EM\_DD indicate higher EM on average within financially distressed sample in comparison to the non-distressed sample. The mean values for CSR and CSR\_COMB are 0.5168 and 0.4417 respectively in the distressed subsample, and 0.5311 and 0.4557 respectively in the non-distressed subsample. Both measures of the independent variable (CSR and CSR\_COMB) suggest that CSR is slightly lower in financially distressed firms in comparison to non-distressed firms. The mean values for OC and OC\_PT are 0.1915 and 1.4461 respectively in the distressed subsample, and 0.1918 and 1.1680 respectively in the non-distressed subsample. The primary measure of the mediator (OC) has almost equal mean values in both subsamples, while the alternate measure (OC\_PT) is higher in the distressed subsample, suggesting that financially distressed firms have higher average OC. The control variable SIZE has a mean value of 13.4814 in the distressed subsample, and 14.0041 in the non-distressed subsample, showing that distressed firms are relatively smaller on average than non-distressed firms. LEV is higher among financially distressed firms, with a mean of 0.2491 in the distressed subsample, and 0.1890 in the non-distressed subsample. Financially distressed firms have lower profitability, as ADJROA has a mean of -0.1067 in the distressed subsample, and a mean of 0.0237 in the non-distressed subsample. Financially distressed firms have lower research and development expenses and lower physical resources in contrast to non-distressed firms. RD and PR have mean values of 0.3354 and 0.5961 respectively in the distressed subsample, and 0.0337 and 0.5510 respectively in the non-distressed subsample. The Market to book ratio is not much different among distressed and non-distressed firms, as MB has a mean of 3.3163 in the distressed subsample, and 3.3363 in the non-distressed subsample.

**Table 5.5 Descriptive Statistics**

The table reports the summary statistics (number of observations, mean, median, minimum and maximum values, and the standard deviation) of the key variables for the period 2002 to 2017. Panel A shows the summary statistics of the key variables for the full sample, while Panels B shows the summary statistics for the two subsamples, distressed and non-distressed subsamples. EM and EM\_DD are the two alternate measures of the dependent variable. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). EM\_DD refers to alternate earnings management specification, proxied by accruals quality model by Dechow & Dichev (2002) CSR and CSR\_COM are the two alternate measures of the independent variable. CSR is the ESG score obtained from Thomson Reuters, while CSR\_COMB is the ESG combined score from Thomson Reuters. OC and OC\_PT are the two alternate measures for the mediator, organisation capital. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013). OC\_PT is the alternate measure of organisational capital following Peters & Taylor (2017). FD refers to FD, the moderating variable. FD is measured using the FD classification used by prior studies (for example, Giroux & Wiggins, 1984; Habib et al., 2013; Hopwood et al., 1994; McKeown et al., 1991; Rosner, 2003; Ward, 1994). FD is defined as a dummy variable, taking the value 1 if the firm is financially distressed, and 0 otherwise. SIZE, LEV, ADJROA, RD PR and MB are the control variables. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio.

**Panel A: Full sample - Descriptive Statistics**

	N	Mean	Median	Minimum	Maximum	Std. Dev.
<i>Dependent variables</i>						
EM	27,208	0.0857	0.0391	0.0005	1.0142	0.1465
EM_DD	27,051	0.4711	0.0620	0.0000	13.5023	1.7876
<i>Independent variables</i>						
CSR	19,777	0.5260	0.5189	0.0000	0.9756	0.1753
CSR_COMB	19,777	0.4508	0.4251	0.1672	0.8378	0.1544
<i>Mediating variables</i>						
OC	36,194	0.1917	0.0539	0.0000	1.9364	0.3362
OC_PT	36,194	1.2754	0.7089	0.0014	19.3431	2.3152
<i>Moderating variables</i>						
FD	36,811	0.3857	0.0000	0.0000	1.0000	0.4868
<i>Control variables</i>						
SIZE	34,463	13.8117	13.8135	8.9270	17.9589	1.7639
LEV	36,111	0.2122	0.1866	0.0000	0.9515	0.1935
ADJROA	36,811	-0.0266	0.0000	-0.9742	0.2976	0.1734
RD	35,808	0.1485	0.0000	0.0000	6.6791	0.7525
PR	36,186	0.5684	0.5896	0.0228	0.9631	0.2370
MB	32,834	3.3288	2.3400	-16.6100	33.1800	5.2108

**Panel B: Subsamples - Descriptive Statistics**

	Distressed subsample (n = 14,199)			Non-Distressed subsample (n = 22,612)		
	N	Mean	Std. Dev.	N	Mean	Std. Dev.
<i>Dependent variables</i>						
EM	10,693	0.1121	0.1874	16,515	0.0686	0.1089
EM_DD	10,483	0.5859	1.9655	16,568	0.3984	1.6612
<i>Independent variables</i>						
CSR	7,009	0.5168	0.1740	12,768	0.5311	0.1758
CSR_COMB	7,009	0.4417	0.1506	12,768	0.4557	0.1562
<i>Mediating variables</i>						
OC	13,983	0.1915	0.3666	22,211	0.1918	0.3156
OC_PT	13,983	1.4461	2.8267	22,211	1.1680	1.9170
<i>Control variables</i>						
SIZE	12,684	13.4814	1.9737	21,779	14.0041	1.5983
LEV	13,961	0.2491	0.2191	22,150	0.1890	0.1714
ADJROA	14,199	-0.1067	0.2383	22,612	0.0237	0.0820
RD	13,620	0.3354	1.1928	22,188	0.0337	0.0775
PR	13,978	0.5961	0.2800	22,208	0.5510	0.2033
MB	12,286	3.3163	6.3798	20,548	3.3363	4.3649

### 5.8.2 Correlation

Table 5.6 presents the Pearson's correlation matrix for the main variables in the full sample. The main dependent variable, EM, is negatively and significantly correlated with CSR (-0.1076), and with CSR\_COMB (-0.0573) at the 1% level of significance. The alternate specification of the dependent variable, EM\_DD, is also negatively and significantly correlated with CSR (-0.0449) at the 1% level of significance, but not significantly correlated with and CSR\_COMB (-0.0093). The mediating variable, OC, has a positive and significant correlation with EM (0.0294), but a negative and significant correlation with EM\_DD (-0.0728) at the 1% level of significance. OC is negatively and significantly correlated with CSR\_COMB (-0.0139) at the 5% level of significance, but there is no statistically significant correlation between OC and CSR (-0.0054). The alternate measure of the mediator, OC\_PT, is has a positive and significant correlation with EM (0.1245) at the 1% level of significance, but there is no statistically significant correlation between OC and EM\_DD (-0.0061). OC is negatively and significantly correlated with CSR (-0.0428) and CSR\_COMB (-0.0328) at the 1% level of significance. FD is positively correlated with both EM (0.1452) and EM\_DD (0.0511) at the 1% level of significance, and negatively correlated with both CSR (-0.0391) and CSR\_COMB (-0.0434) at the 1% level of significance. FD has a positive correlation with OC\_PT (0.0585) at the 1% level of significance, but no statistically strong correlation with OC.

The control variable SIZE is negatively and significantly correlated with EM (-0.2555), EM\_DD (-0.0839), OC (-0.2189) and OC\_PT (-0.3917) at the 1% level of significance. SIZE has a positive and significant correlation with CSR (0.4983) and CSR\_COMB (0.1879) at the 1% level of significance. The control variable LEV has negative and significant correlations with EM (-0.1300), EM\_DD (-0.0589), CSR (-0.0510), CSR\_COMB (-0.0392), OC (-0.1232) and OC\_PT (-0.1441), at the 1% level of significance. ADJROA is negatively correlated with EM (-0.3379), EM\_DD (-0.0709), OC (-0.0526) and OC\_PT(-0.2042) at the 1% level of significance, and positively correlated with CSR (0.1031) and CSR\_COM (0.0765) at the 1% level of significance. RD has strong positive correlations with EM (0.3012), EM\_DD (0.1199), OC (0.0603) and OC\_PT (0.1206) at the 1% level of significance, and negative and significant correlations with CSR (-0.0637) and CSR\_COMB (-0.0258) at the 1% level of significance. The control variable, PR, is negatively correlated with EM (-0.3115), EM\_DD (-0.1340), OC (-0.2192) and OC\_PT (-0.2722) at the 1% level of significance, and positively correlated with CSR (0.0775) and CSR\_COMB (0.0289) at the 1% level of significance. The final control variable, MB, has positive and significant correlations with EM (0.0920), EM\_DD (0.0182), OC (0.0240) and OC\_PT (0.0497) at the 1% level of significance. MB has a negative correlation with CSR (-0.0186) at the 5%

level of significance, but no statistically significant correlation with CSR\_COMB (-0.0073).

**Table 5.6 Correlation Matrix**

The table presents the Pearson’s correlation matrix between the key variables. EM and EM\_DD are the two alternate measures of the dependent variable. EM refers to earnings management, proxied by Discretionary accruals using the modified Jones model by Dechow et al. (1995). EM\_DD refers to alternate earnings management specification, proxied by accruals quality model by Dechow & Dichev (2002). CSR and CSR\_COMB are the two alternate measures of the independent variable. CSR is the ESG score obtained from Thomson Reuters, while CSR\_COMB is the ESG combined score from Thomson Reuters. OC and OC\_PT are the two alternate measures for the mediator, organisation capital. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013). OC\_PT is the alternate measure of organisational capital following Peters & Taylor (2017). FD refers to FD, the moderating variable. FD is measured using the FD classification used by prior studies (for example, Giroux & Wiggins, 1984; Habib et al., 2013; Hopwood et al., 1994; McKeown et al., 1991; Rosner, 2003; Ward, 1994). FD is defined as a dummy variable, taking the value 1 if the firm is financially distressed, and 0 otherwise. SIZE, LEV, ADJROA, RD PR and MB are the control variables. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio.

<b>Correlation Matrix – full sample</b>		1	2	3	4	5	6	7	8	9	10	11	12	13
1	EM	1												
2	EM_DD	0.2073***	1											
3	CSR	-0.1076***	-0.0449***	1										
4	CSR_COMB	-0.0573***	-0.0093	0.7116***	1									
5	OC	0.0294***	-0.0728***	-0.0054	-0.0139**	1								
6	OC_PT	0.1245***	-0.0061	-0.0428***	-0.0328***	0.4308***	1							
7	FD	0.1452***	0.0511***	-0.0391***	-0.0434***	-0.0005	0.0585***	1						
8	SIZE	-0.2555***	-0.0839***	0.4983***	0.1879***	-0.2189***	-0.3917***	-0.1429***	1					
9	LEV	-0.1300***	-0.0589***	-0.0510***	-0.0392***	-0.1232***	-0.1441***	0.1514***	0.1005***	1				
10	ADJROA	-0.3379***	-0.0709***	0.1031***	0.0765***	-0.0526***	-0.2042***	-0.3660***	0.2910***	-0.0073	1			
11	RD	0.3012***	0.1199***	-0.0637***	-0.0258***	0.0603***	0.1206***	0.1946***	-0.2177***	-0.092***	-0.5227***	1		
12	PR	-0.3115***	-0.1340***	0.0775***	0.0289***	-0.2192***	-0.2722***	0.0927***	0.3693***	0.4082***	0.2104***	-0.2647***	1	
13	MB	0.0920***	0.0182***	-0.0186**	-0.0073	0.0240***	0.0497***	-0.0019	-0.2890***	-0.0778***	0.0123**	0.0666***	-0.1512***	1

\*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively

### **5.8.3 Test of Multicollinearity**

As discussed in previous chapters, I use the variation inflation factor (VIF) to test for multicollinearity problems that may arise due to the existence of a strong linear relationship between two or more independent variables. The general rule of thumb suggests that a VIF value of 10 or above indicates the existence of multicollinearity (Takezawa, 2014). The variables used in the present study do not appear to suffer from significant multicollinearity problems as evident through variation inflation factors (VIF), values mostly being far below the threshold of 10 for all regression models. Table 5.7 shows the results of the VIF analysis of all regression models used in the present study.

Columns (1) and (2) of Table 5.7 present the VIF results of equations (7) and (8) respectively. Equation (7) has a mean VIF of 1.88 (the values ranging from 1.16 to 5.17); equation (8) has a mean VIF of 1.87 (the values ranging from 1.13 to 5.53). Columns (3) to (4) present the VIF results of equations (7a) and (8a) respectively. Equation (7a) has a mean VIF of 1.87 (the values ranging from 1.08 to 5.17); equation (8a) has a mean VIF of 1.84 (the values ranging from 1.09 to 5.51).

For equations (9), (10), (9a) and (10a), the VIF values for the moderator (FD) and the interaction variable (CSR<sub>x</sub>FD for equations (9) and (10); and CSR\_COM<sub>x</sub>FD for equations (9a) and (10a)), are slightly above the general threshold of 10. However, as Allison (2012) suggests, it is quite acceptable for dummy variables to have higher than normal VIF values. Additionally, the interaction variable CSR<sub>x</sub>FD (for equations (9) and (10)) and CSR\_COM<sub>x</sub>FD (for equations (9a) and (10a)) are the product of the independent continuous variables (CSR or CSR\_COM) and the independent dummy variable, FD. Thus, it is again quite normal for the interaction variable to have a higher collinearity with the main independent variables. The slightly larger VIF is not concerning for 3 reasons: 1) the values are just slightly (and not significantly) above the threshold of 10, 2) the nature of the variables as a dummy variable and an interaction variable makes it quite likely for the VIF to be higher, and 3) the overall mean VIF is far below the threshold of 10 in each of these instances.

Columns (5) and (6) report the VIF results of equations (9) and (10) respectively. Equation (9) and (10) has a mean VIF of 2.15. For equation (9), the VIF values range from 1.16 to 10.94, while for equation (10) the values range from 1.14 to 11.54. As discussed above, in equation (9) and (10), the upper range VIF values are slightly higher than 10 due to the VIF for the moderator, FD, and the interaction variable, CSR<sub>x</sub>FD, being greater than 10. For equation (9), the VIF for FD and CSR<sub>x</sub>FD are 10.94 and 10.86 respectively, while for equation (10), the VIF for FD and CSR<sub>x</sub>FD are 11.54 and 11.13 respectively. The higher VIF values are just slightly above 10, and therefore not concerning, as

discussed in the previous paragraph. Furthermore, the overall mean VIF values are far below 10 for both equations (0) and (10).

Columns (7) and (8) report the VIF results of equations (9a) and (10a) respectively. Equation (9a) and (10a) have mean VIF values of 2.12 and 2.11 respectively. For equation (9a), the VIF values range from 1.16 to 10.22, while for equation (10a) the values range from 1.13 to 11.13. As in the discussion above, the VIF values for the dummy moderating variable (FD) and the independent and moderating interaction variable (CSR\_COMx<sub>FD</sub>) are slightly above the general the general threshold of 10. However, as discussed above, the higher VIF values are only slightly above 10, and therefore not concerning. Furthermore, the overall mean VIF values are far below 10 for both equations (9a) and (10a).

**Table 5.7 Variation Inflation Factor (VIF) Results of the Multicollinearity Tests**

Columns (1) and (2) present the VIF results for equations (7) and (8) respectively; Columns (3) and (4) present the VIF results for equations (7a) and (8a) respectively; Columns (5) and (6) present the VIF results for equations (9) and (10) respectively; and Columns (7) and (8) present the VIF results for equations (9a) and (10a) respectively. OC, the mediator, is the stock of organisation capital scaled by total assets. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013). OC\_PT is the alternate measure of organisational capital following Peters & Taylor (2017). CSR is the ESG score from Thomson Reuters. CSR\_COMB and CSR\_DUM, are the alternate specifications for the main independent variable. CSR\_COMB is the ESG combined score from Thomson Reuters, CSR\_DUM is dummy variable taking the value of 1 if the CSR score of the firm is greater median CSR (is based on each year and industry), and 0 otherwise. FD refers to FD, the moderating variable. FD is measured using the FD classification used by prior studies (for example, Giroux & Wiggins, 1984; Habib et al., 2013; Hopwood et al., 1994; McKeown et al., 1991; Rosner, 2003; Ward, 1994). FD is defined as a dummy variable, taking the value 1 if the firm is financially distressed, and 0 otherwise. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. Year dummies include a set of dummy variables to capture year effects. Industry dummies include a set of dummy variables to capture industry effects, based on 2-digit SIC codes.

	Variation inflation factor (VIF)							
	(1) Eq (7)	(2) Eq (8)	(3) Eq (7a)	(4) Eq (8a)	(5) Eq (9)	(6) Eq (10)	(7) Eq (9a)	(8) Eq (10a)
<i>Independent variables</i>								
OC		2.02				2.5		
OC_PT				1.43				2.21
CSR	1.45	1.56			1.98	2.1		
CSR_COM			1.08	1.09			1.57	1.57
FD					10.94	11.54	10.22	11.13
CSRx <sub>FD</sub>					10.86	11.13		
CSR_COMx <sub>FD</sub>							10.17	10.25
OCx <sub>FD</sub>						1.71		
OC_PTx <sub>FD</sub>								2.48
SIZE	1.91	2.18	1.49	1.67	1.93	2.19	1.5	1.68
LEV	1.43	1.32	1.42	1.37	1.43	1.33	1.42	1.38
ADJROA	1.34	1.4	1.35	1.42	1.45	1.54	1.45	1.58
RD	1.54	1.57	1.54	1.56	1.54	1.58	1.54	1.56
PR	2.1		2.08		2.14		2.11	
MB		1.36		1.32		1.36		1.33
<i>Year dummies</i>								
Dum 1 (2003)	1.28	1.57	1.18	1.18	1.28	1.57	1.28	1.18
Dum 2 (2004)	1.29	1.42	1.18	1.18	1.29	1.43	1.28	1.18
Dum 3 (2005)	1.4	1.43	1.24	1.24	1.4	1.43	1.39	1.24
Dum 4 (2006)	1.45	1.44	1.29	1.29	1.45	1.44	1.45	1.29
Dum 5 (2007)	1.45	1.38	1.31	1.31	1.45	1.38	1.45	1.31
Dum 6 (2008)	1.48	1.35	1.32	1.32	1.48	1.36	1.48	1.32
Dum 7 (2009)	1.55	1.36	1.35	1.35	1.55	1.36	1.55	1.36

Dum 8 (2010)	1.6	1.4	1.4	1.4	1.6	1.4	1.6	1.4
Dum 9 (2011)	1.64	1.51	1.49	1.49	1.64	1.51	1.64	1.49
Dum 10 (2012)	1.65	1.54	1.53	1.53	1.65	1.54	1.65	1.53
Dum 11 (2013)	1.64	1.55	1.55	1.55	1.65	1.55	1.65	1.55
Dum 12 (2014)	1.64	1.58	1.56	1.56	1.64	1.58	1.64	1.57
Dum 13 (2015)	1.64	1.62	1.59	1.59	1.64	1.62	1.64	1.59
Dum14 (2016)	1.79	1.75	1.76	1.76	1.79	1.76	1.8	1.76
Dum15 (2017)	1.95	1.89	1.91	1.91	1.95	1.89	1.95	1.91
<i>Industry dummies</i>								
Dum 1 (sic = 12)	2.16	2.27	2.29	2.29	2.16	2.27	2.16	2.29
Dum 2 (sic = 13)	1.27	1.24	1.25	1.25	1.27	1.24	1.27	1.25
Dum 3 (sic = 14)	3.61	3.51	3.48	3.48	3.61	3.51	3.6	3.48
Dum 4 (sic = 15)	1.19	1.16	1.14	1.14	1.19	1.16	1.19	1.14
Dum 5 (sic = 16)	2.02	2.02	2.02	2.02	2.02	2.02	2.01	2.02
Dum 6 (sic = 20)	1.16	1.13	1.13	1.13	1.16	1.14	1.16	1.13
Dum 7 (sic = 21)	3.24	3.16	3.13	3.13	3.25	3.17	3.25	3.14
Dum 8 (sic = 23)	1.3	1.24	1.24	1.24	1.31	1.25	1.31	1.24
Dum 9 (sic = 24)	1.37	1.32	1.33	1.33	1.38	1.33	1.38	1.34
Dum 10 (sic = 25)	1.17	1.14	1.15	1.15	1.17	1.14	1.17	1.15
Dum 11 (sic = 26)	1.2	1.2	1.19	1.19	1.2	1.2	1.2	1.2
Dum 12 (sic = 27)	1.7	1.57	1.59	1.59	1.71	1.57	1.71	1.6
Dum 13 (sic = 28)	1.82	1.69	1.66	1.66	1.83	1.7	1.83	1.66
Dum 14 (sic = 29)	5.15	5.37	5.49	5.49	5.17	5.4	5.17	5.51
Dum 15 (sic = 30)	2.08	2.1	2.09	2.09	2.08	2.1	2.08	2.09
Dum 16 (sic = 32)	1.4	1.36	1.35	1.35	1.4	1.36	1.4	1.36
Dum 17 (sic = 33)	1.48	1.47	1.48	1.48	1.48	1.48	1.48	1.48
Dum 18 (sic = 34)	2.07	2.12	2.12	2.12	2.07	2.12	2.07	2.12
Dum 19 (sic = 35)	1.64	1.59	1.57	1.57	1.65	1.6	1.65	1.58
Dum 20 (sic = 36)	3.61	3.69	3.66	3.66	3.62	3.71	3.62	3.68
Dum 21 (sic = 37)	4.3	4.82	4.82	4.82	4.3	4.84	4.3	4.84
Dum 22 (sic = 38)	2.96	3.06	3.05	3.05	2.96	3.07	2.97	3.06
Dum 23 (sic = 39)	3.44	3.44	3.5	3.5	3.46	3.47	3.46	3.53
Dum 24 (sic = 42)	1.25	1.23	1.24	1.24	1.26	1.23	1.26	1.24
Dum 25 (sic = 44)	1.42	1.43	1.43	1.43	1.42	1.43	1.42	1.44
Dum 26 (sic = 45)	1.36	1.36	1.35	1.35	1.36	1.36	1.36	1.36
Dum 27 (sic = 47)	1.73	1.74	1.74	1.74	1.73	1.74	1.73	1.74
Dum 28 (sic = 48)	1.24	1.26	1.25	1.25	1.24	1.26	1.23	1.25
Dum 29 (sic = 49)	3.93	4.1	4.04	4.04	3.93	4.12	3.92	4.04
Dum 30 (sic = 50)	4.68	4.61	4.56	4.56	4.69	4.62	4.68	4.57
Dum 31 (sic = 51)	1.71	1.58	1.54	1.54	1.72	1.59	1.7	1.55
Dum 32 (sic = 52)	1.55	1.5	1.53	1.53	1.55	1.5	1.55	1.53
Dum 33 (sic = 53)	1.34	1.36	1.37	1.37	1.34	1.37	1.34	1.37
Dum 34 (sic = 54)	1.64	1.58	1.68	1.68	1.64	1.58	1.64	1.7
Dum 35 (sic = 55)	1.52	1.51	1.53	1.53	1.52	1.51	1.52	1.53
Dum 36 (sic = 56)	1.29	1.25	1.22	1.22	1.29	1.25	1.29	1.22
Dum 37 (sic = 57)	1.54	1.58	1.61	1.61	1.55	1.59	1.55	1.63
Dum 38 (sic = 58)	1.3	1.33	1.31	1.31	1.3	1.33	1.3	1.32
Dum 39 (sic = 59)	1.62	1.59	1.62	1.62	1.62	1.59	1.62	1.62
Dum 40 (sic = 70)	1.69	1.67	1.68	1.68	1.69	1.67	1.7	1.69
Dum 41 (sic = 72)	1.55	1.5	1.5	1.5	1.55	1.5	1.55	1.51
Dum 42 (sic = 73)	1.19	1.18	1.19	1.19	1.19	1.18	1.19	1.19
Dum 43 (sic = 75)	5.17	5.53	5.51	5.51	5.17	5.55	5.17	5.53
Dum 44 (sic = 78)	1.18	1.14	1.15	1.15	1.18	1.14	1.18	1.15
Dum 45 (sic = 79)	1.2	1.14	1.15	1.15	1.2	1.14	1.2	1.15
Dum 46 (sic = 80)	1.28	1.23	1.24	1.24	1.28	1.23	1.28	1.24
Dum 47 (sic = 82)	1.68	1.6	1.58	1.58	1.68	1.61	1.68	1.58
Dum 48 (sic = 87)	1.29	1.35	1.36	1.36	1.29	1.35	1.29	1.37
<b>Mean VIF</b>	<b>1.88</b>	<b>1.87</b>	<b>1.87</b>	<b>1.84</b>	<b>2.15</b>	<b>2.15</b>	<b>2.12</b>	<b>2.11</b>

#### **5.8.4 Preliminary Analysis Results**

##### ***Base model results of ML estimation of equations (7) and (8)***

Prior to the hypotheses testing, as part of the preliminary analysis, I test the direct relationship between CSR and EM, and the indirect relationship between CSR and EM, via the mediating channel OC. Table 5.8 presents the results of the preliminary analysis based on estimation of equations (7) and (8), using SEM with ML method. The equations are estimated using robust standard errors. Panel A shows the results of the relationship between CSR and OC (Column 1), and the direct effect of CSR on EM (Column 2), while Panel B shows the results of the indirect effect of CSR on EM via OC.

**Table 5.8 ML Estimation Output of Equations (7) and (8)**

Panel A presents the direct effects by estimating equations (7) and (8) individually in Columns (1) and (2) respectively. Robust standard errors are presented in parenthesis within Panel A. Panel B reports the joint results of OC as a channel between the CSR and EM relationship. The standard errors of the indirect relationship in Panel B, are estimated using the delta method and the bootstrapping technique with 1,000 replications. Panel B Column (1) reports the size of the indirect effect; Columns (2) and (3) show the delta method standard errors and p values respectively Columns (4) and (5) show the bootstrap standard error and the bias-corrected percentile bootstrap confidence interval respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). CSR is the ESG score obtained from Datastream. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. The model includes a set of dummy variables to capture year and industry effects.

**Panel A: Direct effect**

<i>Variables</i>	(1)	(2)
	OC (Equation 7)	EM (Equation 8)
CONSTANT	0.1788*** (0.0157)	0.1844*** (0.0274)
OC		0.9533*** (0.1088)
CSR	0.0830*** (0.0084)	-0.1074*** (0.0141)
SIZE	-0.0121*** (0.0011)	0.0085*** (0.0021)
LEV	-0.0281*** (0.0092)	0.0104*** (0.0123)
ADJROA	0.0226* (0.0124)	-0.0860*** (0.0150)
RD	-0.0092*** (0.0026)	0.0308*** (0.0031)
PR	-0.0898*** (0.0082)	
MB		0.0009*** (0.0002)
Year effects	Yes	Yes
Industry effects	Yes	Yes
Var matrix		
OC	0.0217 (0.0003)	-.02137 *** (0.0024)
EM		.0307144 (0.0047)
N	14,845	14,845
Adjusted R <sup>2</sup>	0.5081	-1.4888

**Panel B: Indirect effect**

<i>Variables</i>	(1)	(2)	(3)	(4)	(5)
	EM	Delta method Std error	Delta method p-value	Bootstrap Std error	Bootstrap-based 95% confidence interval
CSR	0.0791	0.0125	0.0000	0.0084	(0.0665, 0.0996)

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

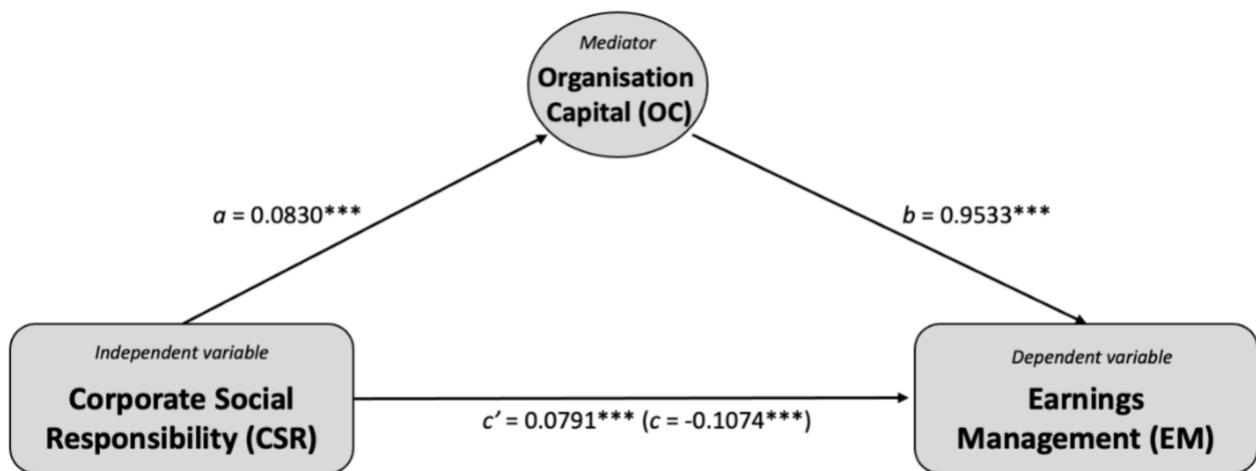
Column (1) of Panel A presents the estimation output of equation (7), that is, the relationship of OC with CSR and the control variables. Consistent with my original findings in Chapter 4, the results show a positive and significant relationship between CSR and OC at the 1% level of significance ( $\alpha_1 = 0.0830$ ;  $p < 0.01$ ). Consistent with my findings from Chapter 4, the control variables SIZE ( $\alpha_2 = -0.0121$ ;  $p < 0.01$ ), LEV ( $\alpha_3 = -0.0281$ ;  $p < 0.01$ ), RD ( $\alpha_5 = -0.0092$ ;  $p < 0.01$ ) and PR ( $\alpha_6 = -0.0898$ ;  $p < 0.01$ ) have negative associations with OC at the 1% level of significance. The control variable ADJROA is positively related to OC at the 1% level of significance ( $\alpha_4 = 0.0226$ ;  $p < 0.10$ ).

Column (2) of Panel A presents the estimation output of equation (8), that is, the direct relationships of EM with CSR, OC and the control variables. Similar to my findings reported in Chapter 4, the results indicate a positive relationship between OC and EM at the 1% level of significance ( $\beta_1 = 0.9533$ ;  $p < 0.01$ ). The direct effect result also shows that CSR has a negative direct influence on EM at the 1% level of significance ( $\beta_2 = -0.1074$ ;  $p < 0.01$ ). The results regarding the relationship between the controls variables and EM are also consistent with Chapter 4 findings. SIZE ( $\beta_3 = 0.0085$ ;  $p < 0.01$ ), LEV ( $\beta_4 = 0.0104$ ;  $p < 0.01$ ), RD ( $\beta_6 = 0.0308$ ;  $p < 0.01$ ) and MB ( $\beta_7 = 0.0009$ ;  $p < 0.01$ ) are positively related to EM at the 1% level of significance, while ADJROA is negatively related to EM at the 1% level of significance ( $\beta_5 = -0.0860$ ;  $p < 0.01$ ).

Panel B of Table 5.8 shows the indirect effect of CSR on EM via OC as a mediating channel. As shown in Column (1) shows the size of the indirect effect is 0.0791. The size of the indirect effect is calculated as the product of  $\alpha_1$  (that is, the coefficient of CSR from equation (7)) and  $\beta_1$  (that is, the coefficient of OC from equation (8)). The coefficients  $\alpha_1$  (0.0830) and  $\beta_1$  (0.9533) are individually shown in Panel A. Thus, the size of the indirect effect is 0.0791 (i.e.,  $\alpha_1 \times \beta_1 = 0.0830 \times 0.9533$ ). The positive coefficient suggests a positive indirect relationship between CSR and OC, via the mediator OC. As in Chapter 4, the statistical significance of the indirect effect is determined in two ways – 1) the delta method, and 2) the bootstrapping technique. Panel B Columns (2) and (3) show the standard error and p-values for the indirect effect, using the delta method. This suggests a strong positive indirect effect of CSR on EM, via the mediating channel OC at the 1% level of significance ( $p < 0.01$ ). Panel B Columns (4) and (5) present the standard error and the 95% confidence interval using the bootstrap technique with 1,000 replications. The results using the bootstrap technique also confirm the positive indirect effect of CSR on EM via OC. The bootstrap-based 95% confidence interval reports the lower and upper bound limits to be 0.0665 and 0.0996 respectively. Since zero does not fall between the lower and upper bound limits of the confidence interval, this suggests

that the indirect effect is statistically significant at least in the 5% ( $1 - \alpha$ ) level of significance.

Overall, the preliminary analysis is consistent with my results reported in Chapter 4, suggesting that CSR has a negative direct effect on EM, but a positive indirect effect on EM via OC. Figure 5.9 below is a snapshot of the result of the preliminary analysis that have been discussed in the preceding paragraphs. The size of the direct effect of CSR on EM is -0.1074, while the size of the indirect effect of CSR on EM via the mediator OC is 0.0791. Thus, the size of the total effect of CSR on EM, calculated as the sum of the direct and indirect effects, is -0.0283 (i.e.,  $-0.1074 + 0.0791$ ).



**Figure 5.6 OC as Mediator in the CSR and EM Relationship**

*Note: The coefficient 0.0830 represents the size of the effect of CSR on OC (path a); the coefficient 0.9533 represents the size of the effect of OC on EM (path b); the coefficient 0.0791 represents the size of the indirect effect of CSR on EM via the mediator OC (path c'); the coefficient -0.1074 represents the size of the direct effect of CSR on EM (path c).*

*\*\*\* indicate statistical significance at the 1% level.*

### **Base model sensitivity test - results of ML estimation of equations (7a) and (8a)**

I perform sensitivity tests on my preliminary analysis by estimating equations (7a) and (8a) with ML estimation, using the alternate specifications of EM, CSR and OC, that is, EM\_DD, CSR\_COMB and OC\_PT respectively. Table 5.9 shows the results of the sensitivity test for the preliminary analysis.

**Table 5.9 ML Estimation Output of Equations (7a) and (8a)**

Panel A presents the direct effects by estimating equations (7a) and (8a) individually in Columns (1) and (2) respectively. Robust standard errors are presented in parenthesis within Panel A. Panel B reports the joint results of OC\_PT as a channel between the CSR\_COMB and EM\_DD relationship. The standard errors of the indirect relationship in Panel B, are estimated using the delta method and the bootstrapping technique with 1,000 replications. Panel B Column (1) reports the size of the indirect effect; Columns (2) and (3) show the delta method standard errors and p values respectively Columns (4) and (5) show the bootstrap standard error and the bias-corrected percentile bootstrap confidence interval respectively. EM\_DD refers to alternate earnings management specification, proxied by accruals quality model by Dechow and Dichev (2002). CSR\_COMV, the alternate specification for the main independent variable is the ESG combined score from Thomson Reuters. OC\_PT is the alternate measure of organisational capital following Peters & Taylor (2017). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. The model includes a set of dummy variables to capture year and industry effects.

**Panel A: Direct effect**

Variables	(1) OC_ALT (Equation 7a)	(2) EM_DD (Equation 8a)
CONSTANT	3.0038*** (0.0824)	4.1016*** (0.4091)
OC_PT		0.3237** (0.1271)
CSR_COMB	0.1872*** (0.0429)	-0.1552* (0.0867)
SIZE	-0.1422*** (0.0052)	0.0175 (0.0229)
LEV	-0.8204*** (0.0485)	0.2600 (0.1636)
ADJROA	-0.5999*** (0.0665)	0.7288*** (0.1494)
RD	-0.0676*** (0.0142)	0.2508*** (0.0276)
PR	-0.6660*** (0.0433)	
MB		-0.0023 (0.0030)
Year effects	Yes	Yes
Industry effects	Yes	Yes
Var matrix		
OC_ALT	0.6146	-0.1869**
EM_DD		2.2856
N	14,813	14,813
Adjusted R <sup>2</sup>	0.3068	0.3286

**Panel B: Indirect effect**

Variables	(1) EM_DD	(2) Delta method Std error	(3) Delta method p-value	(4) Bootstrap Std error	(5) Bootstrap-based 95% confidence interval
CSR_COMB	0.0606	0.0276	0.0280	0.0867	(-0.3251, 0.0147)

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

Column (1) of Panel A presents the estimation output of equation (7a), that is, the relationship of OC\_PT with CSR\_COMB and the control variables. Consistent with my original, the results show a positive and significant relationship between CSR\_COMB and OC\_PT at the 1% level of significance ( $\alpha_1 = 0.1872$ ;  $p < 0.01$ ). The control variables SIZE ( $\alpha_2 = -0.1422$ ;  $p < 0.01$ ), LEV ( $\alpha_3 = -0.8204$ ;  $p < 0.01$ ), ADJROA ( $\alpha_4 = -0.5999$ ;  $p < 0.10$ ), RD ( $\alpha_5 = -0.0676$ ;  $p < 0.01$ ) and PR ( $\alpha_6 = -0.6660$ ;  $p < 0.01$ ) have negative associations with OC\_PT at the 1% level of significance.

Column (2) of Panel A presents the estimation output of equation (8a), that is, the direct relationships of EM\_DD with CSR\_COMB, OC\_PT and the control variables. The results indicate a positive relationship between OC\_PT and EM\_DD at the 5% level of significance ( $\beta_1 = 0.3237$ ;  $p < 0.05$ ). The direct effects result also shows that CSR\_COMB has a negative direct influence on EM\_DD at the 10% level of significance ( $\beta_2 = -0.1552$ ;  $p < 0.10$ ). The control variables ADJROA ( $\beta_5 = 0.7288$ ;  $p < 0.01$ ) and RD ( $\beta_6 = 0.2508$ ;  $p < 0.01$ ) are positively related to EM\_DD at the 1% level of significance. However, SIZE ( $\beta_3 = 0.0175$ ), LEV ( $\beta_4 = 0.2600$ ), MB ( $\beta_7 = -0.0023$ ) do not have a statistically significant relations with EM\_DD.

Panel B of Table 5.9 shows the indirect effect of CSR\_COMB on EM\_DD via OC\_PT as a mediating channel. As shown in Column (1) shows the size of the indirect effect is 0.0606. The size of the indirect effect is calculated as the product of  $\alpha_1$  and  $\beta_1$ , that is, the coefficients of CSR\_COMB ( $\alpha_1 = 0.1872$ ) from equation (7a) and of OC\_PT ( $\beta_1 = 0.3237$ ) from equation (8a) respectively. The positive coefficient suggests a positive indirect relationship between CSR\_COMB and OC\_PT, via the mediator OC. Columns (2) and (3) show the standard error and p-values for the indirect effect, using the delta method. This suggests a positive indirect effect of CSR\_COMB on EM\_DD, via the mediating channel OC\_PT at the 5% level of significance ( $p < 0.05$ ). Panel B Columns (4) and (5) present the standard error and the 95% confidence interval using the bootstrap technique with 1,000 replications. The bootstrap-based 95% confidence interval reports the lower and upper bound limits to be -0.3239 and 0.0135 respectively. Since zero falls between the lower and upper bound limits of the confidence interval, this suggests that the indirect effect is no longer statistically significant. Although the bootstrap technique does not show indirect relationship between CSR and EM via OC to be statistically significant, the delta method suggests that the indirect relationship is statistically significant, consistent with the ML estimation results.

**Base model results of 2SLS estimation of equations (7) and (8)**

In the next step of my preliminary analysis, I address endogeneity of CSR by re-estimating equations (7) and (8) as 2SLS models with an instrument variable. Following Nguyen et al. (2019), I use CSR\_M as an instrument, measured as the median CSR based on Fama-French 48 industry classification. Table 5.10 presents the results of the 2SLS estimation of equations (7) and (8).

**Table 5.10 2SLS Estimation Output of Equations (7) and (8)**

The model uses CSR\_M, measured as the median CSR based on Fama-French 48 industry classification as an instrument to control for endogeneity of CSR. Panel A presents the direct effects obtained from estimating equations (7) and (8) individually, shown in Columns (1) and (2) respectively. Standard errors are presented in parenthesis within Panel A. Panel B shows the indirect effects by estimating equations (7) and (8) jointly. The standard errors of the indirect relationship in Panel B are estimated using the bootstrapping method with 1,000 replications. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). CSR is the ESG score obtained from Thomson Reuters. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. The model includes a set of dummy variables to capture year and industry effects.

<b>Panel A: Direct effect</b>		
<i>Variables</i>	(1) OC (Equation 8)	(2) EM (Equation 9)
CONSTANT	0.2753*** (0.0242)	0.0352 (0.0770)
OC		0.7323*** (0.0991)
CSR	0.3411*** (0.0486)	-0.4922*** (0.1390)
SIZE	-0.0298*** (0.0035)	0.0339*** (0.0107)
LEV	-0.0516*** (0.0104)	
ADJROA	0.0204 (0.0128)	-0.0909*** (0.0153)
RDINT	-0.0096*** (0.0027)	0.0302*** (0.0028)
PR	-0.0663*** (0.0095)	
MB		0.0032*** (0.0008)
Year effects	Yes	Yes
Industry effects	Yes	Yes
1-stage F-stat	95.33	66.55
N	14,845	14,845
Adjusted R <sup>2</sup>	0.4767	-1.0809

<b>Panel B: Indirect effect (bootstrap method)</b>			
	EM	Bootstrap std error	Bootstrap-based 95% confidence interval
CSR	0.2498	0.0200	-0.9056 -0.0789

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

As shown in Panel A of Table 5.10, my preliminary test results remain consistent after using the 2SLS model to address endogeneity. Panel A Column (1) displays the results of equation (7). The results show that CSR has a positive effect on OC at the 1% level of significance ( $\alpha_1 = 0.3411$ ;  $p < 0.01$ ). The results concerning the control variables also remain consistent to the original results. The control variables SIZE ( $\alpha_2 = -0.0298$ ;  $p < 0.01$ ), LEV ( $\alpha_3 = -0.0516$ ;  $p < 0.01$ ), RD ( $\alpha_5 = -0.0096$ ;  $p < 0.01$ ) and PR ( $\alpha_6 = -0.0663$ ;  $p < 0.01$ ) have negative associations with OC at the 1% level of significance. The control variable ADJROA is positively related to OC at the 1% level of significance ( $\alpha_4 = 0.0204$ ;  $p < 0.10$ ).

Panel A Column (2) presents the results of the direct effects from the estimation of equation (8). Consistent to the original preliminary analysis, the results show that OC has a positive and effect on EM at the 1% level of significance ( $\beta_1 = 0.7323$ ;  $p < 0.01$ ). The direct effects result also shows that CSR has a negative direct influence on EM at the 1% level of significance ( $\beta_2 = -0.4922$ ;  $p < 0.01$ ). The controls variables SIZE ( $\beta_3 = 0.0339$ ;  $p < 0.01$ ), RD ( $\beta_6 = 0.0302$ ;  $p < 0.01$ ) and MB ( $\beta_7 = 0.0032$ ;  $p < 0.01$ ) are positively related to EM at the 1% level of significance, while ADJROA is negatively related to EM at the 1% level of significance ( $\beta_5 = -0.0909$ ;  $p < 0.01$ ). Thus, after controlling for endogeneity, the results remain consistent to the findings from the original preliminary analysis, and to Chapter 4 findings.

Table 5.10 Panel B reports the results relevant to the indirect relationship between CSR and EM via OC. The results show that CSR has a positive indirect effect on EM (0.2498). As discussed previously, the size of the indirect effect is estimated by calculating the product of the CSR coefficient ( $\alpha_1$ ) from equation (7) and the OC coefficient ( $\beta_1$ ) from equation (8) – that is,  $\alpha_1\beta_1$ . As shown in Table 5.10 Panel A, the CSR coefficient ( $\alpha_1$ ) from equation (7) is 0.3411, while the OC coefficient ( $\beta_1$ ) from equation (8) is 0.7323. Thus, the size of the indirect effect of CSR on EM via OC ( $\alpha_1\beta_1$ ) is 0.2498. As discussed before, I use the bootstrapping method with 1,000 replacements to estimate the standard error of the indirect effect. The lower and upper bound limits of the bootstrap-based 95% confidence interval are -0.9056 and -0.0789 respectively. Since zero does not fall between the lower and upper bound limits of the confidence interval, this suggests that the indirect effect is statistically significant at least in the 5% ( $1 - \alpha$ ) level of significance. Thus, even after controlling for endogeneity, the results suggest a positive and significant indirect relationship between CSR and EM via OC, consistent to the managerial myopia hypothesis.

Additionally, to test the validity of the instrument (CSR\_M) used in the 2SLS model, I follow prior studies and test for weak instrument. A weak instrument may cause 2SLS estimation to be

inconsistent (Stock & Yogo, 2002). Following prior studies, I use the first-stage F-statistic to detect weak instruments (for example, see Cheung, 2016; Stock & Yogo, 2002). Following the general rule of thumb, to determine that the instrument is not weak, the first-stage F-statistic should be larger than 10 to warrant that the maximum bias in the instrumental variable estimators is less than 10% (Staiger & Stock, 1994). As shown in Table 5.10, the first stage F-statistic is 95.33 for equation (8) and 66.55 for equation (9). Thus, the first stage F-statistic being well above 10, suggests that the instrument, CSR\_M, used in the 2SLS estimation, is not a weak instrument.

#### **5.8.5 Main Model Results of ML Estimation of Equations (9) and (10)**

Table 5.11 presents the results of the main hypothesis testing, based on estimation of equations (9) and (10), using SEM with ML method. The equations are estimated using robust standard errors. Panel A shows the results of the first stage moderation in Column (1) (that is, the moderating effect of FD on the relationship between CSR and OC), and the results of the second stage moderation in Column (2) (that is, the moderating effect of FD on the direct effect of CSR on EM. Panel B shows the results of the moderated mediation (that is, the moderating effect of FD on the indirect effect of CSR on EM via OC)

**Table 5.11 ML Estimation Output of Equations (9) and (10)**

The table presents the ML estimation results of equations (9) and (10). Panel A presents the conditional direct effects, and moderating effects of FD, by estimating equations (9) and (10) individually in Columns (1) and (2) respectively. Robust standard errors are presented in parenthesis within Panel A. Panel B reports the joint results of the moderating effect of FD in the indirect relationship between the CSR and EM, through the mediating channel OC. The standard errors of the conditional indirect relationship in Panel B, are estimated using the delta method and the bootstrapping technique with 1,000 replications. Panel B Column (1) reports the size of the conditional indirect effect; Columns (2) and (3) show the delta method standard errors and p values respectively Columns (4) and (5) show the bootstrap standard error and the bias-corrected percentile bootstrap confidence interval respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). CSR is the ESG score obtained from Thomson Reuters. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013).. FD refers to FD, the moderating variable. FD is measured using the FD classification used by prior studies (for example, Giroux & Wiggins, 1984; Habib et al., 2013; Hopwood et al., 1994; McKeown et al., 1991; Rosner, 2003; Ward, 1994). FD is defined as a dummy variable, taking the value 1 if the firm is financially distressed, and 0 otherwise. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. The model includes a set of dummy variables to capture year and industry effects.

<b>Panel A: Direct effect</b>		
<i>Variables</i>	(1)	(2)
	OC	EM
	(Equation 9)	(Equation 10)
CONSTANT	0.1697*** (0.0161)	0.1808** (0.0277)
OC		0.9810*** (0.1107)
CSR	0.0963*** (0.0098)	-0.1178*** (0.0166)
FD	0.0240*** (0.0086)	-0.0062 (0.0106)
OCXFD		-0.0169** (0.0084)
CSRXFD	-0.0404*** (0.0149)	0.0238 (0.0185)
SIZE	-0.0121*** (0.0011)	0.0089*** (0.0022)
LEV	-0.0283*** (0.0092)	0.0112* (0.0125)
ADJROA	0.0292** (0.0129)	-0.0835*** (0.0160)
RD	-0.0095*** (0.0026)	0.0308*** (0.0032)
PR	-0.0903*** (0.0082)	
MB		0.0009*** (0.0002)
Year effects	Yes	Yes
Industry effects	Yes	Yes
Var matrix		
OC	0.0217 (0.0003)	-0.0218*** (0.0002)
EM		0.0317 (0.0048)
N	14,845	14,845
Adjusted R <sup>2</sup>	0.5080	-1.5673

<b>Panel B: Indirect effect</b>					
	(1)	(2)	(3)	(4)	(5)
	EM	Delta method Std error	Delta method p-value	Bootstrap Std error	Bootstrap-based 95% confidence interval
<b>Unconditional Indirect effect</b>					
<b>CSR</b>	0.0945	0.0149	0.0000		
<b>Indirect effect conditional on FD: CSR -&gt; OC -&gt; EM</b>					
Distressed firms (FD = 1)	0.0539	0.0144	0.0000	0.0148	(0.0294, 0.0876)
Non-distressed firms (FD = 0)	0.0945	0.0168	0.0000	0.0166	(0.0671, 0.1325)
Difference	-0.0406	0.0147	0.0060	0.0149	(-0.0746, -0.0140)

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

### ***Results of the moderating effect of FD on the direct CSR-EM relationship***

The direct effects results, obtained from estimating equation (10), are shown in Column (2) of Panel A. The result shows that CSR has a negative direct influence on EM at the 1% level of significance ( $\beta_2 = -0.1178$ ;  $p < 0.01$ ). This result is consistent to my findings from Chapter 4 and to the preliminary analysis. FD does not have a statistically significant relationship with EM ( $\beta_3 = -0.0062$ ). Thus, the result does not provide enough evidence to support hypothesis H2.1. The interaction effect of CSR and FD (that is, CSR $\times$ FD) on EM has a positive coefficient ( $\beta_4 = 0.0238$ ), but this is not statistically significant. The result does not find evidence of a significant moderating effect of FD on the direct relationship between CSR and EM. Thus, I do not find support for hypothesis H2.2. This means that the negative direct relationship between CSR and EM does not change with the level of FD.

### ***Results of first stage moderation***

Column (1) of Panel A portrays the estimation output of equation (9), that is, the relationship of OC with CSR, FD, the interaction of CSR and FD, and the control variables. The results show a positive relationship between CSR and OC at the 1% level of significance ( $\alpha_1 = 0.0963$ ;  $p < 0.01$ ). This result is consistent to my findings from Chapter 4 and to the preliminary analysis. FD also has a positive relationship with OC at the 1% level of significance ( $\alpha_2 = 0.0240$ ;  $p < 0.01$ ). The result is consistent to the RBV and provides support for hypothesis H2.3b. The interaction effect of CSR and FD (CSR $\times$ FD) on OC is negative at the 1% level of significance ( $\alpha_3 = -0.0404$ ;  $p < 0.01$ ). The negative and significant coefficient on the interaction term CSR $\times$ FD suggests that FD has a significant moderating

(weakening) effect on the CSR and OC relationship. Thus, the result provides evidence of a first stage moderation of FD. The result is consistent to the slack resource theory, suggesting that FD weakens the positive relationship between CSR and OC, providing support for hypothesis H2.4. Consistent to the preliminary analysis, the control variables SIZE ( $\alpha_4 = -0.0121$ ;  $p < 0.01$ ), LEV ( $\alpha_5 = -0.0283$ ;  $p < 0.01$ ), RD ( $\alpha_7 = -0.0095$ ;  $p < 0.01$ ) and PR ( $\alpha_8 = -0.0903$ ;  $p < 0.01$ ) have negative associations with OC at the 1% level of significance. The control variable ADJROA is positively related to OC at the 5% level of significance ( $\alpha_6 = 0.0292$ ;  $p < 0.05$ ).

### ***Results of second stage moderation***

The results on the relationships of EM with OC, and with the interaction of OC and FD, obtained from equation (10) estimation, is shown in Column (2) of Panel A. Consistent to my preliminary findings, the results indicate a positive relationship between OC and EM at the 1% level of significance ( $\beta_1 = 0.9810$ ;  $p < 0.01$ ). However, the interaction of OC and FD (that is, OCxFD) has a negative effect on EM at the 5% level of significance ( $\beta_4 = -0.0169$ ;  $p < 0.05$ ). This result suggests that FD moderates (weakens) the positive relationship between OC and EM. Thus, the result provides support for hypothesis H2.5, suggesting that FD weakens managerial myopia behaviour. In regard to the control variables, the results are mostly consistent to my preliminary findings. SIZE ( $\beta_6 = 0.0089$ ;  $p < 0.01$ ), RD ( $\beta_9 = 0.0308$ ;  $p < 0.01$ ) and MB ( $\beta_{10} = 0.0009$ ;  $p < 0.01$ ) are positively related to EM at the 1% level of significance, while ADJROA is negatively related to EM at the 1% level of significance ( $\beta_8 = -0.0835$ ;  $p < 0.01$ ). LEV does not have a statistically significant relationship with EM ( $\beta_7 = 0.0112$ ).

### ***Results of moderated mediation***

Panel B of Table 5.11 shows the result of the hypothesis H2.6 testing, where I test moderated mediation, that is, the moderating effect of FD on the indirect relationship between CSR and EM, via the mediator OC. The first part of the table in Panel B shows the size of the unconditional indirect effect of CSR on EM via OC. Consistent to the preliminary findings, the result suggest that CSR has a positive unconditional indirect effect on EM via the channel OC, at the 1% level of significance ( $\alpha_1\beta_1 = 0.0945$ ,  $p < 0.01$ ). Similar to the previous analyses, the size of the unconditional indirect effect is measured as the product of the coefficients of CSR ( $\alpha_1 = 0.0963$ ) and OC ( $\beta_1 = 0.9810$ ) from equations (9) and (10) respectively. The standard errors, for the indirect effects of CSR on EM via OC, is based on the delta method.

The findings reported above only show the unconditional indirect effects of CSR and FD on EM. However, to examine the moderated mediation effect of FD on the indirect relationship between CSR on EM via OC, the analysis is based on the approach suggested by Preacher et al. (2007). As Preacher et al. (2007) suggest, moderated mediation occurs when the strength of the indirect effect varies with changes in the level of the moderator. The FD measure, used in the present study, is a dummy variable with 2 levels (or values) – the value ‘1’ coded for financially distressed firms, and ‘0’ for non-distressed firms. The remaining of Panel B of Table 5.11 shows the indirect effect of CSR on EM via OC for financially distressed firms, for non-distressed firms, and the difference in the indirect effect of CSR on EM between distressed and non-distressed firms, to capture any change in the strength of the indirect effect.

The statistical significance of the indirect effect results is reported in two ways: 1) using the delta method, 2) using the bootstrapping technique with 5,000 replications. Column (1) shows the size of the indirect effect; Columns (2) and (3) show the standard error and p-values, respectively calculated based on the delta method; Columns (4) and (5) show the bootstrap standard error and the bias-corrected bootstrap-based 95% confidence interval.

As shown in Panel B, the indirect effect of CSR on EM via OC is positive and significant, for both distressed and non-distressed firms. For distressed firms, CSR has a positive indirect effect on EM via OC at the 1% level of significance ( $\beta_2'_{(distressed)} = 0.0539$ ;  $p < 0.01$ ). This is known as the conditional indirect effect, as this indirect effect of CSR on EM via OC, is conditional on the moderator FD. I follow Process Model 59 for assessing the indirect effect. Following, Model 59, the conditional indirect effect ( $\beta_2'_{(distressed)}$ ) is measured as:  $(\alpha_1 + \alpha_3 FD) (\beta_1 + \beta_4 FD)$ .  $\alpha_1$  (0.0963) and  $\alpha_3 FD$  (-0.0404) are the coefficients of CSR and CSRxFD, respectively, from equation (9), while  $\beta_1$  (0.9810) and  $\beta_4 FD$  (-0.0169) are the coefficients of OC and OCxFD, respectively, from equation (10). The positive and significant coefficient on the indirect effect of CSR indicates that CSR, via the mediating path OC, tends to increase EM. The result of the bootstrap estimation also confirms this. The bias-corrected bootstrap-based 95% confidence interval reports the lower and upper bound limits to be 0.0294 and 0.0876 respectively. Since zero does not fall between the lower and upper bound limits of the confidence interval, this suggests that the indirect effect is statistically significant at least in the 5% ( $1 - \alpha$ ) level of significance.

The conditional indirect effect of CSR on EM via OC, for non-distressed firms, is also positive at the 1% level of significance ( $\beta_2'_{(non-distressed)} = 0.0945$ ;  $p < 0.01$ ). The bootstrap estimation also confirms

the statistical significance of the indirect effect. Since zero does not fall between the lower and upper bound limits of the bias-corrected bootstrap-based 95% confidence interval (the lower and upper bound limits being (0.0671 and 0.1325 respectively), it can be inferred that the indirect effect is statistically significant at least in the 5% level of significance.

An important thing to note is the size of the indirect effect coefficients for distressed and non-distressed firms. The size of the indirect effect coefficient for distressed firms (0.0539) is smaller than that of non-distressed firms (0.0945). The change in the size of the indirect effect with each level of FD suggests evidence of a moderated mediating effect. In particular, the coefficient being smaller for distressed firms, suggest that the indirect effect of CSR on EM via OC gets smaller as firms experience FD. I also test whether the difference in the indirect effects between distressed versus non-distressed firms is statistically significant. The result, shown in the final row of Panel B, indicate a negative coefficient at the 1% level of significance ( $\beta_2'_{(distressed)} - \beta_2'_{(non-distressed)} = -0.0406$ ;  $p < 0.01$ ). This result indicates that there is a statistically significant difference in the indirect effect of CSR on EM via OC between distressed versus non-distressed firms. The bias corrected bootstrap-based 95% confidence interval has lower and upper bounds as -0.0746 and -0.0140 respectively (that, is zero does not fall in between these two values), confirming that the difference in the indirect effects, between distressed and non-distressed firms, is statistically significant, at least at the 5% level of significance. The negative coefficient ( $\beta_2'_{(distressed)} - \beta_2'_{(non-distressed)} = -0.0406$ ) on the difference between distressed and non-distressed firms reiterates that the indirect relationship between CSR and EM is weaker for financially distressed firms. Thus, the moderated mediation result provides support for my final hypothesis (H2.6) and is consistent to the myopia avoidance hypothesis.

#### **5.8.6 Main Model Results Sensitivity Test – Results of ML Estimation of Equations (9a) and (10a)**

The sensitivity test involves replacing the dependent, independent and mediating variables with their alternate measures. Table 5.12 displays the results of the sensitivity tests on the main regressions. For the sensitivity test, I estimate equations (9a) and (10a) which are essentially the same as equations (9) and (10), with the only exceptions being that the main variables EM, CSR and OC are replaced with their alternate specifications EM\_DD, CSR\_COMB and OC\_PT respectively. Equations (9a) and (10a) are estimated as SEM using ML estimation, using robust standard errors.

**Table 5.12 ML Estimation Output of Equations (9a) and (10a)**

Panel A presents the conditional direct effects, and moderating effects of FD, by estimating equations (9a) and (10a) individually in Columns (1) and (2) respectively. Robust standard errors are presented in parenthesis within Panel A. Panel B reports the joint results of the moderating effect of FD in the indirect relationship between CSR\_COMB and EM\_DD, through the mediating channel OC\_PT. The standard errors of the conditional indirect relationship in Panel B, are estimated using the delta method and the bootstrapping technique with 5,000 replications. Panel B Column (1) reports the size of the conditional indirect effect; Columns (2) and (3) show the delta method standard errors and p values respectively Columns (4) and (5) show the bootstrap standard error and the bias-corrected percentile bootstrap confidence interval respectively. EM\_DD refers to alternate earnings management specification, proxied by accruals quality model by Dechow and Dichev (2002). CSR\_COMB, the alternate specification for the main independent variable, is the ESG combined score from Thomson Reuters. OC\_PT is the alternate measure of organisational capital following Peters & Taylor (2017). FD refers to FD, the moderating variable. FD is measured using the FD classification used by prior studies (for example, Giroux & Wiggins, 1984; Habib et al., 2013; Hopwood et al., 1994; McKeown et al., 1991; Rosner, 2003; Ward, 1994). FD is defined as a dummy variable, taking the value 1 if the firm is financially distressed, and 0 otherwise. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. The model includes a set of dummy variables to capture year and industry effects.

**Panel A: Direct effect**

<i>Variables</i>	(1) OC_PT (Equation 9a)	(2) EM_DD (Equation 10a)
CONSTANT	2.9178*** (0.0842)	4.0346*** (0.4004)
OC_PT		0.3235** (0.1268)
CSR_COMB	0.3245*** (0.0516)	-0.2286** (0.1083)
FD	0.2252*** (0.0436)	-0.0897 (0.0904)
OC_PTXFD		0.0560** (0.0277)
CSR_COMBFXFD	-0.4244*** (0.0892)	0.2340 (0.1802)
SIZE	-0.1416*** (0.0052)	0.0226 (0.0228)
LEV	-0.8199*** (0.0485)	0.2784* (0.1626)
ADJROA	-0.5337*** (0.0691)	0.8420*** (0.1537)
RD	-0.0678*** (0.0142)	0.2513*** (0.0276)
PR	-0.6777*** (0.0436)	
MB		-0.0029 (0.0030)
Year effects	Yes	Yes
Industry effects	Yes	Yes
Var matrix		
OC_PT	0.6135	-0.2008**
EM_DD		2.2931
N	14,813	14,813
Adjusted R <sup>2</sup>	0.3081	0.3264

<b>Panel B: Indirect effect</b>					
	(1)	(2)	(3)	(4)	(5)
	EM_DD	Delta method Std error	Delta method p-value	Bootstrap Std error	Bootstrap-based 95% confidence interval
<b>Unconditional Indirect effect</b>					
CSR_COMB	0.1050	0.0445	0.018		
<b>Indirect effect conditional on FD: CSR_COMB -&gt; OC_PT -&gt; EM_DD</b>					
Distressed firms (FD = 1)	-0.0379	0.0285	0.184	0.0309	(-0.1246, 0.0041)
Non-distressed firms (FD = 0)	0.1050	0.0487	0.031	0.0504	(0.0212, 0.2204)
Difference	-0.1429	0.0667	0.032	0.0694	(-0.3049, -0.0324)

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

### ***Sensitivity test results of the moderating effect of FD on the direct CSR-EM relationship***

The results regarding the direct effect of CSR\_COMB on EM\_DD, and the moderating effect of FD, obtained from estimating equation (10a), are shown in Column (2) of Panel A. Consistent with the original findings, the sensitivity test results show that CSR\_COMB has a negative direct influence on EM\_DD at the 5% level of significance ( $\beta_2 = -0.2286$ ;  $p < 0.05$ ). FD does not have a statistically significant relationship with EM\_DD ( $\beta_3 = -0.0897$ ). The interaction variable, CSR\_COMBx $\beta_4 = 0.2340$ ). Thus, consistent with the original findings, the sensitivity test results do not find evidence of a significant moderating effect of FD on the direct relationship between CSR\_COMB and EM\_DD.

### ***Sensitivity test results of first-stage moderation***

The results regarding the effect of CSR\_COMB on OC\_PT, and the moderating effect of FD, obtained by estimating equation (9a), are portrayed in Column (1) of Panel A. Consistent with the original results, the results of the sensitivity tests show a positive relationship between CSR\_COMB and OC\_PT at the 1% level of significance ( $\alpha_1 = 0.3245$ ;  $p < 0.01$ ). FD also has a positive relationship with OC\_PT at the 1% level of significance ( $\alpha_2 = 0.2252$ ;  $p < 0.01$ ). The interaction variable CSR\_COMBx $\alpha_3 = -0.4244$ ;  $p < 0.01$ ), suggesting that FD has a significant moderating (weakening) effect on the CSR\_COMB and OC\_PT relationship (that is, first stage moderation). The control variables SIZE ( $\alpha_4 = -0.1416$ ;  $p < 0.01$ ), LEV ( $\alpha_5 = -0.8199$ ;  $p < 0.01$ ), ADJROA ( $\alpha_6 = -0.5337$ ;  $p < 0.05$ ), RD ( $\alpha_7 = -0.0678$ ;  $p < 0.01$ ) and PR ( $\alpha_8 = -0.6777$ ;  $p < 0.01$ ) have negative associations with OC\_PT at the 1% level of significance.

### ***Sensitivity test results of second-stage moderation***

The results regarding the effect of OC\_PT on EM\_DD, and the moderating effect of FD, obtained from estimating equation (10a), are shown in Column (2) of Panel A. Consistent with the original findings, the sensitivity test results indicate a positive relationship between OC\_PT and EM\_DD at the 5% level of significance ( $\beta_1 = 0.3235$ ;  $p < 0.05$ ). The interaction variable, OC\_PTxFD has a positive effect on EM\_DD at the 5% level of significance ( $\beta_4 = -0.0560$ ;  $p < 0.05$ ). This result suggests that FD moderates (weakens) the positive relationship between OC\_PT and EM\_DD (that is, second stage moderation occurs). The control variables ADJROA ( $\beta_8 = 0.8420$ ;  $p < 0.01$ ) and RD ( $\beta_9 = 0.2513$ ;  $p < 0.01$ ) are positively related to EM\_DD at the 1% level of significance, while LEV ( $\beta_7 = 0.2784$ ;  $p < 0.10$ ) is positively related to EM\_DD at the 10% level of significance. SIZE ( $\beta_6 = 0.0226$ ) and MB ( $\beta_{10} = -0.0029$ ;  $p < 0.01$ ) do not have statistically significant relationships with EM\_DD.

### ***Sensitivity test results of moderated mediation***

Panel B of Table 5.12 shows the moderated mediation result, that is, the moderating effect of FD on the indirect relationship between CSR\_COMB and EM\_DD, via the mediator OC\_PT. The first part of the table in Panel B shows the size of the unconditional indirect effect of CSR\_COMB on EM\_DD via OC\_PT. Consistent with the original findings, the sensitivity test result suggests that CSR\_COMB has a positive indirect effect on EM\_DD via the path OC\_PT, at the 5% level of significance ( $\alpha_1\beta_1 = 0.1050$ ,  $p < 0.05$ ). The size of the indirect effect is measured as the product of the coefficients of CSR\_COMB ( $\alpha_1 = 0.3245$ ) and OC\_PT ( $\beta_1 = 0.3235$ ) from equations (9a) and (10a) respectively. The standard error for both the indirect effects of CSR\_COMB on EM\_DD via OC\_PT is based on the delta method.

As discussed previously, the moderated mediation is assessed by examining the strength of the indirect effect with changes in the level of the moderator. Panel B of Table 5.12 shows the indirect effect of CSR\_COMB on EM\_DD via OC\_PT for financially distressed firms, for non-distressed firms, and the difference in the indirect effect of CSR\_COMB on EM\_DD between distressed and non-distressed firms, to capture any change in the strength of the indirect effect. As shown in Column (1), the size of the indirect effect of CSR\_COMB on EM\_DD via OC\_PT for financially distressed firms is ( $\beta_2'_{(distressed)} = -0.0379$ ), measured as  $(\alpha_1 + \alpha_3FD)(\beta_1 + \beta_4FD)$ .  $\alpha_1$  (0.3245) and  $\alpha_3FD$  (-0.4244) are the coefficients of CSR\_COMB and CSR\_COMBxFD, respectively, from equation (9a), while  $\beta_1$

(0.3235) and  $\beta_4FD$  (-0.0560) are the coefficients of OC\_PT and OC\_PT $\times$ FD, respectively, from equation (10a). However, the indirect effect is not statistically significant for distressed firms. This is confirmed by the delta method p-value being greater than 0.1000, as well as the bias corrected 95% bootstrap-based confidence interval having zero between the lower (-0.1246) and upper (0.0041) bounds.

The conditional indirect effect of CSR\_COMB on EM\_DD via OC\_PT for non-distressed firms is positive at the 5% level of significance ( $\beta_2'$ <sub>(non-distressed)</sub> = 0.1050; p<0.05). The bootstrap estimation also confirms the statistical significance of the indirect effect. Since zero does not fall between the lower (0.0212) and upper (0.2204) bound limits of the bias-corrected bootstrap-based 95% confidence interval, it can be inferred that the indirect effect is statistically significant at least at the 5% level of significance. The size of the indirect effect coefficient for distressed firms is smaller than that of non-distressed firms, suggesting evidence of a moderated mediating effect. Consistent with the original findings, the sensitivity test results also suggest that the indirect effect of CSR\_COMB on EM\_DD via OC\_PT becomes smaller as firms experience FD.

The results regarding the indirect effect from the sensitivity test do not dismiss the original findings. On the contrary, the sensitivity test result shows that FD has a moderating (weakening) effect on the indirect relationship between CSR\_COMB and EM\_DD via OC\_PT. The results confirm that as the level of FD changes, the indirect effect between CSR\_COMB and EM\_DD via OC\_PT also changes. For financially non-distressed firms (that is FD = 0), there is a statistically significant indirect effect. However, as the level of FD changes to 1 (that is, financially distressed firms), the indirect effect is no longer statistically significant. Thus, the result confirms the original findings, suggesting that while there is a statistically significant indirect relationship between CSR\_COMB and EM\_DD via OC\_PT among non-distressed firms, this negative indirect effect becomes weaker and insignificant as the level of FD increases. The size of the indirect effect also decreases as the level of FD increases (the indirect effect coefficient being 0.1050 for non-distressed firms, and -0.0379 for financially distressed firms), consistent with the original findings. Furthermore, the difference in the indirect effects between distressed versus non-distressed firms is statistically significant. The result, shown in the final row of Panel B, indicate a negative coefficient at the 5% level of significance ( $\beta_2'$ <sub>(distressed)</sub> -  $\beta_2'$ <sub>(non-distressed)</sub> = -0.1429; p<0.01). The bias corrected bootstrap-based 95% confidence interval has lower and upper bounds of -0.3049 and -0.0324 respectively. Since zero does not fall in between these two values, this also confirms that the difference in the indirect effects between distressed

and non-distressed firms is statistically significant, at least at the 5% level of significance. The negative coefficient ( $\beta_2'_{(distressed)} - \beta_2'_{(non-distressed)} = -0.1429$ ) on the difference between distressed and non-distressed firms suggest that the indirect relationship between CSR\_COMB and EM\_DD is weaker for financially distressed firms. Thus, consistent with the original findings, the sensitivity test result indicates that there is a statistically significant difference in the indirect effect of CSR\_COMB on EM\_DD via OC\_PT between distressed versus non-distressed firms, that is FD has a statistically significant moderated mediation (weakening) effect on the indirect relationship between CSR\_COMB and EM\_DD via OC\_PT.

### **5.8.7 Accounting for Endogeneity – 2SLS Estimation Results of Equations (9) and (10)**

Table 5.13 presents the results of the 2SLS tests for addressing the endogeneity of CSR concerning the main hypothesis testing, based on estimation of equations (9) and (10), using the instrument CSR\_M, measured as the median CSR based on Fama-French 48 industry classifications. Panel A Column (1) shows the results of the first stage moderation (that is, the moderating effect of FD on the relationship between CSR and OC), while Column (2) shows the results of the second stage moderation (that is, the moderating effect of FD on the relationship between OC and EM), and the moderating effect of FD on the direct effect of CSR on EM. Panel B shows the results of the moderated mediation (that is, the moderating effect of FD on the indirect effect of CSR on EM via OC).

**Table 5.13 2SLS Estimation Output of Equations (9) and (10)**

The model uses CSR\_M, measured as the median CSR based on Fama-French 48 industry classification, as an instrument to control for endogeneity of CSR. Panel A presents the conditional direct effects, and moderating effects of FD, by estimating equations (9) and (10) individually in Columns (1) and (2) respectively. Standard errors are presented in parenthesis within Panel A. Panel B reports the joint results of the moderating effect of FD in the indirect relationship between the CSR and EM, through the mediating channel OC. The standard errors of the indirect relationship in Panel B are estimated using the bootstrapping method with 5,000 replications. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). CSR is the ESG score obtained from Thomson Reuters. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013). FD is measured using the FD classification used by prior studies (for example, Giroux & Wiggins, 1984; Habib et al., 2013; Hopwood et al., 1994; McKeown et al., 1991; Rosner, 2003; Ward, 1994). FD is defined as a dummy variable, taking the value 1 if the firm is financially distressed, and 0 otherwise. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. The model includes a set of dummy variables to capture year and industry.

**Panel A: Direct effect**

<i>Variables</i>	(1) OC (Equation 9)	(2) EM (Equation 10)
CONSTANT	0.2551*** (0.0203)	0.1655*** (0.0533)
OC		0.7192*** (0.1051)
CSR	0.6877*** (0.0639)	-0.3759** (0.1737)
FD	0.2652*** (0.0274)	-0.0788 (0.0659)
OCXFD		-0.4551*** (0.0617)
CSRXFD	-0.4972*** (0.0514)	0.2401* (0.1316)
SIZE	-0.0432*** (0.0035)	0.0194* (0.0103)
LEV	-0.0681*** (0.0111)	
ADJROA	0.0639*** (0.0149)	-0.1175*** (0.0241)
RD	-0.0120*** (0.0029)	0.0258*** (0.0025)
PR	-0.0458*** (0.0104)	
MB		0.0026*** (0.0009)
Year effects	Yes	Yes
Industry effects	Yes	Yes
1-stage F-stat	46.96	33.00
N	14,845	14,845
Adjusted R <sup>2</sup>	0.3872	-0.5385

<b>Panel B: Indirect effect (bootstrap method)</b>				
	(1)	(2)	(3)	
	EM	Bootstrap std error	Bootstrap-based 95% confidence interval	
<b>Indirect effect: CSR -&gt; OC -&gt; EM</b>				
Distressed firms (FD = 1)	0.0503	0.0173	0.0205	0.0920
Non-distressed firms (FD = 0)	0.4946	0.1535	0.2435	0.8729
Difference	-0.4443	0.1373	-0.7818	-0.2214

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

### **2SLS results of the moderating effect of FD on the direct CSR-EM relationship**

Column (2) of Panel A presents the 2SLS estimation output of equation (10) that tests the direct relationships of EM with CSR, and the moderating effect of FD. The direct effect is CSR on EM is negative at the 5% level of significance ( $\beta_2 = -0.3759$ ;  $p < 0.05$ ). The direct effect of FD on EM is not statistically significant. However, the direct effect of CSR $\times$ FD (that is, the interaction effect of CSR and FD) on EM is a weak positive ( $\beta_4 = 0.2401$ ;  $p < 0.10$ ), at the 10% level of significance. Although the SEM results do not find a statistically significant moderating effect of FD on the direct relationship between CSR and EM, the 2SLS estimation results suggest that FD has a weak moderating (strengthening) effect on the direct relationship between CSR and EM.

### **2SLS results of first stage moderation**

Column (1) of Panel A portrays the 2SLS estimation output of equation (9), that is, the relationship of OC with CSR, FD, the interaction of CSR and FD, and the control variables. The 2SLS results regarding the first stage moderation are consistent to the ML estimation results. The results show a positive relationship between CSR and OC at the 1% level of significance ( $\alpha_1 = 0.6877$ ;  $p < 0.01$ ). FD also has a positive relationship with OC at the 1% level of significance ( $\alpha_2 = 0.2652$ ;  $p < 0.01$ ). The interaction effect of CSR and FD (CSR $\times$ FD) on OC is negative at the 1% level of significance ( $\alpha_3 = -0.4972$ ;  $p < 0.01$ ). The control variables SIZE ( $\alpha_4 = -0.0432$ ;  $p < 0.01$ ), LEV ( $\alpha_5 = -0.0681$ ;  $p < 0.01$ ), RD ( $\alpha_7 = -0.0121$ ;  $p < 0.01$ ) and PR ( $\alpha_8 = -0.0458$ ;  $p < 0.01$ ) have negative associations with OC, while ADJROA ( $\alpha_6 = 0.0639$ ;  $p < 0.01$ ) has a positive association with OC at the 1% level of significance.

### **2SLS Results of second stage moderation**

Column (2) of Panel A presents the 2SLS estimation output of equation (10) that also tests the moderating effect of FD on the relationship between OC and EM, besides testing the direct CSR-EM relationship, discussed above. The 2SLS results regarding the second stage moderation are mostly

consistent with the SEM estimation results. The results indicate a positive relationship between OC and EM at the 1% level of significance ( $\beta_1 = 0.7192$ ;  $p < 0.01$ ). The interaction of OC and FD (that is, OCx $FD$ ) has a negative effect on EM at the 1% level of significance ( $\beta_4 = -0.4551$ ;  $p < 0.01$ ). The control variables RD ( $\beta_9 = 0.0258$ ;  $p < 0.01$ ) and MB ( $\beta_{10} = 0.0026$ ;  $p < 0.01$ ) are positively related to EM, while ADJROA ( $\beta_8 = -0.1175$ ;  $p < 0.01$ ) is negatively related to EM at the 1% level of significance. SIZE is positively related to EM at the 10% level of significance ( $\beta_6 = 0.0194$ ;  $p < 0.10$ ).

### **2SLS Results of moderated mediation**

Panel B of Table 5.13 shows the result of the moderating effect of FD on the indirect relationship between CSR and EM, via the mediator OC (that is, the moderated mediation effect). The 2SLS results regarding the moderated mediation are mostly consistent with the SEM estimation results. Consistent with the SEM estimation results, I report the 2SLS estimation result concerning the indirect effect of CSR on EM via OC for distressed firms, non-distressed firms, and the difference in the direct and indirect effects between distressed and non-distressed firms. The statistical significance of the indirect effects is only based on the bootstrap estimation. The bootstrap technique uses 5,000 replications. Column (1) shows the size of the indirect effect; Columns (2) and (3) show the bootstrap standard error and the bias-corrected bootstrap-based 95% confidence interval.

As shown in Panel B Column (1), the conditional indirect effect of CSR on EM via OC has a positive coefficient ( $\beta_2'_{(distressed)} = 0.0503$ ). As discussed previously, following Process Model 59, the size of the conditional indirect effect ( $\beta_2'_{(distressed)}$ ) is measured as  $(\alpha_1 + \alpha_3FD)(\beta_1 + \beta_4FD)$ .  $\alpha_1$  (0.6877) and  $\alpha_3FD$  (-0.4972) are the coefficients of CSR and CSRx $FD$ , respectively, from equation (9), while  $\beta_1$  (0.7192) and  $\beta_4FD$  (-0.4551) are the coefficients of OC and OCx $FD$ , respectively, from equation (10). The p-value using the delta method shows that the indirect effect is statistically significant at the 5% level of significance. The lower and upper bound limits of the bias-corrected bootstrap-based 95% confidence interval reports being 0.0205 and 0.0920 respectively, suggests that the indirect effect is statistically significant at least at the 5% ( $1 - \alpha$ ) level of significance (since zero does not fall in between the lower and upper bounds of the confidence interval).

The conditional indirect effect of CSR on EM via OC for non-distressed firms is also positive ( $\beta_2'_{(non-distressed)} = 0.4946$ ). Although the p-value, using the delta method, shows that the indirect effect for

non-distressed firms is not statistically significant, the bootstrap estimation is consistent with the ML estimation results. The bootstrap estimation reports the lower and upper bound limits of the bias-corrected bootstrap-based 95% confidence interval to be 0.2435 and 0.8729 respectively. This indicates that the indirect effect of CSR on EM for non-distressed firms is statistically significant at least in the 5% level of significance. Consistent to the SEM results, it can be noted that the size of the indirect effect coefficient for distressed firms (0.0503) is smaller than that of non-distressed firms (0.4946).

As shown in the final row of Panel B, the difference in the CSR and EM indirect relationship, between distressed and non-distressed firms, has a negative coefficient ( $\beta_{2'}(distressed) - \beta_{2'}(non-distressed) = -0.4443$ ;  $p < 0.01$ ). The p-value, using the delta method, shows that the indirect effect is not statistically significant. However, as discussed above, the bootstrap estimation is consistent to the original results from the ML estimation. The lower and upper bounds of the bias corrected bootstrap-based 95% confidence interval are -0.7818 and -0.2214 respectively. Since zero does not fall between the lower and upper bound limits, this suggests that the difference in the indirect effects is statistically significant in at least at the 5% level of significance. Consistent with the original results, the negative coefficient further indicates that the indirect relationship between CSR and EM is weaker for financially distressed firms.

Additionally, similar to the approach followed in the preliminary analysis, the validity of the instrument (CSR\_M) is tested by testing for weak instrument. As shown in Table 5.13, the first stage F-statistic is 46.96 for equation (9) and 33.00 for equation (10). Thus, the first stage F-statistic being well above 10, suggests that the instrument, CSR\_M, used in the 2SLS estimation, is not a weak instrument.

### **5.8.8 Results of Robustness Check – Split Sample**

#### ***ML estimation of base model equations (7) and (8) within the two subsamples***

Table 5.14 shows the results of ML estimations of the base model equations (7) and (8), using robust standard errors, performed individually on each of the 2 subsamples, that is, distressed and non-distressed samples. As discussed in Section 5.7.5, the FD classification is based on prior studies (for example, Giroux & Wiggins, 1984; Habib et al., 2013; Hopwood et al., 1994; McKeown et al., 1991; Rosner, 2003; Ward, 1994). The subsamples are obtained by splitting the full sample based on the

FD classification. All firm-year observations classified as Financially distressed form the Distressed sample, while all firm-year observations classified as healthy (or non-financially distressed) form the Non-Distressed sample. The two subsamples have uneven number of observations with the distressed sample having 14,199 firm-year observations (38.57% of the full sample), and the non-distressed sample having 22,612 firm-year observations (61.43% of the full sample).

**Table 5.14 ML Estimation Output for Equations (7) and (8) on Distressed and Non-distressed Samples**

The table presents the ML estimation results of equations (7) and (8) performed on the 2 subsamples (distressed and non-distressed subsamples). Panel A Columns (1) and (2) present the direct effects by individually estimating equations (7) and (8) respectively, for the distressed subsample. Columns (3) and (4) present the direct effects by individually estimating equations (7) and (8) respectively, for the non-distressed subsample. Robust standard errors are presented in parenthesis. Panel B reports the joint results of OC as a channel between the CSR and EM relationship, shown for both distressed and non-distressed subsamples. The standard errors of the indirect relationship in Panel B, are estimated using the delta method and the bootstrapping technique with 1,000 replications. Panel B Column (1) reports the size of the indirect effect; Columns (2) and (3) show the delta method standard errors and p values respectively Columns (4) and (5) show the bootstrap standard error and the bias-corrected percentile bootstrap confidence interval respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). CSR is the ESG score obtained from Thomson Reuters. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. The model includes a set of dummy variables to capture year and industry effects.

**Panel A: Direct effect**

Variables	Distressed subsample		Non-distressed subsample	
	(1) OC (Equation 7)	(2) EM (Equation 8)	(3) OC (Equation 7)	(4) EM (Equation 8)
CONSTANT	0.1782*** (0.0249)	0.2132*** (0.0495)	0.1520*** (0.0208)	0.1764*** (0.0300)
OC		1.0528*** (0.1988)		0.8097*** (0.1383)
CSR	0.0340** (0.0146)	-0.0597*** (0.0212)	0.1078*** (0.0102)	-0.1186*** (0.0190)
SIZE	-0.0080*** (0.0018)	0.0035 (0.0033)	-0.0137*** (0.0014)	0.0097*** (0.0027)
LEV	-0.0002 (0.0147)	-0.0424** (0.0196)	-0.0360*** (0.0116)	0.0494*** (0.0146)
ADJROA	0.0419** (0.0185)	-0.1658*** (0.0244)	0.0189 (0.0197)	0.0635*** (0.0216)
RD	-0.0112*** (0.0030)	0.0236*** (0.0043)	0.1586*** (0.0258)	-0.0109 (0.0361)
PR	-0.0941*** (0.0141)		-0.0786*** (0.0103)	
MB		0.0006* (0.0003)		0.0000 (0.0003)
Year effects	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes
Var matrix				
OC	0.0222	-0.0243***	0.0202	-0.0170***
EM		0.0389		0.0222
N	5,129	5,129	9,716	9,716
Adjusted R <sup>2</sup>	0.4533	-1.1813	0.5582	-1.3745

<b>Panel B: Indirect effect</b>					
<i>Variables</i>	(1)	(2)	(3)	(4)	(5)
	EM	Delta method Std error	Delta method p-value	Bootstrap Std error	Bootstrap-based 95% confidence interval
CSR (distressed subsample)	0.0358	0.0173	0.0390	0.0235	(-0.1058, -0.0135)
CSR (non-distressed subsample)	0.0873	0.0175	0.0000	0.0210	(-0.1598, -0.0774)

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

Table 5.14 Panel A Columns (1) and (2) show the results of equations (7) and (8) respectively on the distressed subsample, while Columns (3) and (4) show the results of equations (7) and (8) respectively on the distressed subsample, testing the relationship between OC and EM, and the direct relationship between CSR and EM, individually on the distressed and non-distressed subsamples respectively.

Column (1) of Panel A portrays the estimation output of equation (7) on the distressed subsample, testing the relationship of OC with CSR and the control variables. The results show a positive relationship between CSR and OC at the 5% level of significance ( $\alpha_1 = 0.0340$ ;  $p < 0.05$ ). The control variables SIZE ( $\alpha_2 = -0.0080$ ;  $p < 0.01$ ), RD ( $\alpha_5 = -0.0112$ ;  $p < 0.01$ ) and PR ( $\alpha_6 = -0.0941$ ;  $p < 0.01$ ) have negative relationships with OC at the 1% level of significance, while ADJROA is positively related to OC at the 5% level of significance ( $\alpha_4 = 0.0419$ ;  $p < 0.05$ ). However, LEV ( $\alpha_3 = -0.0002$ ) does not have a statistically significant association with OC in the distressed subsample.

Column (2) of Panel A presents the estimation output of equation (8) on the distressed subsample, testing the direct relationships of EM with CSR, OC and the control variables. The results indicate a positive relationship between OC and EM at the 1% level of significance ( $\beta_1 = 1.0528$ ;  $p < 0.01$ ). The direct effects result also shows that CSR has a negative direct influence on EM at the 1% level of significance ( $\beta_2 = -0.0597$ ;  $p < 0.01$ ). The control variables LEV ( $\beta_4 = -0.0424$ ;  $p < 0.05$ ) and ADJROA ( $\beta_5 = -0.1658$ ;  $p < 0.01$ ) are negatively related to EM at the 5% and 1% level of significance respectively. RD ( $\beta_6 = 0.0236$ ;  $p < 0.01$ ) and MB ( $\beta_7 = 0.0006$ ;  $p < 0.10$ ) are positively related to EM at the 1% and 10% level of significance respectively. However, SIZE ( $\beta_3 = 0.0035$ ) does not have a statistically significant association with EM in the distressed subsample.

Column (3) of Panel A portrays the estimation output of equation (7), testing the relationship of OC with CSR and the control variables, on the non-distressed subsample. The results show a positive relationship between CSR and OC at the 1% level of significance ( $\alpha_1 = 0.1078$ ;  $p < 0.01$ ). The control variables SIZE ( $\alpha_2 = -0.0137$ ;  $p < 0.01$ ), LEV ( $\alpha_3 = -0.0360$ ;  $p < 0.01$ ) and PR ( $\alpha_6 = -0.0786$ ;  $p < 0.01$ ) have negative associations with OC at the 1% level of significance, while RD ( $\alpha_5 = 0.1586$ ;  $p < 0.01$ ) is positively related to OC at the 1% level of significance. However, ADJROA ( $\alpha_4 = 0.0189$ ) does not have a statistically significant association with OC in the non-distressed subsample.

Column (4) of Panel A presents the estimation output of equation (8), testing the direct relationships of EM with CSR, OC and the control variables, on the non-distressed subsample. The results indicate a positive relationship between OC and EM at the 1% level of significance ( $\beta_1 = 0.8097$ ;  $p < 0.01$ ). The direct effects result also shows that CSR has a negative direct influence on EM at the 1% level of significance ( $\beta_2 = -0.1186$ ;  $p < 0.01$ ). The control variables SIZE ( $\beta_3 = 0.0097$ ;  $p < 0.01$ ), LEV ( $\beta_4 = 0.0494$ ;  $p < 0.01$ ) and ADJROA ( $\beta_5 = 0.0635$ ;  $p < 0.01$ ) are positively related to EM at the 1% level of significance. However, RD ( $\beta_6 = -0.0109$ ) and MB ( $\beta_7 = 0.0000$ ) do not have a statistically significant relationships with EM in the non-distressed subsample.

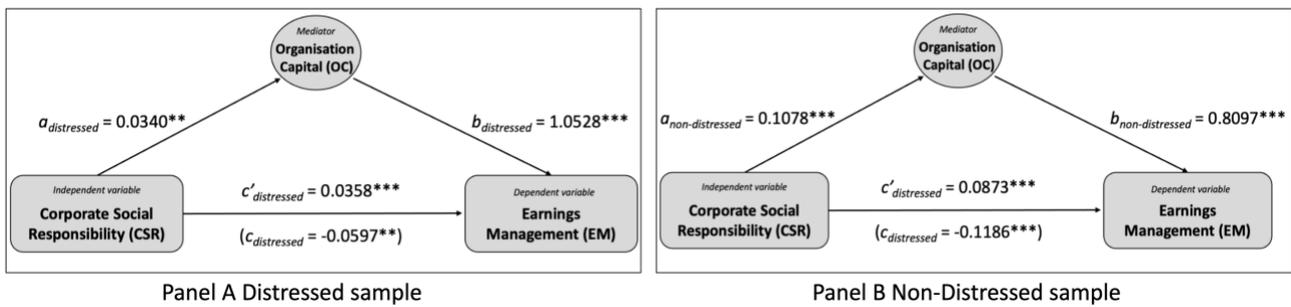
Panel B of Table 5.14 shows the indirect effect of CSR on EM via OC as a mediating channel. Column (1) shows the size of the indirect effect for each subsample, calculated as the product of  $\alpha_1$  and  $\beta_1$ , that is, the coefficients of CSR from equation (7) and of OC from equation (8) respectively. As discussed previously, the statistical significance of the indirect effect is determined using 1) the delta method, and 2) the bootstrapping technique. Panel B Columns (2) and (3) show the standard error and p-values for the indirect effect, using the delta method, while Columns (4) and (5) present the standard error and the 95% confidence interval using the bootstrap technique with 1,000 replications.

Panel B first reports the indirect effects result within the distressed subsample. As shown in Column (1), the size of the indirect effect, within the distressed subsample, is 0.0358, calculated as the product of  $\alpha_1$  (0.0340) and  $\beta_1$  (1.0528) from equations (7) and (8) respectively. Based on the delta method p-value, the result suggests a positive indirect relationship between CSR and EM, via the mediator OC, at the 5% level of significance ( $p < 0.05$ ) in the distressed subsample. The results using the bootstrap technique also confirm this positive indirect relationship. The bootstrap-based 95%

confidence interval reports the lower and upper bound limits to -0.1058 and -0.0135 respectively. Since zero does not fall between the lower and upper bound limits of the confidence interval, this suggests that the indirect effect is statistically significant at least in the 5% ( $1 - \alpha$ ) level of significance.

In regard to the results concerning the non-distressed subsample, Panel B Column (1) shows the size of the indirect effect to be 0.0873 (that is, the product of  $\alpha_1 = 0.1078$  and  $\beta_1 = 0.8097$  from equations (7) and (8) respectively). Based on the delta method p-value, the result suggests a strong positive indirect relationship between CSR and EM, via the mediator OC, at the 1% level of significance ( $p < 0.01$ ) in the non-distressed subsample. The lower and upper bound limits of the bootstrap-based 95% confidence interval, being -0.1598 and -0.0774 respectively, also confirm that the indirect effect is statistically significant in at least the 5% level of significance.

Figure 5.7 below is a snapshot of the results concerning the two subsamples – Distressed sample and Non-distressed sample in Panels A and B respectively. As shown in Panel A, within the Distressed sample, the size of the direct effect of CSR on EM is -0.0597, while the size of the indirect effect of CSR on EM via the mediator OC is 0.0358. Thus, the size of the total effect of CSR on EM, calculated as the sum of the direct and indirect effects, is -0.0239 (i.e.,  $-0.0597 + 0.0358$ ). As shown in Panel B, within the Non-distressed sample, the size of the direct effect of CSR on EM is -0.1186, while the size of the indirect effect of CSR on EM via the mediator OC is 0.0873. Thus, the size of the total effect of CSR on EM, calculated as the sum of the direct and indirect effects, is -0.0313 (i.e.,  $-0.1186 + 0.0873$ ).



**Figure 5.7 OC as Mediator in the CSR and EM Relationship in the Distressed Versus Non-Distressed Sample**

**Note:**

*In Panel A, the coefficient 0.0340 represents the size of the effect of CSR on OC (path a) in the distressed sample; the coefficient 1.0528 represents the size of the effect of OC on EM (path b) in the distressed sample; the coefficient 0.0358 represents the size of the indirect effect of CSR on EM via the mediator OC (path c') in the distressed sample; the coefficient -0.0597 represents the size of the direct effect of CSR on EM (path c) in the distressed sample.*

*In Panel B, the coefficient 0.1078 represents the size of the effect of CSR on OC (path a) in the non-distressed sample; the coefficient 0.8097 represents the size of the effect of OC on EM (path b) in the non-distressed sample; the coefficient 0.0873 represents the size of the indirect effect of CSR on EM via the mediator OC (path c') in the non-distressed sample; the coefficient -0.1186 represents the size of the direct effect of CSR on EM (path c) in the non-distressed sample.*

\*\*\* indicate statistical significance at the 1% level.

The preceding paragraphs report the results in each of the two subsamples individually, that is, Distressed and Non-distressed samples. Table 5.15 below shows the results of the differences between the effect sizes within the two subsamples. The table focusses on the difference in the effect sizes for the key relationships, that is:

- 1) the effect of CSR on OC from equation (7) - to test for first stage moderation;
- 2) the effect of OC on EM from equation (8) - to test for second stage moderation;
- 3) the direct effect of CSR on EM from equation (9); and
- 4) the indirect effect of CSR on EM via OC from equations (7) and (8) - to test for moderated mediation.

The difference in each of the effect sizes is measured as the difference between each of the regression coefficients between the Distressed and Non-distressed samples. The statistical significance of the differences in the coefficients are reported using 1) the delta method, and 2) the Bootstrap technique with the standard 1,000 replications.

**Table 5.15 Difference Effect Sizes between Distressed and Non-Distressed Samples from ML Estimation of Equations (7) and (8)**

The table presents the comparison of ML estimation results of equations (7) and (8) performed on the 2 subsamples (distressed and non-distressed subsamples). Column (1) presents the difference in the regression coefficients, between the two subsamples, from estimating equations (7) and (8). The standard errors for the difference in the effect sizes are estimated using the delta method and the bootstrapping technique with 1,000 replications. Columns (2) and (3) show the delta method standard errors and p values respectively. Columns (4) and (5) show the bootstrap standard error and the bias-corrected percentile bootstrap confidence interval respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). CSR is the ESG score obtained from Thomson Reuters. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013).

Variables	(1)	(2)	(3)	(4)	(5)
	EM	Delta method Std error	Delta method p-value	Bootstrap Std error	Bootstrap-based 95% confidence interval
CSR -> EM (direct effect)	0.0589	0.0284	0.0380	0.0326	(-0.0004, 0.1240)
CSR -> OC (equation 7)	-0.0738	0.0178	0.0000	0.0180	(-0.1100, -0.0412)
OC -> EM (equation 8)	0.2431	0.2421	0.3150	0.3175	(-0.3075, 0.9526)
CSR -> OC -> EM (indirect effect)	-0.0515	0.0246	0.0370	0.0277	(-0.1022, 0.0058)

Overall, the results from the robustness check, using the two subsamples, are mostly consistent to the original results. The direct relationship between CSR and EM (as shown earlier in Table 5.14) is negative and significant in both the Distressed ( $\beta_{2(distressed)} = -0.0597$ ;  $p < 0.01$ ) and Non-Distressed ( $\beta_{2(non-distressed)} = -0.1186$ ;  $p < 0.01$ ) subsamples. The difference in the effect size, shown in Table 5.15, calculated as  $\beta_{2(distressed)} - \beta_{2(non-distressed)}$  (that is,  $-0.0597 - (-0.1186)$ ), is 0.0589 ( $p < 0.05$ ) at the 5% level if significance, based on the delta method. However, the bias-corrected bootstrap-based 95% confidence interval has zero in between the lower (-0.0004) and upper (0.1240) bound limits, suggesting that the difference in the size of the direct effect CSR on EM is not statistically significant. Overall, the results suggest a weak moderating (strengthening) effect on the direct relationship between CSR and EM, based on the delta method p-value.

The relationship between CSR and OC (as shown earlier in Table 5.14) is positive and significant in both the distressed ( $\alpha_{1(distressed)} = 0.0340$ ;  $p < 0.05$ ) and non-distressed ( $\alpha_{1(non-distressed)} = 0.1078$ ;  $p < 0.01$ ) subsamples. The difference in the effect size, shown in Table 5.15, calculated as  $\alpha_{1(distressed)} - \alpha_{1(non-distressed)}$  (that is,  $0.0340 - 0.1078$ ), is -0.0738 ( $p < 0.01$ ) at the 1% level if significance, based on the delta method. The lower and upper bound limits of the bias-corrected bootstrap-based 95% confidence interval are -0.1100 and -0.0412 respectively. Since zero does not fall in between the lower and upper bounds of the confidence interval, this suggest that the difference in the effect size

of CSR on OC is statistically significant in at least the 5% level of significance. The negative and significant coefficient on the difference in the effect size of CSR on OC suggests that the relationship between CSR and OC is weaker within financially distressed firms. This is consistent to the original findings, suggesting that FD has a moderating (weakening) effect on the relationship between CSR and OC.

The relationship between OC and EM (as shown earlier in Table 5.14) are positive and significant in both the distressed ( $\beta_{1(\text{distressed})} = 1.0528$ ;  $p < 0.01$ ) and non-distressed ( $\beta_{1(\text{non-distressed})} = 0.8097$ ;  $p < 0.01$ ) subsamples. The difference in the effect size is 0.2431, shown in Table 5.15, and calculated as ( $\beta_{1(\text{distressed})} - \beta_{1(\text{non-distressed})}$ ) (that is,  $1.0528 - 0.8097$ ). However, the difference in the effect size of OC on EM is not statistically significant, as evident by the delta method p-value being greater than 0.10, and the bias corrected bootstrap-based 95% confidence interval having 0 in between the lower (-0.3075) and upper (0.9526) bound limits. Thus, the result does not suggest a moderating effect of FD on the relationship between OC and EM.

The indirect effects result shows that CSR has a positive and significant indirect effect on EM via OC (as shown earlier in Table 5.14) in both the Distressed ( $\alpha_1\beta_{1(\text{distressed})} = 0.0358$ ;  $p < 0.05$ ) and the Non-Distressed ( $\alpha_1\beta_{1(\text{non-distressed})} = 0.0873$ ;  $p < 0.01$ ) subsamples. Table 5.15 shows that the difference in the effect size is -0.0515 ( $p < 0.05$ ), calculated as  $\alpha_1\beta_{1(\text{distressed})} - \alpha_1\beta_{1(\text{non-distressed})}$  (that is,  $0.0358 - 0.0873$ ), at the 5% level of significance, based on the delta method. However, the bias-corrected bootstrap-based 95% confidence interval has zero in between the lower (-0.1022) and upper (0.0058) bound limits, suggesting that the difference in the size of the indirect effect CSR on EM via OC is not statistically significant. Consistent to the original results, the split sample robustness checks also suggest a moderating (weakening) effect on the indirect relationship between CSR and EM via OC, at least based on the delta method p-value.

As a further test of robustness and endogeneity, I re-estimate equations (7) and (8) on each of the two subsamples, using GMM technique, following Lewbel (2012) approach. The results are largely consistent to the original findings. In particular, the results suggest that FD does not change the direct effect of CSR on EM, but weakens the indirect effect of CSR on EM via OC. The results also suggest that FD weakens the positive relationship between CSR and OC (first stage moderation) and FD also weakens the positive relationship between OC and EM (second stage moderation). The results are reported in full in Appendix 2A.

## 5.9 Discussion of Findings

The relationship between CSR and EM has been a topic of interest among academic researchers for some time now. However, there is no consensus in the literature on whether CSR has a role in constraining EM or in escalating EM. In Chapter 4, I have already established a negative direct relationship between CSR and EM. Consistent with the myopia avoidance hypothesis, the negative direct relationship suggests that managers in high CSR firms are less likely to manage earnings, as they may tend to avoid myopic behaviour targeted towards achieving short-term goals only. The results reported in Chapter 4 have also established a positive indirect relationship between CSR and EM via OC, suggesting that high CSR firms have higher OC, which in turn leads to more EM engagement. Managers in high CSR firms are more likely to manage earnings by using their superior skills, abilities and better organisational processes (that is, high OC). Consistent with the managerial myopia hypothesis, the result suggests that while CSR creates incentives and opportunities for EM, high OC may create additional incentives and opportunities for managers to engage in EM for short-term goals. The incentives may arise as managers in firms with high OC may be concerned about their reputations being at stake if they fail to meet stakeholder expectations, such as, earnings targets. Furthermore, the opportunities may arise as managers in firms with high OC may have superior abilities and techniques to manage earnings for self-fulfilling motives. The present study explores these direct and indirect relationships between CSR and EM via OC, by examining how these relationships stand when the firms' circumstances change. To the best of my knowledge, this is the first study to examine the moderated effect of a firm-level event on the indirect relationship between CSR and EM. In this Chapter, I address the second research objective, which is to investigate *when* CSR has a *direct effect* on EM, and when CSR has an *indirect effect* on EM via OC, by examining the context FD.

I address research objective 2, by answering the following two research questions:

*Research Question 2.1:* Does FD have a significant effect on the *direct* CSR-EM relationship?

*Research Question 2.2:* Does FD have a significant effect on the *indirect* CSR-EM relationship via OC?

Using a sample of 36,811 firm-year observations, the results support most of the hypotheses tested to address the research questions stated in Section 5.1. In regard to the first research question, the study does not find a statistically significant moderating effect of FD on the direct relationship between CSR and EM. However, in regard to the second research question, the study finds that FD

weakens the indirect relationship between CSR and EM via OC. In addressing the second research question, I also examine how FD affects each of the indirect paths in the CSR-EM relationship – the first path examines the moderating effect of FD on the relationship between CSR and OC; the second path examines the moderating effect of FD on the relationship between OC and EM. The remainder of this section discusses these results. Table 5.16 (an extension of Table 5.4 presented earlier) shows a summary of the results.

**Table 5.16 Summary of Research Questions, Hypotheses and Results**

Research Question	Hypothesis	Theory	Expected sign	Results	Conclusion	
2.1. Does FD moderate the <i>direct</i> relationship between CSR and EM?	H2.1: Consistent with the managerial myopia hypothesis, there is a positive and significant relationship between FD and EM.	Managerial myopia hypothesis	$\beta_3 = +$ (Equation (10))	No significant relationship between FD and EM	FD does not moderate the <i>direct</i> relationship between CSR and EM	
	H2.2: FD has a significant moderating effect on the <i>direct</i> relationship between CSR and EM.	Myopia avoidance hypothesis (stronger)	$\beta_5 = -$ (Equation (10))	No significant moderating effect of FD on the <i>direct</i> relationship between CSR and EM		
		Myopia avoidance hypothesis (weaker)	$\beta_5 = +$ (Equation (10))			
2.2. Does FD have a significant effect on the <i>indirect</i> CSR-EM relationship via OC?	H2.3a: Consistent with the RBV theory, there is a positive and significant relationship between FD and OC.	Slack resource theory	$\alpha_2 = -$ (Equation (9))	Consistent with RBV theory, FD has a positive and significant effect on OC ( $\alpha_2 = +$ )	FD moderates (weakens) the relationship between CSR and OC	
	H2.3b: Consistent with the resource-based view (RBV) theory, there is a positive and significant relationship between FD and OC.	RBV theory	$\alpha_2 = +$ (Equation (9))			
	H2.4: FD has a significant moderating effect on the relationship between CSR and OC.	Slack resource theory	$\alpha_3 = -$ (Equation (9))	Consistent with the slack resource theory, FD has a significant moderating effect ( $\alpha_3 = -$ ) on the relationship between CSR and OC		
		RBV theory	$\alpha_3 = +$ (Equation (9))			
	H2.5: FD has a significant moderating effect on the relationship between OC and EM.	Managerial myopia hypothesis	$\beta_4 = +$ (Equation (10))	FD has a significant moderating effect ( $\beta_4 = -$ ) on the relationship between OC and EM, suggesting weaker myopia		FD moderates (weakens) the relationship between OC and EM
		Myopia avoidance hypothesis	$\beta_4 = -$ (Equation (10))			
	H2.6: FD has a significant moderating effect on the <i>indirect</i> relationship between CSR and EM, via the mediator OC.	Managerial myopia hypothesis (stronger)	$(\alpha_1 + \alpha_3 FD)(\beta_1 + \beta_4 FD) = +$ (Equations (9) and (10))	FD has a moderating effect ( $(\alpha_1 + \alpha_3 FD)(\beta_1 + \beta_4 FD) = -$ ) on the <i>indirect</i> relationship between CSR and EM via OC, suggesting weaker myopia		FD moderates (weakens) the <i>indirect</i> relationship between CSR and EM via OC.
		Managerial myopia hypothesis (weaker)	$(\alpha_1 + \alpha_3 FD)(\beta_1 + \beta_4 FD) = -$ (Equations (9) and (10))			

As shown in Table 5.16, in response to research question 2.1, the results suggest that FD does not moderate the *direct* relationship between CSR and EM. This suggests that regardless of whether the firm is financially distressed or not, CSR has a negative direct effect on EM, consistent with the managerial myopia hypothesis. The result suggests that managers in firms with high CSR will continue to avoid myopic behaviour, specifically EM, irrespective of FD. This may be because managers engaged in CSR are driven by their genuine concern to maintain relationships with stakeholders (relationship-driven myopia avoidance), and/ or their ethical and moral values (value-driven myopia avoidance). Thus, genuine involvement in CSR may constrain the opportunistic behaviour that FD typically creates, as suggested in the literature.

In contrast to the *direct* relationship, I find a totally different result when examining the effect of FD on the *indirect* relationship between CSR and EM via OC. When there is no FD, there is a positive *indirect* relationship between CSR and EM via OC. Consistent with the managerial myopia hypothesis, this result suggests that managers in firms with high CSR may manage more earnings for short-term gains, such as meeting stakeholder expectations by meeting earnings targets. They may take advantage of the greater opportunities from their firm's high OC (that is, better processes and techniques, higher knowledge, superior managerial quality practices, and greater ability) to manage earnings using more sophisticated techniques and to cover up their opportunistic behaviour more efficiently (opportunity-driven myopia). Furthermore, managers in firms with high OC may experience pressures resulting from greater expectations from stakeholders. Failure to meet such expectations may pose a threat to their reputation. Thus, to please stakeholders by meeting targets, and to safeguard their reputation, they may exhibit myopic behaviour by engaging in more EM as a short-term solution (incentive-driven myopia). However, this changes when firms experience FD. FD is a situation when firms may struggle to meet their financial obligations. This may have significant impacts on the managers, often putting their employment at stake (for example, see Charitou et al., 2011), causing managers to re-evaluate their priorities and change their behaviour. The results suggest that when firms experience FD, the positive indirect relationship between CSR and EM via OC becomes weaker. Since FD has a moderating effect only on the indirect relationship (via OC) but not the direct relationship between CSR and EM, this suggests that OC has an important role in changing managerial behaviour during FD. In general, it can be expected that during FD, firms adopt a short-term perspective, often resulting in more opportunistic behaviour by managers. However, my results suggest that in firms with high OC, during FD, managers may make use of their high OC (that is, better processes, superior managerial quality practices, knowledge,

etc.) to focus more on the firm's recovery. They are less likely to engage in short-term opportunistic behaviour, that is, their myopic behaviour becomes weaker. Such a change in managerial behaviour is explained in the following paragraphs.

First, when experiencing FD, managerial priorities may shift from safeguarding their reputation to safeguarding their employment. In general, managers in firms with high OC, may use CSR to opportunistically manage earnings to safeguard their reputations by meeting stakeholders' expectations and earnings targets. However, during FD, managers' jobs may be at stake. Thus, their priorities may shift, as they are more likely to focus on actions that may save their jobs. OC plays an important role here. In firms with high OC, managers are expected to have better understanding of the consequences of managing earnings, particularly during FD. Thus, they become more cautious about opportunistic actions that may pose further risks to their jobs. Managing earnings may only be a short-term solution that may put their jobs in further danger. Thus, they become less myopic during FD and are less likely to use CSR opportunistically to manage earnings simply for short-term gains.

Second, managers in financially distressed firms have limited funds and their expenditures will be prioritised on saving the firm. Consistent with the slack resource theory, managers in financially distressed firms are less likely to spend their limited funds on activities or investments where the returns may not be immediate, such as CSR initiatives (for example, see Brynjolfsson et al., 2002). With limited funds available, managers in firms with high OC, specifically, are likely to be better able to manage their limited funds more wisely, and thus refrain from spending more on CSR initiatives with opportunistic motives. Rather, managers will spend on projects or strategies that are essential to the firm's recovery.

Third, some managers engaged in CSR initiatives may have genuine concerns about their firm's survival and their stakeholders. As the stakeholder theory suggests, managers may engage in CSR because they care about maintaining their relationships with stakeholders. This perspective also suggests that these managers will try to reduce agency costs by managing earnings less. Thus, during FD, they may tap into the firm's unique abilities, (that is, OC) to take actions that will aid in reviving their firms from the distressed state.

Thus, in response to research question 2.2, I find that FD moderates (weakens) the *indirect* relationship between CSR and EM via OC. When examining the effect of FD on the indirect relationship between CSR and EM via OC, the present study also examines the effect of FD on each

of the indirect paths through which CSR affects OC and OC in turn affects EM. With regard to the first indirect path, Chapter 4 has already established a positive relationship between CSR and OC. In the present study, I find a positive relationship between FD and OC. Consistent with the RBV theory, this result suggests that during FD, firms are more likely to enhance their knowledge-based assets as a turnaround strategy to recover from the distressed state. In general, firms experiencing FD may face challenges in retaining and attracting skilled employees, and experience high managerial turnover (for example, see Baghai et al., 2020; Brickley, 2003). This does not necessarily mean that OC will decline, because OC encompasses a broader range of intangible aspects such as, knowledge, managerial quality practices, organisational processes and culture (for example, see Attig & Cleary, 2014, 2015; Bloom et al., 2010; Bloom & Van Reenen, 2007; Carlin et al., 2012). When firms are in a distressed state, high OC may give them the ability to turn around. Dreyer & Grønhaug (2004) suggest that improving knowledge resources during uncertain times may provide distressed firms with competitive advantage, as knowledge resources are unique, firm-specific, and inimitable by competitors. OC is considered to be a firm-specific intangible resource that becomes embedded, through time, within the organisational structure, and is not transferred or imitated, even as managers leave the firm (Attig & Cleary, 2014; Carlin et al., 2012). Thus, during FD, firms may view OC as an effective turnaround strategy.

The results from the main analysis suggest that FD weakens the positive relationship between CSR and OC. This may be explained by the notion that financially distressed firms are less likely to engage in CSR. The result is consistent with the slack resource theory that posits that less profitable firms have fewer surplus (i.e. slack) resources to spend on CSR in comparison to more profitable firms with greater slack resources (for example see Campbell, 2007; Chan et al., 2017). When firms experience a crisis, such as FD, they may refrain from getting involved in new business models that may take years to generate profits. During FD, as CSR decreases, it causes the positive relationship between CSR and OC to weaken.

With regard to the second indirect path, Chapter 4 has already established that OC has a positive and significant effect on EM. In this study, I find that FD weakens the positive relationship between OC and EM. When firms are financially challenged, managers, in firms with high OC are less likely to manage earnings. As discussed above, this indicates that managerial myopia behaviour weakens, suggesting that managers in firms with high OC, may engage less in opportunistic short-term behaviour, as their priorities and behaviour changes during FD.

Overall, in response to research objective 2, the results suggest that while FD does not have a significant moderating effect on the direct relationship between CSR and EM, FD weakens the indirect positive relationship between CSR and EM via OC. FD weakens the positive relationships between CSR and OC, and between OC and EM. In particular, the results suggest that in general situations, OC may act as an indirect channel via which managers may use their CSR initiatives to engage more in EM. This is consistent with the managerial myopia hypothesis indicating that managers may use CSR opportunistically to manage earnings for short-term gains. OC may act as an enabler through which managers may manage earnings. However, this changes during FD. When firms experience FD, managers' behaviour and priorities may change. Managers in financially distressed firms are less likely to resort to myopic behaviour and manage earnings for short-term benefits. Thus, the indirect opportunistic use of CSR to manage more earnings via OC reduces during FD, suggesting a weakening of managerial myopia. The effect of FD on the direct and indirect CSR-EM relationships addresses the questions *when CSR directly affects EM*, and *when CSR indirectly affects EM via OC*. In response to the first question (*when CSR directly affects EM*), the results suggest that CSR has a *direct* negative effect on EM *when* firms are financially distressed and *when* firms are non-distressed. This means that regardless of the level of FD, the negative *direct* CSR-EM relationship holds. In response to the second question (*when CSR indirectly affects EM via OC*), the results suggest that CSR has an *indirect* positive effect on EM via OC, *when* firms are non-distressed. The results show that the positive *indirect* relationship between CSR and EM via OC, *when* firms are financially distressed.

## 5.10 Chapter Summary

This study addresses research objective 2, by investigating *when* CSR has a *direct effect* on EM, and *when* CSR has an *indirect effect* on EM via OC, by examining the context FD. This study uses a sample of 36,811 firm-year observations from non-financial US firms for the period 2002-2017 inclusive. The study finds that FD weakens the indirect relationship between CSR and EM via OC. This indicates that managerial myopia weakens, suggesting that when firms experience FD, managers in firms with high OC become more cautious and risk averse, and tend to avoid myopic or short-term behaviour and focus more on recovery of the firm.

The results also suggest that FD affects the channels through which CSR indirectly effects EM. Consistent with the RBV, the study finds that financially distressed firms tend to improve their OC

as a turnaround strategy to recover from their distressed state. However, consistent with the slack resource theory, the findings suggest that the interaction of FD and CSR deteriorates OC. Consistent with the myopia avoidance hypothesis, the findings suggest that FD weakens the positive relationship between OC and EM.

The study uses a battery of additional analyses to address endogeneity, to test sensitivity of the variables to alternate measures, and to check robustness of the findings. The results mostly remain consistent.

## **CHAPTER 6 : EARNINGS MANAGEMENT AND CORPORATE SOCIAL RESPONSIBILITY: THE IMPACT OF COLLECTIVIST CULTURE, CORRUPTION AND INVESTOR PROTECTION IN EMERGING MARKETS**

### **6.1 Introduction to the Chapter**

This chapter addresses the third and final research objective, that is, investigates *when* Corporate Social Responsibility (CSR) affects Earnings Management (EM), by examining the contexts collectivism (COLL) culture, corruption pervasiveness (CORR) and investor protection (INVPRO) in emerging market countries. Research objective 3 is addressed by answering the following three research questions:

*Research Question 3.1: Does CSR have a significant effect on EM in emerging market countries?*

*Research Question 3.2: Do COLL and CORR, individually and jointly, have significant effects on the CSR-EM relationship in emerging market countries?*

*Research Question 3.3: Do COLL and INVPRO, individually and jointly, have significant effects on the CSR-EM relationship in emerging market countries?*

This chapter is organised as follows: Sections 6.2 and 6.3 discuss the background and justification for, and contribution of this study respectively. Section 6.4 presents the theoretical background, followed the literature review, leading to the development of the hypotheses on the effects of COLL, CORR and INVPRO on relationship between CSR and EM in Section 6.5. Section 6.6 presents the conceptual framework for the study, and Section 6.7 discusses the data and research methodology adopted for this study. The results and findings are reported in Sections 6.8, and discussed in Section 6.9. The chapter ends with a chapter summary in Section 6.10.

### **6.2 Background and Justification**

#### **6.2.1 Background of the Study**

The present study examines the CSR-EM relationship in emerging market countries. The term 'emerging market' does not have an official definition (Dutttagupta & Pazarbasioglu, 2021). The term was coined by Antoine van Agtmael in the 1980s when the International Finance Corporation (IFC), of World Bank, started focusing investment-returns for stock markets of developing countries,

including Argentina, Brazil, Chile, Greece, India, Jordan, Korea, Mexico, Thailand, and Zimbabwe International Finance Corporation (2021). Originally, developing countries were referred to as 'third world' countries. The term 'third world' implied poverty and substandard production. Antoine van Agtmael reframed this view, suggesting that 'emerging markets' "suggested progress, uplift, and dynamism" (International Finance Corporation, 2021). It reframed the picture, in time becoming the universal term used in the financial world to describe investment in developing economies. Prior to the 1980s, foreign investment in developing countries was very limited. The IFC analysis, in mid 1980s, showed quite attractive results, recommending increased foreign investments in developing countries. Today, investors, globally, are spending billions into stocks and bonds from emerging market countries (International Finance Corporation, 2021). Forbes (2008) defines emerging market countries as societies that are "transitioning from a dictatorship to a free market-oriented economy, with increasing economic freedom, gradual integration within the global marketplace, an expanding middle class, improving standards of living and social stability and tolerance, as well as an increase in cooperation with multilateral institution". Morgan Stanley Capital International (MSCI) posits that the biggest contributor behind today's global economic and financial market state is the increasing economic and technological growth of emerging markets (MSCI, 2021b). In 1988, MSCI introduced the MSCI Emerging Markets index that included 10 countries. The list of countries have dynamically changed over the years as MSCI added and removed countries based on their economic development, size and liquidity, and market accessibility (MSCI, 2021b). Currently, the MSCI Emerging Markets index includes 27 countries, namely, Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Kuwait, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, Saudi Arabia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates (MSCI, 2021b). The present study follows the MSCI Emerging Market index in selecting the emerging market countries. Based on data availability, as discussed later in Section 6.7, the present study includes 10 emerging market countries, namely, Brazil, China, India, Indonesia, Korea (South), Malaysia, Russia, South Africa, Taiwan and Thailand.

In Chapter 1, I have discussed that EM from an agency theory perspective. EM is an agency cost that often arises due to the conflict of interest that results from the separation of ownership (by external shareholders) and control (by managers) of organisations (Desender et al., 2011; Jensen & Meckling, 1976). In emerging market countries, this model of conflict is slightly improvised by the prevalence of concentrated ownership structures. Ownership concentration, a very common phenomenon in emerging market countries (for example, see Haw et al., 2011; La Porta et al., 1999), exists when a

firm has refers to the concentration of equity holdings and control by some major shareholders or block holders (Bouvatier et al., 2014; Gopalan & Jayaraman, 2012). Concentrated ownership gives rise to divergence between control and cash flow rights of the controlling shareholders, where the controlling shareholders' control (i.e. voting) rights often exceed cash flow rights (Haw et al., 2011; La Porta et al., 1999; Shleifer & Vishny, 1997). Thus, in emerging market countries, conflicts of interest exist between controlling shareholders and minority shareholders (Lyu et al., 2016). Due to their excess control rights, controlling shareholders may have greater control over managers, and use this power to extract private benefits of control, that may adversely affect minority shareholders (Bao & Lewellyn, 2017; Haw et al., 2004; Jiraporn et al., 2008; La Porta et al., 1999; Shleifer & Vishny, 1997). Controlling shareholders and managers have incentives to conceal their private control benefits because if these are detected, it may result in negative consequences, such as, external intervention, regulation, legal costs, and a loss of reputation (Haw et al., 2004). Thus, in emerging market countries, managers and controlling shareholders may manage more earnings to conceal their private control benefits from minority shareholders (Haw et al., 2004). Since the present study is based on a sample from emerging market countries, the issue of ownership concentration is useful in understanding managerial behaviour and motives. Accordingly, the present study refers to corporate insiders as managers, employees and controlling shareholders.

### **6.2.2 *Justification of the Study***

The literature suggests that firms in emerging markets are more susceptible to EM than firms in developed countries (for example, see Bao & Lewellyn, 2017; Li et al., 2014; Li et al., 2011). Emerging markets are characterised as markets with high potential for economic growth (Kaymak & Bektas, 2015). However, due to the instability of policymaking in these markets, emerging market countries experience social, economic, political and demographic challenges (Kaymak & Bektas, 2015), and are considered to be extremely volatile (Aguiar & Gopinath, 2007). Prior studies suggest that the unique characteristics of emerging market countries make EM more prevalent in these countries. In this section I discuss three characteristics that differentiate emerging markets and developed markets, to illustrate the likelihood of EM in these countries – 1) COLL, 2) CORR, and 3) INVPRO. All these characteristics are expected to affect the level of EM, as discussed below.

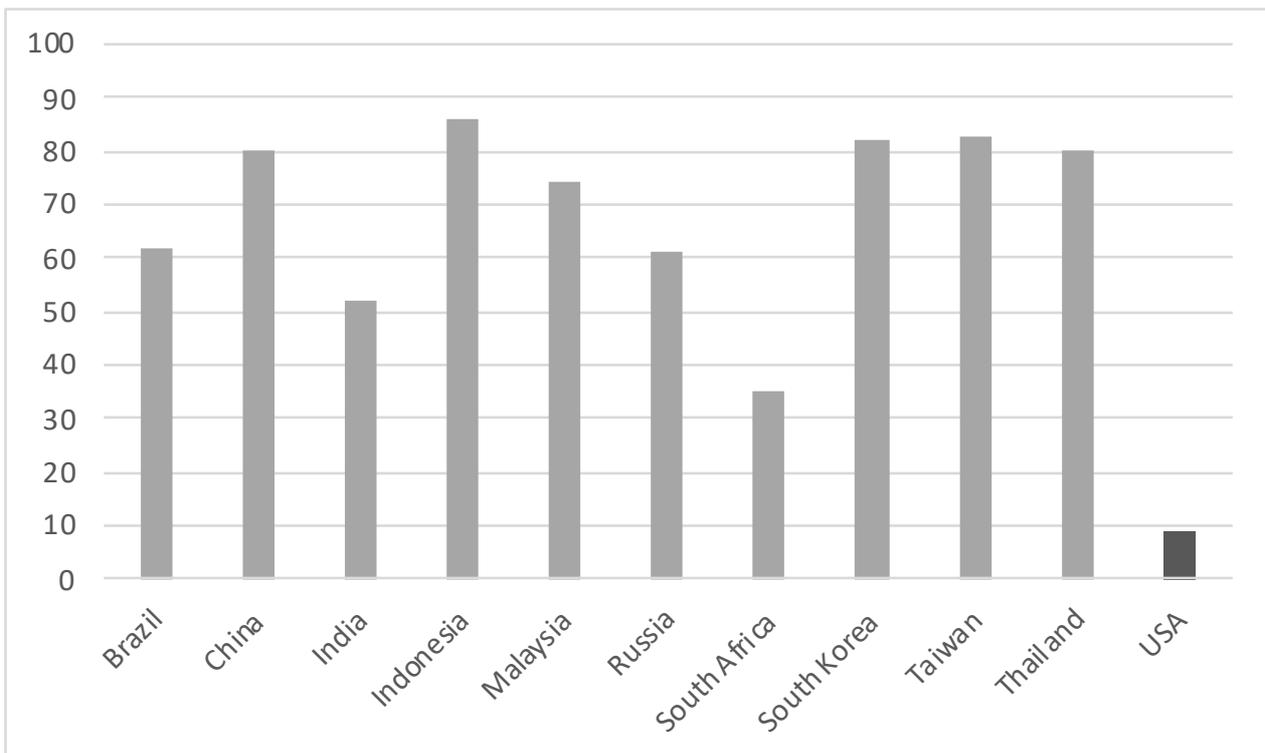
First, to understand the role of the unique social and demographic challenges in emerging markets,

I examine the effect of COLL<sup>28</sup> culture on the CSR-EM relationship. Emerging market countries and developed market countries are known to have disparate national cultures. COLL culture represents societies where family-like bonds and group interests are valued more than individual interests (Hofstede & Hofstede, 2005). The concept of COLL is rooted in the individualism (IDV) – collectivism (COLL) dimension of culture introduced by Hofstede (1980). IDV societies are defined as societies with loose social ties, where individuals look after themselves and their immediate families, and where individual rights and equity are prioritised (Desender et al., 2011; Hofstede, 1980; Viana Jr et al., 2021). In contrast, COLL societies are defined as societies with strong and cohesive social ties, where in-group loyalty is prioritised (Hofstede & Hofstede, 2005; Viana Jr et al., 2021). Prior studies suggest that EM is more widespread in countries with COLL cultures and less widespread in IDV cultures (for example, see Callen et al., 2011; Douppnik, 2008; Nabar & Boonlert-U-Thai, 2007; Zhang et al., 2013). In COLL countries, there may be more collusion among corporate insiders as collective welfare and goals are prioritised (Lyu et al., 2016; Zhang et al., 2013). This gives managers more opportunities to manage earnings with lower risks of whistleblowing by other employees (Zhang et al., 2013). Given this notion that EM engagement varies between the COLL and IDV cultures, I note the IDV-COLL nature of cultures within emerging market and developed market countries. The average COLL score, based on the inverse measure of the IDV scores from Hofstede Insights (2021) is 69.5 for emerging market countries,<sup>29</sup> and only 9 for USA, suggesting that developed countries generally have more IDV (that is, low COLL) culture in contrast to emerging market countries. Figure 6.1 shows the COLL scores for the 10 emerging market countries versus USA.

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<sup>28</sup> As discussed in the preceding section, firms in emerging markets have higher ownership concentration, that creates more EM incentives. The literature suggests that this issue is further escalated in countries characterised by COLL culture. This is because in COLL societies, managers and controlling shareholders may collude to extract private benefits of control, while managing earnings to hide their private control benefits by masking the true firm performance from outside stakeholders (Lyu et al., 2016; Viana Jr et al., 2021; Zhang et al., 2013). I posit that it is more important to examine the CSR-EM issue in a context where opportunistic managerial behaviour is likely to be more prevalent. Owing to the notion that EM incentives created by ownership concentration may become more prominent in COLL societies, the present study focuses on the COLL dimension of culture, instead of other cultural dimensions, such as PD, and long-term or Future orientation (FO). While the scope of the present study is to examine COLL cultural dimension only, future studies could examine the other cultural dimensions, as recommended in Chapter 7.

<sup>29</sup> The average is based on the COLL score (inverse of the individualism score obtained from the (Hofstede Insights, 2021) index for the 10 emerging market countries: Brazil (62), China (80), India (52), Indonesia (86), Malaysia (74), Russia (61), South Africa (35), South Korea (82), Taiwan (83) and Thailand (80).



**Figure 6.1 COLL Scores for Emerging Market Countries Versus USA (Data Obtained from Hofstede Insights, 2021)**

As shown in Figure 6.1, most emerging market countries have COLL culture as the COLL scores are well above 50. The only exceptions are South Africa, with a COLL score of 35, suggesting that South Africa has an individualist culture, while India appears to have a moderate COLL with a score of 52. Overall, while emerging market countries appear to have varying levels of COLL, these countries have higher COLL than developed markets (specifically USA). This suggests that EM is likely to be higher in emerging market countries in comparison to USA. While the literature suggests that EM is higher in COLL culture, the effect of COLL on the CSR-EM literature has not gained attention in prior studies. The present study fills this gap by examining the role of COLL on the CSR-EM relationship in emerging market countries. This will address the question *when* CSR affects EM, in context of COLL in emerging market countries. Although this section discusses the Hofstede’s IDV-COLL score to illustrate differences in the COLL nature of culture between developed and emerging market countries, the present study examines both Hofstede’s IDV-COLL cultural dimension and the institutional COLL dimension from the GLOBE Study by House et al. (2004), as discussed in greater details later in Section 6.7.4.

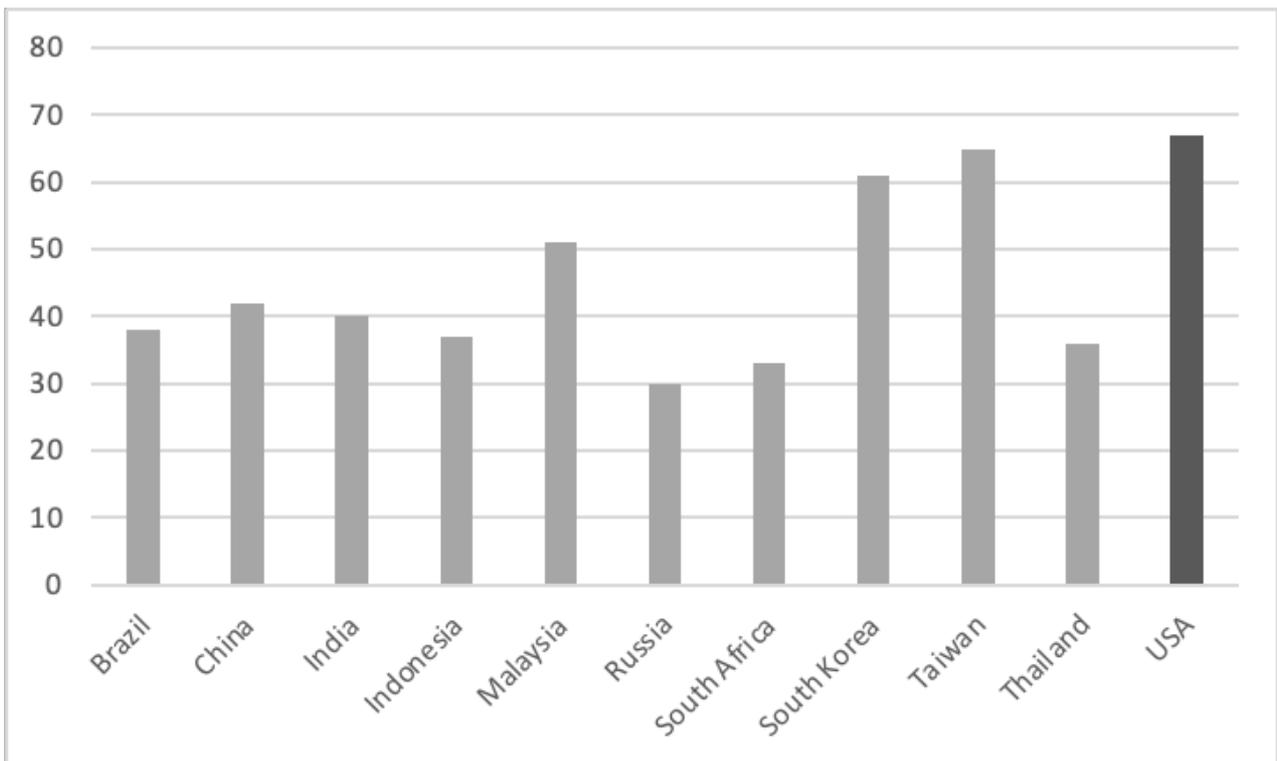
Second, to understand the role of the unique political challenges in emerging markets, I examine the effect of CORR on the CSR-EM relationship. CORR is defined as “the misuse of entrusted power

for private benefit” (Errath et al., 2005, p. 2). Such misuse of power involves engaging in illegal, rent-seeking activities and transfer payments, such as, bribery, paid to bureaucrats or business people (Blackburn et al., 2006; Riahi-Belkaoui, 2004). Emerging markets are generally perceived to have higher levels of CORR than developed market countries (for example, see Ernst & Young, 2016). Prior studies have noted that EM is more widespread in countries with high CORR (for example, see Lourenço et al., 2018; Riahi-Belkaoui, 2004; Riahi-Belkaoui & AlNajjar, 2006), as managers may manage earnings to hide their corruptive actions (Riahi-Belkaoui, 2004). Given the notion that EM engagement varies with the CORR pervasiveness, I further note differences in the level of CORR pervasiveness between emerging and developed markets. The average CORR perception index (obtained from Transparency International, 2021<sup>30</sup>) is 44.4 on average for emerging market countries,<sup>31</sup> compared to a developed country (USA) at 67. The CORR perception index is an inverse measure of the level of CORR pervasiveness within a country. So, the indices of emerging market countries versus USA clearly show that CORR is more widespread in emerging market countries than in developed countries. Figure 6.2 shows the CORR indices for the 10 emerging market countries (Brazil, China, India, Indonesia, Malaysia, Russia, South Africa, South Korea, Taiwan and Thailand) versus a developed market country (USA).

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<sup>30</sup> Transparency International, 2021 provides data on the CORR perception index for 180 countries. The index is based on a scale of 0 to 100, 0 representing highly corruption, while 100 representing no CORR (or very clean) (Transparency International, 2021).

<sup>31</sup> The average is based on the 2020 CORR perception index for the ten emerging market countries – Brazil (38), China (42), India (40), Indonesia (37), Malaysia (51), Russia (30), South Africa (44), South Korea (61), Taiwan (65) and Thailand (36).



**Figure 6.2 CORR Perception Indices for Emerging Market Countries Versus USA**

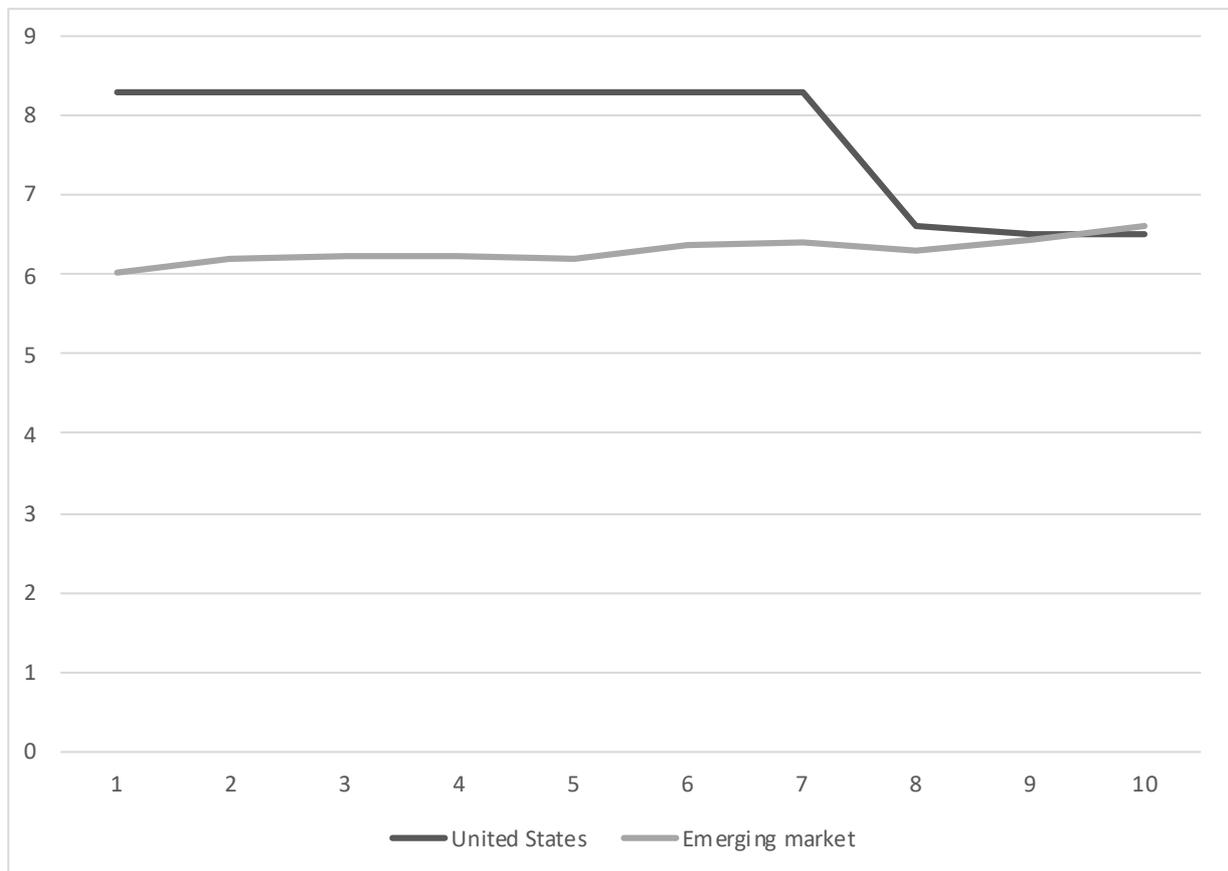
As shown in Figure 6.2, USA has the highest CORR perception index (that is, lowest CORR pervasiveness). The emerging market countries, in comparison, mostly have lower CORR perception index (that is, higher CORR pervasiveness). However, scrutiny of the emerging market countries individually reveals there are varying levels of CORR within emerging market countries. For example, South Korea and Taiwan have very low CORR as the CORR perception indices for these two countries are well above 50. Malaysia has moderate levels of CORR with the CORR perception index at 51. The other emerging market countries appear to have quite high CORR as the CORR perception indices are below 50. Overall, this shows that EM is likely to higher in most emerging market countries in comparison to USA. While the literature suggests that EM is higher in countries with high CORR, the effect of CORR on the CSR-EM relationship has not gained research attention. The present study fills this gap by examining the role of CORR on the CSR-EM relationship in emerging market countries. This will address the question *when* CSR affects EM, in context of CORR in emerging market countries.

Third, to understand the role of the unique institutional and legal challenges in emerging markets, I examine the effect of INVPRO on the CSR-EM relationship. INVPRO is defined as legal systems protecting the rights of investors, from expropriation of managers and controlling shareholders, by

– 1) allowing them to take disciplinary actions against insiders (such as, replacing managers); and 2) imposing contracts that constrain insiders' private control benefits (Claessens et al., 2002; Dyck & Zingales, 2004; La Porta et al., 1998). Traditionally, developed countries were generally viewed as having higher levels of INVPRO in contrast to emerging market countries (for example, DeFond et al., 2007; Leuz et al., 2003). EM incentives and opportunities tend to be higher in countries with lower INVPRO (Leuz et al., 2003). In contrast, stronger INVPRO provides fewer opportunities for corporate insiders to manage earnings to obtain private benefits of control. Fewer opportunities and higher threat of EM being exposed, also reduces the incentives for EM (Leuz et al., 2003). Given this notion that EM engagement varies with the level of INVPRO, I further examine differences in the level of INVPRO between emerging and developed markets. In recent years, the difference in the levels of INVPRO between developed and emerging markets appears to be insignificant, as the INVPRO levels of developed markets (specifically USA) have been declining, whereas the INVPRO levels of emerging market countries have been increasing. This is evidenced from data collected on the strength of INVPRO from the World Banks' Global competitiveness index. Figure 6.3 shows the changes in INVPRO over a 10-year period from 2016 to 2017, for USA and emerging market countries.<sup>32</sup>

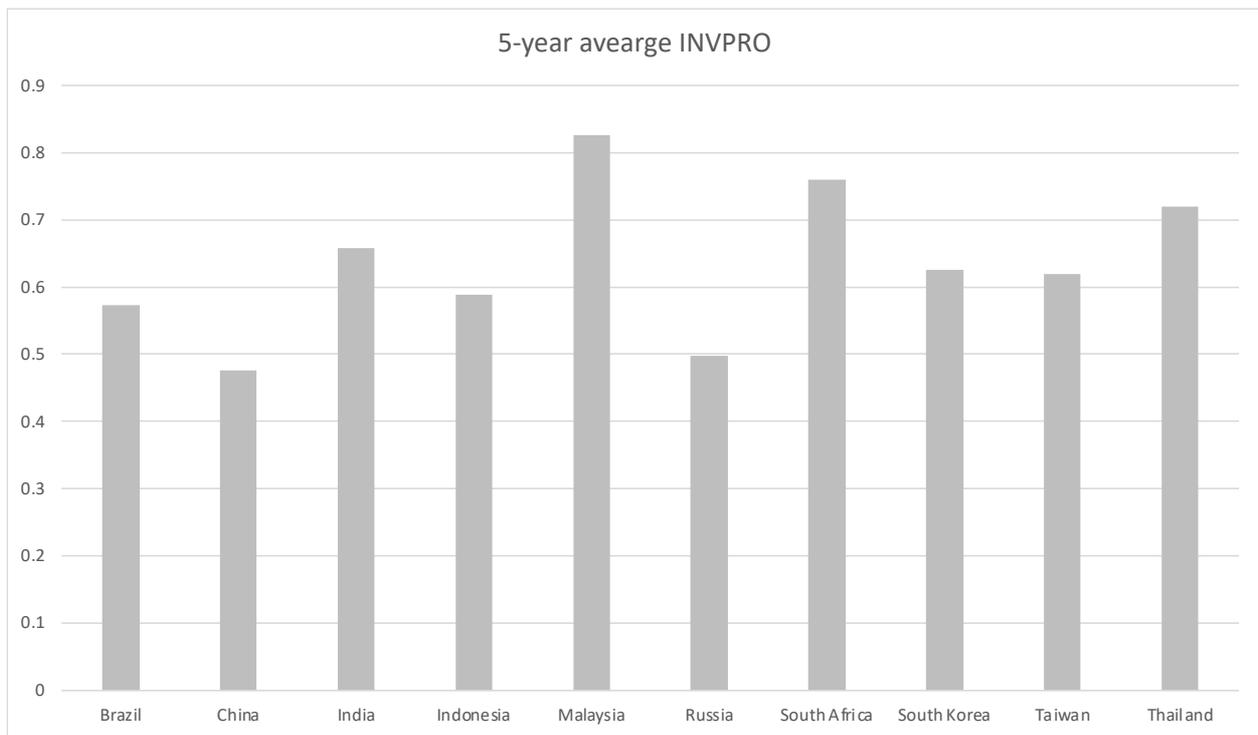
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<sup>32</sup> I calculate the average INVPRO level for each year for 10 emerging market countries (specifically Brazil, China, India, Indonesia, Malaysia Russia, South Africa, South Korea, Taiwan and Thailand). I observe these 10 countries because they form my sample for my third research study (reported in this chapter).



**Figure 6.3 Strength of INVPRO (2007 to 2016): USA Versus Emerging Market Countries**

As shown in Figure 6.3, the strength of INVPRO was higher for USA from 2007 to 2013. In 2014, there was a sharp drop in the strength of INVPRO in USA. For emerging markets, on average, there has been a steady increase in the strength of INVPRO over the 10-year period of observation (2007 to 2016). During the years 2015 and 2016, no significant difference is observed in the strength of INVPRO between USA and emerging market countries. However, differences can be observed in the INVPRO among different emerging market countries. Figure 6.4 shows a comparison of the INVPRO across the 10 emerging market countries used in the present study. The INVPRO score shown on the graph is computed as a 5-year average (between 2012 and 2016 – the sample period for the present study), for each country. As shown in Figure 6.4, the average INVPRO ranges from the lowest being 0.48 (in China) to the highest being 0.83 (in Malaysia).



**Figure 6.4 Comparison of Average INVPRO Among Emerging Market Countries**

The discussion above suggests that emerging market countries have varying levels of INVPRO. The literature suggests that EM is likely to be higher in countries with low INVPRO, and lower in countries with high INVPRO. The present study examines the role of INVPRO on the CSR-EM relationship in emerging market countries. This will address the question *when* CSR affects EM, in context of INVPRO in emerging market countries.

The purpose of this study is to examine whether these unique characteristics in emerging markets, affect the relationship between CSR and EM from a managerial behaviour perspective, especially managerial myopia behaviour (short-term orientation) and myopia avoidance behaviour (long-term orientation). Driven by the notion suggested by prior studies that the unique characteristics of emerging market countries make managers, in these countries, more susceptible to engaging in EM, I expect that these characteristics will change the relationship between CSR and EM. In particular, while my results in Chapters 4 and 5, suggest that CSR has a negative direct effect on EM in developed countries, I expect that the unique characteristics of emerging market countries will either weaken the negative CSR-EM relationship, or produce a completely contrasting result, that is a positive CSR-EM relationship. Since EM incentives are more prevalent in emerging market countries, in contrast to developed countries, managerial myopic behaviour is expected to be more prominent in emerging market countries. To capture the unique challenges that emerging markets

face, I examine the effect of COLL culture (for social and demographic challenges), CORR (for political challenges) and INVPRO (for legal and policymaking challenges) on the CSR-EM relationship. I posit that in an emerging market context, rather than examining an indirect CSR-EM relationship (as I have done to address the first 2 research objectives in Chapters 4 and 5), it is more relevant to examine how these unique challenges (COLL, CORR and INVPRO) affect the relationship between CSR and EM. This will address *when* CSR affects EM in the context of the unique social, political and legal challenges in emerging markets.

### **6.3 Contribution**

The present study makes several contributions to literature, theory and methodology. First, the present study enriches the literature examining international differences in the CSR-EM relationship. More specifically, the study enriches the emerging market literature on CSR and EM. Furthermore, by linking COLL, CORR and INVPRO to the CSR-EM relationship, the present study adds to the literature on these key issues. Moreover, by using a regional emerging market sample, the present study enhances generalizability of the results to multiple countries, as opposed to results being confined to a single country.

As discussed in Chapter 2, research on CSR and EM had initially gained popularity mostly in developed countries. More recently, emerging market countries have started gaining increased attention. The majority of studies focussing on emerging market countries have used Chinese samples (see Gong & Ho, 2018; Kim et al., 2019; Li & Xia, 2018; Liu & Lee, 2019; Rezaee et al., 2020; Sial et al., 2019; Wang et al., 2018; Zhang et al., 2021). Studies have also focussed on other emerging market countries, including, Korea (see Cho & Chun, 2015; Choi et al., 2018; Chun & Cho, 2017), Egypt (see Mohamed et al., 2020), India (see Hickman et al., 2021), Indonesia (see Faisal et al., 2018; Kumala & Siregar, 2020; Pratiwi & Siregar, 2019), Kuwait (see Gerged et al., 2020), Saudi Arabia (see Habbash & Haddad, 2020), South Africa (see Buertey et al., 2020; Jordaan et al., 2018), Taiwan (see Chen & Hung, 2021) and United Arab Emirates (UAE) (see Kolsi & Attayah, 2018). However, to the best of my knowledge, regional emerging market samples (involving multiple emerging market countries) have not been utilised by existing studies. The present study utilises a regional emerging market sample, as it enhances the relevance of my results for an entire region (that is, multiple emerging market countries with similar institutional characteristics), instead of being relevant only to a single country.

Second, from a theoretical perspective, the study links managerial behaviour perspectives (that is, managerial myopia and myopia avoidance behaviour) to a broader theory, specifically the institutional theory. By examining the effects of COLL, CORR and INVPRO on the CSR-EM relationship, the present study explains how the informal and formal institutions perspectives of the institutional theory explain changes in managerial myopic and myopia avoidance behaviour.

Third, to the best of my knowledge, this is the first study to examine the *individual* and *joint* effects of COLL and CORR on the CSR-EM relationship. The literature suggests that COLL has a positive effect on EM (for example, see Callen et al., 2011; Doupnik, 2008; Nabar & Boonlert-U-Thai, 2007; Zhang et al., 2013), and CORR also has a positive effect on EM (for example see Lourenço et al., 2018; Riahi-Belkaoui, 2004; Riahi-Belkaoui & AlNajjar, 2006). The present study examines how COLL and CORR, *individually* and *jointly*, affect the CSR-EM relationship, from managerial behaviour perspectives. I posit that, since CORR, in a society, co-exist with the cultural background of the society, it is essential to examine the joint effects of these factors, as opposed to only examining these factors individually. Examining the moderating effects of COLL and CORR addresses the question *when* CSR affects EM in context of the unique cultural and political challenges in emerging market countries.

Fourth, to the best of my knowledge, this is the first study to examine the *joint* effect of COLL and INVPRO on the CSR-EM relationship. Prior studies suggest that INVPRO has a negative effect on EM (for example, see Cahan et al., 2008; Francis & Wang, 2008; Haw et al., 2011; Leuz et al., 2003; Persakis & Iatridis, 2016; Shen & Chih, 2005). Some studies have also examined the effect of INVPRO on the CSR-EM relationship, suggesting that INVPRO strengthens (weakens) the negative (positive) relationship between CSR and EM (for example see Chih et al., 2008; Martínez-Ferrero et al., 2015; Scholtens & Kang, 2013). The present study is different, as it examines the *individual* moderating effects of INVPRO, as well as the *joint* moderating effect of COLL and INVPRO on the CSR-EM relationship. As discussed above, I posit that it is important to examine the joint effects of these factors because the country-level legal and institutional factors (INVPRO) co-exist with the cultural background (COLL), as opposed to existing individually. Examining the *joint* moderating effects of COLL and INVPRO addresses the question *when* CSR affects EM in the context of the unique cultural and legal (or institutional) challenges in emerging market countries.

Fifth, the study also makes an important methodological contribution by adopting a multi-level analysis technique. Since the study involves a sample of 10 countries, there are two levels of variables. The dependent and independent variables (CSR and EM respectively) are firm-level

variables, while the moderating variables (COLL, CORR and INVPRO) are country-level variables. Using simple OLS estimations in samples involving multi-level variables may produce biased results (see Rabe-Hesketh & Skrondal, 2008). To circumvent this issue, following Lewellyn & Bao (2017), the present study uses the Hierarchical Linear Modelling (HLM) technique, as this is a more efficient method for studies involving multi-level variables. Prior studies involving multiple-country samples with 2-level variables have chosen simple analytic methods, such as OLS. To the best of my knowledge, this is the first study to use a multi-level analysis technique in examining the CSR-EM relationship.

## **6.4 Theoretical Background**

This section discusses the theoretical background for the present study. There are three main theoretical perspectives that explain the main relationships tested in this study – 1) the managerial myopia hypothesis, 2) the myopia avoidance hypothesis, and 3) institutional theory.

The managerial myopia hypothesis and the myopia avoidance hypothesis present two contrasting perspectives on the relationship between CSR and EM, while institutional theory explains the moderating effects of COLL, CORR and INVPRO on the CSR-EM relationship. The study links institutional theory to the managerial behaviour perspectives and provides understanding on how the informal and formal institution perspectives of the institutional theory affect managerial myopia and myopia avoidance.

### **6.4.1 Managerial Myopia Hypothesis**

The term myopia refers to short-term behaviour, that is, a focus on short-term objectives, often resulting in unfavorable consequences on long-term value creation (Hayes & Abernathy, 1980). As explained in Chapter 2, the managerial myopia hypothesis may provide one of the perspectives on the relationship between CSR and EM. According to the managerial myopia hypothesis, CSR and EM are positively related. Managers engaged in CSR may engage in EM for short-term objectives. In Chapter 2, I refer to two underlying managerial motives to explain managers' myopic behaviour, and the positive CSR-EM relationship. First, the incentive-driven myopia perspective suggests that managers engaged in CSR manage more earnings because they are driven by the short-term incentives of meeting targets to uphold their reputation and to please stakeholders (for example, see Chih et al., 2008; Francis et al., 2008; Gargouri et al., 2010; Habbash & Haddad, 2020). Second, the opportunity-driven myopia perspective suggests that managers engaged in CSR manage more earnings because they have more opportunities for EM. The positive image created by engagement

in CSR initiatives may lower stakeholder scrutiny on firms, thus providing managers with greater EM opportunities (for example, see Kim et al., 2012; Muttakin et al., 2015).

While managerial myopia hypothesis presents one perspective on the CSR-EM relationship, suggesting that managers, engaged in CSR, are more likely to manage earnings, a contrasting perspective is presented by the myopia avoidance hypothesis, as discussed below.

#### **6.4.2 Myopia Avoidance Hypothesis**

The phrase myopia avoidance refers to avoidance of short-term (myopic) behaviour, and a greater focus on long-term objectives. As explained in Chapter 2, the myopia avoidance hypothesis may explain the contrasting perspective on the relationship between CSR and EM. According to the myopia avoidance hypothesis, CSR and EM are negatively related. Managers, engaged in CSR, are less likely to manage earnings, as they are long-term oriented (myopia avoidant). In Chapter 2, I use two underlying managerial motives to explain managers' myopia avoidant behaviour, and the negative CSR-EM relationship. First, the relationship-driven myopia avoidance perspective suggests that managers engaged in CSR have genuine concerns about maintaining long-term relationships with stakeholders, and thus they are less likely to manage earnings, since EM is an agency cost that may hamper managers' relationships with stakeholders (for example, see Bozzolan et al., 2015; Chih et al., 2008; Scholtens & Kang, 2013). Second, the value-driven myopia avoidance perspective suggests that managers engaged in CSR are driven by their ethical and moral values, and thus they avoid unethical acts, such as EM (for example, see Litt et al., 2013; Scholtens & Kang, 2013).

The managerial myopia hypothesis and the myopia avoidance perspective presents two contrasting perspectives on the relationship between CSR and EM. The present study also examines the effects of COLL, CORR and INVPRO on the CSR-EM relationship. The effects of these factors are explained by institutional theory, as discussed below.

#### **6.4.3 Institutional Theory**

Institutions refer to the formal and informal rules and constraints, and the enforcement of these rules and constraints that shape human interactions (Desender et al., 2011; Joubert, 2020; North, 1990). Institutional theory implies that firms operate within a nexus of institutions that impose expectations and affect behaviour of individuals (Campbell, 2007; Martínez-Ferrero et al., 2015). Thus, the theory posits that managers' decision-making is contextual, based on the environment in which they operate. Managers are influenced by "common understandings of what is appropriate

and, fundamentally meaningful behaviour” within their environment (Zucker, 1983, p. 105).

Institutional theory, also known as institutionalised agency theory, may be viewed as an extension to the traditional agency theory (see Bao & Lewellyn, 2017). Agency theory suggests that managers (agents) are responsible to manage firms on behalf of the shareholders (principals). Agency theory posits that due to the separation of control and ownership of firms, conflicts of interest (that is, agency problem) may arise between managers and shareholders (Almahrog et al., 2018; Jensen & Meckling, 1976; Watts & Zimmerman, 1986). Managers may manage earnings for opportunistic and self-interested motives, at the expense of shareholders (Dechow & Schrand, 2004; Gerged et al., 2021; Mohamed et al., 2020). Institutional theory connects this concept to external institutional environment, suggesting that managerial behaviour is also influenced by societal values and norms (Seal, 2006). The theory presents a useful framework, explaining how EM may be influenced by the interaction between firm-level features and country-level institutional features (Bao & Lewellyn, 2017). Institutional theory suggests that the unique institutional context, in a country, shapes managers’ interpretation and justification of their own behaviour (Bao & Lewellyn, 2017). Firms operating in countries with similar institutional contexts are expected to have similar behaviour (Campbell, 2007; La Porta et al., 1998; Martínez-Ferrero et al., 2015).

Following Desender et al. (2011) and Lewellyn & Bao (2017), the present study views the institutional theory using two perspectives – 1) formal institutions perspective; and 2) informal institutions perspective. The formal institutions perspective explains that country-level institutional framework, such as legal and regulatory enforcements, have a role in shaping managerial behaviour (Han et al., 2010; Leuz et al., 2003). The informal institutions perspective suggests that unwritten and unspoken rules, resulting from societal factors, such as, norms and beliefs, have a role in shaping managerial behaviour (Abdi & Aulakh, 2012; Desender et al., 2011; Lewellyn & Bao, 2017). This section discusses these two perspectives of institutional theory to explain the effects of COLL, CORR and INVPRO on the CSR-EM relationship. The effects of COLL and CORR are explained using the informal institutions perspective, while the effect of INVPRO is explained using the formal institutions perspective.

Cultural values are shared within a society, both explicitly and implicitly, providing guidance on desirable behaviour within social institutions, such as family, education, economic, political and religious groups. Thus, country-wide cultural values, that tend to remain stable over time, create informal social institutions with similar implicit rules, beliefs and norms, defining societal and

organisational practices (Desender et al., 2011; Finch et al., 2015). Culture plays an important role in managers' interpretation of ethics and legitimacy, defining what is right and wrong, in a given society (Bourdieu, 2007; Deephouse et al., 2016; Parboteeah et al., 2005; Thorne & Saunders, 2002). Thus, cultural values often provide justification of individual's actions and behaviour (Desender et al., 2011).

Gray (1998) is considered to be one of the first studies to link cultural values to accounting practices. The study suggests that cultural values affect institutional structure, and accounting practices. Driven from this notion, a growing body of literature has examined the effect of culture on managements' engagement in EM (for example, see Callen et al., 2011; Desender et al., 2011; Douppnik, 2008; Gray et al., 2015; Guan & Pourjalali, 2010; Guan et al., 2005; Han et al., 2010; Kanagaretnam et al., 2011; Lewellyn & Bao, 2017; Lyu et al., 2016; Nabar & Boonlert-U-Thai, 2007; Paredes & Wheatley, 2017; Viana Jr et al., 2021; Zhang et al., 2013). Lewellyn & Bao (2017) suggest that managers' engagement in EM is largely influenced by the norms, values and belief-systems framed by the institutional context of their society. Since EM is an opportunistic and unethical act that is undertaken for self-serving motives, that may be detrimental to stakeholders (Lewellyn & Bao, 2017), and may damage managers' relationships with stakeholders (Prior et al., 2008), managers' engagement in EM is expected to be associated with their cultural values that define how they value their relationships with others. Thus, the present study examines the COLL dimension of culture, that defines relationships.

The concept of COLL is rooted in the IDV-COLL cultural dimension, coined by Hofstede (1980). IDV societies are societies where social ties are weak, and individuals only look after themselves and/or their immediate family (Hofstede, 1980). In contrast, COLL societies are societies where in-group relationships are strong and cohesive (Hofstede, 1980). The dominance of IDV versus COLL values within societies are reflected in the informal institutions within those societies (see Desender et al., 2011). While the present study uses Hofstede's IDV-COLL cultural dimension as part of the sensitivity analysis, the main analysis uses the institutional COLL dimension from the GLOBE study. Institutional COLL is defined as "the degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action" (House et al., 2004, p. 12). The GLOBE study defines two categories of COLL, namely in-group COLL and institutional COLL. In-group COLL is relevant to family relationships, while institutional COLL refers to relationships within organizations (Brewer & Venaik, 2011).

COLL societies have stronger social networks or ties between corporate insiders, where the insiders (such as managers and employees) may be considered as an 'in-group', while outsiders, such as shareholders and other stakeholders, may be considered as an 'out-group' (Lyu et al., 2016; Zhang et al., 2013). In the event of conflicts of interests between the corporate insiders and outside stakeholders (such as, shareholders), insiders may work together to protect their collective interest (Zhang et al., 2013). Thus, managers, in COLL societies, may cross the boundaries of ethical and moral values, and even legal obedience, to protect the collective in-group interests of insiders (Zhang et al., 2013). In COLL societies, collective welfare and harmony within the social network is prioritized over an individual's own values, as these members in COLL societies judge the difference between right and wrong actions based on relationships (Zhang et al., 2013). Thus, prior studies suggest that managers, in COLL societies, are more likely to manage earnings to protect COLL interests of their in-group, such as to conceal the true financial performance of firms, to meet compensation-based bonuses, and/or to hide private benefits of control<sup>33</sup> (for example, see Zhang et al., 2013). In contrast, in IDV societies, where individual rights, equity and ethics are valued, managers' in IDV societies are less likely to manage earnings (Desender et al., 2011).

COLL societies may also provide more opportunities for EM. In COLL societies, as relationship networks are valued, corporate insiders (that is, managers and other employees) may collude in their EM practices (Lyu et al., 2016). In COLL societies, the monitoring efficiency of regulators may be weaker since collusion reduces the likelihood of their EM being detected (Lyu et al., 2016).

A contrasting perspective suggests that in COLL societies, managers tend to be concerned about not only the corporate insiders, but also external stakeholders, such as investors. Thus, COLL creates informal institutions where managers are less likely to manage earnings due to genuine concern about collective welfare of stakeholders, and willingness to maintain close-knit relationships with the broader community (for example, see Douppnik, 2008; Lewellyn & Bao, 2017).

The discussion above suggests that COLL culture creates informal social institutions that may shape managerial behaviour and their likelihood of engaging in EM. Driven by this notion, I expect the informal social institutions, created by COLL culture, to have an effect on the CSR-EM relationship.

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<sup>33</sup> Corporate insiders may enjoy greater private benefits of control in COLL societies, since managers provide preferential treatment to the insiders (their in-group) in contrast to the outside stakeholders. Thus, insiders may engage in opportunistic activities such as insider trading, and manage earnings to hide these activities (Shleifer & Vishny, 1997; Zingales, 1994).

Consistent to the first perspective that COLL has a positive effect EM, it can be expected that COLL culture creates informal institutions where managers act more opportunistically. Thus, in COLL societies, managers, engaged in CSR, may opportunistically use their CSR performance to manage earnings for self-interest motives and collective welfare of their in-group (that is, corporate insiders). The incentive-driven myopia perspective suggests that CSR may increase managerial incentives to manage earnings to meet short-term targets (for example, see Chih et al., 2008; Francis et al., 2008; Gargouri et al., 2010; Habbash & Haddad, 2020). COLL may intensify these incentives as managers in COLL societies may manage earnings to meet COLL interests of the corporate insiders (Lyu et al., 2016). Thus, it can be expected that the informal institutions created by COLL intensifies incentive-driven myopic behaviour, as managers are more likely to manage earnings due to the interaction of CSR and COLL. Furthermore, CSR and COLL may create additional opportunities for EM. As discussed earlier, the opportunity driven myopia perspective suggests that the positive image created by CSR performance, may lower stakeholder scrutiny, thus increasing managers' opportunities for EM (for example, see Kim et al., 2012; Muttakin et al., 2015). COLL may provide additional opportunities, as collusion among corporate insiders may reduce the effectiveness of the firms' monitoring systems goals (for example, see Lyu et al., 2016; Zhang et al., 2013). Thus, it can be expected that the informal institutions created by COLL increases opportunity-driven myopic behaviour, as managers are more likely to manage earnings due to the interaction of CSR and COLL.

Consistent to the contrasting perspective that COLL has a negative effect on EM, it can be expected that in COLL societies, managers engage in CSR due to genuine concern towards the broader community, hence they are less likely to manage earnings. The relationship-driven myopia avoidance perspective suggests that managers, engaged in CSR, genuinely care about maintaining long-term relationships with stakeholders (for example, see Bozzolan et al., 2015; Chih et al., 2008; Scholtens & Kang, 2013). This may be more intense in COLL cultures where relationships are prioritized over individual interests (for example, see Douppnik, 2008; Lewellyn & Bao, 2017). Thus, from this contrasting perspective, it can be expected that when CSR has a negative effect on EM, COLL may make this negative relationship stronger. The informal institutions created by COLL may intensify relationship-driven myopia avoidance behaviour, as managers are less likely to manage earnings due to the interaction of CSR and COLL.

The discussion above explains the role of COLL on the CSR-EM relationship using the informal institutions perspective of institutional theory. The informal institutions perspective also explains the role of COLL on managers' engagement in EM, and on the CSR-EM relationship.

The literature suggests that unethical behaviour often results from social norms, values and practices (Ahmed et al., 2003; Zahra et al., 2005). Country-level CORR acts as an informal institution since it is “rooted in societal belief and norms” (Xu & Shenkar, 2002, p. 610), and may become embedded in the cognitive functions of individuals (Parto, 2008). CORR can influence individual belief systems, and become part of their daily practices (Doh et al., 2003). In countries with high CORR, unethical behaviour may be more acceptable and become common-practice (Hoffman et al., 2014). Thus, CORR pervasiveness, within a society, may enhance opportunistic and unethical practices, such as EM, within businesses (Lewellyn & Bao, 2017). CORR creates an informal institution, in which individuals may act more opportunistically (Judge et al., 2008). Thus, in societies with CORR pervasiveness, managers may accept EM to be more legitimate (Lewellyn & Bao, 2017).

Driven by this notion, I expect the informal institutions, created by CORR pervasiveness in a society, to have an effect on the CSR-EM relationship. The literature suggests that CORR creates an overall unethical atmosphere within firms, where EM may become common practice (Riahi-Belkaoui, 2004). Thus, it can be expected that CORR creates informal institutions where unethical practices, such as EM, is more acceptable. Thus, managers, engaged in CSR, have more opportunities to manage earnings in corruptive societies. As discussed earlier, the opportunity driven myopia perspective posits that the positive image created by CSR may increase EM opportunities (for example, see Kim et al., 2012; Muttakin et al., 2015). The unethical environment, in societies with CORR pervasiveness, provides additional opportunities for EM. This perspective suggests that the informal institutions created by CORR may result in more opportunity-driven myopic behaviour, as managers have more incentives to manage earnings due to the interaction of CSR and CORR.

Furthermore, managers involved in corruptive practices, have more incentives to manage earnings to conceal their rent-seeking activities (Riahi-Belkaoui, 2004; Riahi-Belkaoui & AlNajjar, 2006). Thus, it can be expected that in societies with CORR pervasiveness, managers will engage in more CSR initiatives as a cover-up strategy to conceal their EM activities and create a positive image for stakeholders. As discussed earlier, the incentive-driven myopia perspective suggests that CSR creates incentives for managers to manage earnings to meet short-term targets and please stakeholders (for example, see Chih et al., 2008; Francis et al., 2008; Gargouri et al., 2010; Habbash & Haddad, 2020). CORR may create additional incentives, as managers try to conceal their rent-seeking activities. Thus, it can be expected that the informal institutions, created by CORR, may result in more incentive-driven myopic behaviour, as managers have more incentives to manage earnings due to the interaction of CSR and CORR.

The present study also examines the *joint* effect of COLL and CORR on the CSR-EM relationship. The literature suggests that while CORR serves as an informal institution, affecting cognitive functions of individuals, as well as their interpretation of right versus wrong actions (Calhoun, 2002; Judge et al., 2008), individual attitudes are driven by their cultural values, norms and belief systems that remain stable over time (Deephouse et al., 2016; Finch et al., 2015; Lewellyn & Bao, 2017; Yeh & Hwang, 2000). Thus, cultural values are likely to influence managers' attitude towards CORR (Finch et al., 2015). Han et al. (2010) suggest that culture and other institutions may interact and jointly affect EM. Thus, using institutional theory perspective, I expect that the informal institutions created by COLL culture and CORR pervasiveness in a society, *jointly* shapes managerial behaviour (specifically, managerial myopia and myopia avoidance behaviour) and the CSR-EM relationship.

While COLL culture and CORR are considered informal institutions that affects managerial, behaviour, formal institutions, such as legal and regulatory framework of a country, may also affect managerial behaviour and EM, by legitimising norms and expectations (Bao & Lewellyn, 2017). The present study considers INVPRO as a formal institution that protects minority shareholders by limiting opportunities for corporate insiders (managers and controlling shareholders) to extract private control benefits (Desender et al., 2011; La Porta et al., 2000; Leuz et al., 2003; Shleifer & Vishny, 1997). INVPRO provides investors with the rights to take disciplinary actions (such as, relacing managers) against opportunistic actions by corporate insiders (Leuz et al., 2003). Strong legal and institutional systems (including INVPRO) can affect social norms, shaping organisational practices and beliefs, and inhibiting incentives for unethical or opportunistic actions (Chen et al., 2016). Thus, INVPRO creates a formal (explicit) institution that inhibits managers' engagement in EM by aligning managerial practices to legitimate behaviour as defined by the institution (Bao & Lewellyn, 2017).

The formal institutions perspective may also explain the role on INVPRO on the CSR-EM relationship. Given that the CSR-EM relationship can be positive or negative, as evidenced by the mixed findings in the literature, INVPRO may have a weakening effect on the positive CSR-EM relationship, or a strengthening effect on the negative CSR-EM relationship. Thus, it can be expected that the formal institution created by INVPRO may either weaken managerial myopia behaviour (short-term orientation explaining the positive CSR-EM relationship) or strengthen myopia avoidance behaviour (long-term orientation explaining the negative CSR-EM relationship). In particular, when there is a negative relationship between CSR and EM (myopia avoidance), the formal institutions perspective suggests that INVPRO makes this negative relationship stronger (for example, see Joubert, 2020;

Martínez-Ferrero et al., 2015). As discussed earlier, since CSR reduces information asymmetry between managers and stakeholders (Mohmed et al., 2020), it can increase the risks of exposure of managers' engagement in EM. Thus, managers, engaged in CSR, may be less likely to manage earnings to avoid risks of negative consequences resulting from their EM being exposed (for example, see Gerged et al., 2020; Gerged et al., 2021; Litt et al., 2013). INVPRO may pose a further threat to this existing risk. When INVPRO is strong, managers may consider EM to be too risky as shareholders have greater rights to take disciplinary actions against managers (Cahan et al., 2008). Thus, it can be expected that the formal institutions created by INVPRO may myopia avoidance behaviour, as the interaction of CSR and INVPRO may make EM too risky, making managers less likely to manage earnings. Consequently, when there is a positive relationship between CSR and EM (managerial myopia), the formal institutions perspective suggests that INVPRO makes this positive relationship weaker. The incentive-driven myopia perspective, as discussed earlier, suggests that CSR performance may create more incentives for EM (for example, see Chih et al., 2008; Francis et al., 2008; Gargouri et al., 2010; Habbash & Haddad, 2020). INVPRO has a contrasting effect it reduces the incentives for EM. As INVPRO reduces the opportunities for corporate insiders to extract private control benefits, managers have less to conceal, hence their incentives to manage earnings decline. Thus, it can be expected that the formal institutions created by INVPRO may weaken incentive-driven myopic behaviour, as the interaction of CSR and INVPRO may lead managers to manage less earnings.

While formal institutions are an important determinant to understand corporate practices and managerial behaviour, the informal institutions, discussed earlier, still play a crucial role in determining managerial behaviour. In fact, "the enabling and constraining that is widely attributable to formal institutions" is predominantly done by informal institutions (Helmke & Levitsky, 2004, p. 726). More importantly, when formal institutions are weak and underdeveloped, informal institutions play a more important role in influencing business decisions (Puffer & McCarthy, 2011). Thus, the present study also examines the *joint* effect of informal institutions (COLL culture) and formal institutions (INVPRO) on the CSR-EM relationship. Since the theoretical views suggest that both COLL and INVPRO *individually* have effects in shaping managerial behaviour (specifically, managerial myopia and myopia avoidance behaviour) and the CSR-EM relationship, I expect that the informal institutions created by COLL and the formal institutions created by INVPRO *jointly* affects the CSR-EM relationship.

## 6.5 Literature Review and Empirical Evidence

### 6.5.1 *The Effect of CSR on EM*

The literature on the relationship between CSR and EM has been discussed in-depth in Chapter 2. In this section, I begin by a brief discussion on the CSR-EM literature, followed by a discussion on the relevant literature on COLL, CORR and INVPRO. The literature on the CSR-EM relationship shows inconclusive findings. Some studies suggest that CSR has a positive effect on EM (see Buerthey et al., 2020; Habbash & Haddad, 2020; Hickman et al., 2021; Pratiwi & Siregar, 2019; Riahi-Belkaoui, 2003). Consistent with the managerial myopia perspective, this suggests that managers engaged in CSR are more short-term oriented. This myopic behaviour (short-term orientation) suggests that managers engaged in CSR are more likely to manage earnings as a result of being incentive-driven (for example, Chih et al., 2008; Habbash & Haddad, 2020; Kyaw et al., 2017) and/or opportunity-driven (for example, see Kim et al., 2012; Muttakin et al., 2015).

However, a large number of prior studies posit a contrasting perspective, suggesting that CSR has a negative effect on EM (see Almahrog et al., 2018; Bozzolan et al., 2015; Calegari et al., 2010; Chen & Hung, 2021; Cho & Chun, 2015; Chun & Cho, 2017; Faisal et al., 2018; Gao & Zhang, 2015; García-Sánchez et al., 2020; Gerged et al., 2020; Gerged et al., 2021; Gras-Gil et al., 2016; Hong & Andersen, 2011; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Litt et al., 2013; Martínez-Ferrero et al., 2015; Palacios-Manzano et al., 2019; Patten & Trompeter, 2003; Scholtens & Kang, 2013; Sial et al., 2019; Wang et al., 2018). Consistent with the myopia avoidance perspective, this suggests that managers engaged in CSR are more long-term oriented. This myopia avoidant behaviour (long-term orientation) suggests that managers engaged in CSR are less likely to manage earnings as a result of being relationship-driven (for example, see Almahrog et al., 2018; Amar & Chakroun, 2018; Cho & Chun, 2015; Choi et al., 2018; Chun & Cho, 2017; Faisal et al., 2018; Gras-Gil et al., 2016; Hong & Andersen, 2011; Joubert, 2020; Velte, 2019); and/or value-driven (for example, see Calegari et al., 2010; Gao & Zhang, 2015; García-Sánchez et al., 2020; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Martínez-Ferrero et al., 2015; Mohamed et al., 2020; Palacios-Manzano et al., 2019; Rezaee et al., 2020; Scholtens & Kang, 2013; Sial et al., 2019).

In addition to the debate in the literature on the CSR-EM relationship, there is also some debate on the relationship between the CSR dimensions and EM. For example, Gargouri et al. (2010) and Amar & Chakroun (2018) find that the CSR-EM relationship varies for the different CSR dimensions. Using a sample of Canadian firms, Gargouri et al. (2010) suggest that, while the overall CSR and the

corporate governance (GOV) dimension of CSR have no significant effects on EM, the environmental (ENV) and employee dimensions of CSR have positive effects on EM. In contrast, Amar & Chakroun (2018), using a sample of French firms, suggest that overall CSR, as well as the GOV dimension, the ENV dimension and some specific components of the social (SOC) dimension (specifically, human rights and consumer expectations) have negative effects on EM, while other SOC dimensions (specifically, labour, fairness of practices and community involvement) have no significant effect on EM. Consistent with this view, Velte (2019), using a sample of German firms, also reports that overall CSR and the individual CSR dimensions (ENV, SOC and GOV) have negative effects on accruals-based EM. However, none of these studies have examined the relationship between the CSR dimensions and EM in emerging market countries.

Some studies have focussed specifically on the ENV dimension of CSR (see Gerged et al., 2020; Gerged et al., 2021; Heltzer, 2011; Litt et al., 2013; Patten & Trompeter, 2003; Velte, 2021). For example, Patten & Trompeter (2003) find a negative relationship between ENV disclosures and EM in a sample of chemical firms from USA. Heltzer (2011) finds higher EM among firms with ENV concerns in USA. Litt et al. (2013) also find a negative relationship between the ENV dimension and EM, using a sample of firms from USA. Gerged et al. (2020) and Gerged et al. (2021) find negative relationships between ENV disclosures and EM in samples of firms from Kuwait and Jordan respectively. Velte (2021) reports that ENV and carbon performance have negative effects on accruals-based EM. Although there is some debate in the literature on the effect of SOC and GOV on EM, there appears to be largely consistent views that the ENV dimension has a negative effect on EM.

Based on the contrasting evidence in the literature regarding the CSR-EM relationship, I examine the following opposing hypotheses:

H3.1a: Consistent with the managerial myopia hypothesis, there is a positive and significant relationship between CSR and EM.

H3.1b: Consistent with the myopia avoidance hypothesis, there is a negative and significant relationship between CSR and EM.

In testing hypotheses H3.1a and H3.1b, I test the relationships between overall CSR and EM as well as the individual CSR dimensions (ENV, SOC and GOV) and EM, to address the existing debate on these issues.

In response to the debate on how CSR affects EM, several prior studies suggest that the CSR-EM relationship is contextual, based on various factors such as - 1) variable measurements – specifically the type of EM measure (see Chih et al., 2008; Choi et al., 2018; Jordaan et al., 2018; Kolsi & Attayah, 2018; Velte, 2019; Velte, 2021; Zhang et al., 2021), and the dimension of CSR (see (Amar & Chakroun, 2018; Gargouri et al., 2010; Velte, 2019); 2) firm-level factors, such as corporate governance (see Buertey et al., 2020; Cho & Chun, 2015; Gerged et al., 2021), ownership (see Kumala & Siregar, 2020; Li & Xia, 2018; Liu & Lee, 2019; Rezaee et al., 2020), political connections (see Pratiwi & Siregar, 2019); 3) the industry in which the firm operates (see Muttakin et al., 2015; Yip et al., 2011); and 4) country-level factors, such as, institutional factors (see Chih et al., 2008; Kim et al., 2019; Kyaw et al., 2017; Scholtens & Kang, 2013). These are discussed in greater detail in Chapter 2. The CSR-EM literature shows that the contexts COLL, CORR, and the joint effects of COLL and CORR, and COLL and INVPRO have not been examined by prior studies. The remaining of this section discusses the literature relevant to the effects of COLL, CORR and INVPRO on EM.

### **6.5.2 The Effect of COLL on EM**

Culture is defined as the “collective programming of the mind that distinguishes the members of one group or category of people from another” (Hofstede, 1989, p. 25). Culture refers to a set of common beliefs and assumptions, and implicit and explicit understanding of right versus wrong actions, practices and norms (Bohannon, 2010; Bourdieu, 2007; Williams, 1970). Culture is a broad concept that is popularly classified into 6 dimensions formulated by Hofstede (1983). Geert Hofstede collected data from a large number of IBM employees and initially introduced four dimensions of differences in national culture, namely Power Distance (PD), Uncertainty avoidance (UA), Individualism (IDV) vs COLL and Masculinity-Femininity (Hofstede, 1984). Hofstede later added two additional dimension of culture as Long-term or future orientation (FO) and Indulgence. Each cultural dimension focusses on a unique aspect of national culture. The dimension PD indicates the degree to which unequal distribution of power exists within a society (House et al., 2004). UA relates to the degree to which societies are uncomfortable or feel threatened to future uncertainties (Hofstede, 1984; House et al., 2004). The IDV-COLL dimension refers to the degree of interdependence within members of the society (House et al., 2004). The Masculinity-Femininity dimension indicates the level of assertiveness, aggressiveness, and importance of material success (Hofstede & Hofstede, 2005). Long term orientation dimension indicates the level of effort a society places in preparation for the future (Hofstede Insights, 2021). The indulgence dimension refers to the ability of individuals to control their desires and impulses (Hofstede Insights, 2021). The present

study focusses on the IDV-COLL dimension of culture. Specifically, the study looks at collectivism (COLL) culture. COLL societies are defined as societies with social integration of people into family-like bonds, where group interests are more valued than individual interest (Hofstede & Hofstede, 2005). In highly COLL societies, employees may expect to be looked after by the organisation and be treated as part of the organisation's family (Hofstede & Hofstede, 2005). In contrast, in IDV societies, individuals look after their personal interests or the interests of their immediate family.

Prior studies suggest that cultural norms and values have an important role in defining business practices, including accounting choices and EM likelihood, and therefore it is particularly important to consider cultural differences for cross-country studies (Gray, 1988; Guan et al., 2005; Nabar & Boonlert-U-Thai, 2007; Waldman et al., 2006). However, prior studies examining international differences in EM engagement, has only started focussing on culture in relatively recent times, with Guan et al. (2005) being one of the first studies to explore this issue. Subsequently, a number of other studies have examined how culture affects EM (for example, see Callen et al., 2011; Desender et al., 2011; Douppnik, 2008; Gray et al., 2015; Han et al., 2010; Kanagaretnam et al., 2011; Lyu et al., 2016; Nabar & Boonlert-U-Thai, 2007; Paredes & Wheatley, 2017; Viana Jr et al., 2021; Zhang et al., 2013). Some of these studies have examined the role of both culture and INVPRO on EM. In this section, I discuss only those studies that have examined culture *individually*, while the studies that have examined culture and INVPRO *jointly*, are discussed later in Section 6.5.4. Table 6.1 summarises the relevant studies examining the effect of cultural dimensions on EM.

Since the present study focusses on COLL dimension of culture, the discussion in this section predominantly focusses on the relationship between COLL and EM. However, other cultural dimensions may also affect EM, as evidenced by a small but growing body of literature, suggesting mixed findings. For example, while some studies suggest a positive relationship between PD and EM (for example, see Guan & Pourjalali, 2010; Kanagaretnam et al., 2011), others suggest a negative relationship (for example, see Lewellyn & Bao, 2017; Paredes & Wheatley, 2017; Riahi & Omri, 2013). Douppnik (2008) and Kanagaretnam et al. (2011) find no significant association between PD and EM. The literature also reports mixed findings on the relationship between UA and EM. Some studies report a negative relationship between UA and EM (for example, see Gray et al., 2015; Guan et al., 2005; Han et al., 2010; Kanagaretnam et al., 2011; Paredes & Wheatley, 2017; Viana Jr et al., 2021), while others suggest a positive relationship between UA and EM (for example, see Callen et al., 2011; Douppnik, 2008; Guan & Pourjalali, 2010; Nabar & Boonlert-U-Thai, 2007; Riahi & Omri, 2013). Guan and Pourjalali (2010), Kanagaretnam et al. (2011) and Nabar & Boonlert-U-Thai (2007)

find a positive association between masculinity and EM while Paredes & Wheatley (2017) report a negative association. Douppnik (2008) finds no significant association between the masculinity-femininity dimension of national culture and EM. Guan et al. (2005) find a positive relationship between FO and EM.

Overall, majority of the literature suggests that the IDV-COLL dimension of culture has an influence on EM. Using a sample of 13,793 firm-year observations from 5 Asia-Pacific countries, between 1987 and 1995, Guan et al. (2005) find that EM is more prevalent in countries with low COLL (that is, high IDV). Consistent to this, Guan and Pourjalali (2010) and Kanagaretnam et al. (2011) also find a positive relationship a positive relationship between IDV (low COLL) and EM. Guan and Pourjalali (2010) examine a sample of 84,748 firm-year observations from 27 countries, between 1987 and 2001, while Kanagaretnam et al. (2011) examine a sample of 12,475 bank-year observations from 39 countries, between 1993 and 2006. Similarly, Gray et al. (2015) also report a positive relationship between IDV (low COLL) and EM, using a sample of 15,258 observations from 14 European Union countries, between 2000 and 2010. Gray et al. (2015) further suggest that the positive relationship between IDV and EM remain consistent even after mandatory adoption of the International Financial Reporting Standards (IFRS). The findings are consistent to Gray (1998) framework, suggesting that IDV countries (that is, countries with low COLL) are likely to have greater flexibility, optimism, and risk-orientation, and lower concern for stakeholders, in contrast to high COLL countries, thus resulting in higher EM (Gray et al., 2015; Guan et al., 2005; Kanagaretnam et al., 2011).

In contrast to the studies discussed above, other studies suggest that EM is more prevalent in countries with COLL culture. For example, using a sample from 8,616 firms from 31 countries, between 1988 and 2004, Desender et al. (2011) find that EM is lower in countries with high IDV (that, is low COLL). Riahi and Omri (2013) find a positive relationship between COLL and EM, using a sample of 219 firms from France, Tunisia and Canada, between 2003 and 2009. Lyu et al. (2016) examines the moderating effect of COLL on the relationship between ownership concentration and EM, using a sample of 89,208 observations from 22 Western European and Eastern Asian countries, between 1995 and 2011. The study reports that in COLL countries, the positive relationship between ownership concentration and EM becomes more prominent. Viana Jr et al. (2021) also find a positive relationship between COLL and EM, using a large sample of 33,918 observations from 22 developed countries and 11 emerging market countries, between 2006 and 2018. The positive relationship between COLL and EM is consistent to the informal institutions perspective, suggesting that COLL

culture creates informal institutions that may encourage more EM. In COLL societies, strong social networks may create nepotism and collusion among insiders (Callen et al., 2011; Lyu et al., 2016), while following social norms, such as law obedience, honesty and integrity may become less important (Zhang et al., 2013). When there is a conflict of interest between corporate insiders and outside stakeholders, managers are likely to prioritize the in-group interests of the insiders (Lyu et al., 2016). Thus, social networks within corporate insiders may increase the incentives to manage earnings, as corporate insiders may work together to enhance collective benefits for their in-group. Furthermore, social networks within COLL societies may reduce the efficiency of monitoring systems, thus providing more opportunities for EM. This is particularly applicable to emerging market countries, where concentrated ownership structures are very common (for example, see Claessens & Yurtoglu, 2013; Haw et al., 2011; La Porta et al., 1999). Prior studies suggest that concentrated ownership<sup>34</sup> increases EM incentives (for example, see Gopalan & Jayaraman, 2012; Haw et al., 2011; Lyu et al., 2016; Ratnawati et al., 2016). This may be further escalated by COLL culture, as managers and controlling shareholders may collude to extract private benefits of control, while managing earnings to hide their private control benefits by masking the true firm performance from outside stakeholders (Lyu et al., 2016; Viana Jr et al., 2021; Zhang et al., 2013). In contrast to COLL societies, IDV societies tend to respect and prioritise individual rights, and value fairness and equity above group interests (Riahi & Omri, 2013; Zhang et al., 2013). Managers in IDV societies, are likely to have greater concern and respect for individual property rights of shareholders. Thus, they are less likely to manage earnings since EM may have damaging effects on shareholders' rights (Desender et al., 2011). Furthermore, the high level of transparency and stringent regulations within IDV societies, constrain opportunities for managers to manage earnings (Nabar & Boonlert-U-Thai, 2007).

Overall, there appears to be contradictory opinions in the literature regarding the effect of COLL on EM. While some studies suggest a negative relationship between COLL and EM (for example, see Gray et al., 2015; Guan & Pourjalali, 2010; Guan et al., 2005; Han et al., 2010; Kanagaretnam et al., 2011; Lewellyn & Bao, 2017; Paredes & Wheatley, 2017), others suggest a positive relationship (for example, see Callen et al., 2011; Desender et al., 2011; Douppnik, 2008; Nabar & Boonlert-U-Thai, 2007; Riahi & Omri, 2013; Viana Jr et al., 2021; Zhang et al., 2013). These contradictory opinions

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<sup>34</sup> Ownership concentration refers to the concentration of equity holdings and control by some major shareholders or blockholders (Bouvatier et al., 2014; Gopalan & Jayaraman, 2012). Concentrated ownership gives rise to divergence between control and cash flow rights of the controlling shareholders, where the controlling shareholders' control (i.e. voting) rights often exceed cash flow rights (Haw et al., 2011).

appear to result from inconsistencies in defining groups. These contradictory opinions appear to result from inconsistencies in defining groups within organisations. Some studies suggest that in COLL culture, managers consider outside shareholders to be part of their in-group and therefore, managers have greater concern for collective welfare for shareholders (for example, see Douppnik, 2008; Lewellyn & Bao, 2017). This perspective suggests that in COLL culture, managers are less likely to manage earnings. The contradictory perspective suggests that firms have two separate groups – 1) insiders (including managers, other employees, and controlling shareholders); and 2) outsiders (including shareholders and other stakeholders) (for example, see Lyu et al., 2016; Riahi & Omri, 2013; Viana Jr et al., 2021). According to this perspective, in COLL culture, managers consider the corporate insiders as their in-group, building strong ties within the in-group. When conflicts of interest arise between corporate insiders and outsiders, managers are more likely to undertake actions that benefit the insiders. Thus, this perspective suggests that, in COLL culture, managers are more likely to manage earnings for collective welfare of their in-group (that is, corporate insiders). As discussed in section 6.2.1, the present study defines corporate insiders group as a group including managers, employees and controlling shareholders, while external groups are outsiders that include other shareholder (including minority shareholders) and stakeholders. Thus, based on this, I expect to find results that are consistent to the second perspective, that is, COLL is likely to escalate EM.

Consistent to the literature and the informal institutions perspective of the institutional theory, discussed in this section, the present study expects to find a positive relationship between COLL and EM. As explained by prior studies, in emerging market countries, managers and controlling shareholders may manage earnings to conceal their private benefits of control. This issue may be further escalated in COLL societies (Lyu et al., 2016; Viana Jr et al., 2021; Zhang et al., 2013). In COLL societies, collusive practices among corporate insiders may reduce monitoring efficiency, providing more opportunities to corporate insiders to manage earnings to meet collective goals, such as to conceal their private benefits of control (for example, see Lyu et al., 2016; Zhang et al., 2013). Given the notion that COLL escalates EM, I test the following hypotheses:

*H3.2: Consistent to the informal institution perspective, there is a positive and significant relationship between COLL and EM.*

While there is an expanse of literature examining the relationship between COLL and EM, to the best of my knowledge, the effect of COLL on the CSR-EM relationship is yet to be examined. As discussed above, some prior studies find a positive relationship between COLL and EM (for example,

see Callen et al., 2011; Desender et al., 2011; Douppnik, 2008; Nabar & Boonlert-U-Thai, 2007; Riahi & Omri, 2013; Viana Jr et al., 2021; Zhang et al., 2013), suggesting that managerial myopic behaviour is more prominent in COLL societies. This is mainly because in COLL societies, managers may be able to collude with other corporate insiders, which in turn provides more opportunities for EM (Lyu et al., 2016; Viana Jr et al., 2021; Zhang et al., 2013). Driven by this notion, I expect that COLL also has an effect on the CSR-EM relationship. In particular, I expect that in COLL societies, where managerial myopia is more prominent, the negative relationship between CSR and EM will be weaker.

*H3.3: COLL has a significant moderating effect on the relationship between CSR and EM.*

**Table 6.1 Literature on the Relationship Between COLL and EM**

(1)	(2)	(3)	(4)	(5)	(6)
Authors (Year)	Country Sample (Period)	Research Objective	Research method	Theories supported	Key findings
Guan et al. (2005)	5 Asia-Pacific countries 13,793 observations (1987 – 1995)	Examine the effect of culture on EM	<b>Method:</b> OLS <b>DV:</b> EM (Dechow et al., 1995) <b>IV:</b> Cultural dimensions – IDV, UA and FO (Hofstede)	Gray (1998) framework	COLL (IDV) and UA have negative (positive) effects on EM; FO has a positive effect on EM.
Guan and Pourjalali (2010)	27 countries 84,748 observations (1987 – 2001)	Examine the effect of culture on EM	<b>Method:</b> OLS <b>DV:</b> EM (Dechow et al., 1995) <b>IV:</b> Cultural dimensions – IDV, UA, PD and Masculinity (GLOBE study)	Gray (1998) framework	COLL (IDV) has a negative (positive) effect on EM; PD, UA and Masculinity have positive effects on EM.
Desender et al. (2011)	31 countries 8,616 firms (1988 – 2004)	Examine the effect of culture on EM	<b>Method:</b> OLS <b>DV:</b> EM (Burgstahler & Dichev, 1997; Degeorge et al., 1999; Leuz et al., 2003) <b>IV:</b> Cultural dimensions - IDV and egalitarianism (Hofstede, Schwartz, 1994, 2004)	Social institutions perspective	COLL (IDV) has a positive (negative) effect on EM; Egalitarianism has a negative effect on EM.
Kanagaretnam et al. (2011)	39 countries 1,568 banks / 12,745 observations (1993 – 2006)	Examine the effect of culture on EM	<b>Method:</b> OLS <b>DV:</b> EM (Beatty et al., 2002; Fonseca & Gonzalez, 2008) <b>IV:</b> Cultural dimensions – IDV, UA and PD (Hofstede)	Gray (1998) framework	COLL (IDV) and UA have negative (positive) effects on EM; PD has a positive effect on EM.
Riahi and Omri (2013)	France, Tunisia and Canada 219 firms (2003 – 2009)	Examine the effect of culture on EM	<b>Method:</b> SEM using Linear Structural Relationship <b>DV:</b> EM (Dechow et al., 1995; Kothari et al., 2005; Raman & Shahrur, 2008) <b>IV:</b> Cultural dimensions – IDV, UA, PD (Hofstede)	Theory of cultural ecology	COLL (IDV) and UA have positive (negative) effects on EM; PD has a negative effect on EM/
Gray et al. (2015)	14 European Union countries 15,258 observations (2000 – 2010)	Examine the effect of culture on EM, and the moderating effect of mandatory IFRS adoption	<b>Method:</b> OLS <b>DV:</b> EM (Dechow et al., 1995; Han et al., 2010; Kothari et al., 2005) <b>IV:</b> Cultural dimensions – IDV and UA (Hofstede; GLOBE study)	Gray (1998) framework	COLL (IDV) and UA have negative (positive) effects EM. No change post-IFRS.
Lyu et al. (2016)	22 countries (Western European & East Asian) 89,208 observations (1995 – 2011)	Examine the effect on culture on the relationship between ownership concentration and EM	<b>Method:</b> OLS <b>DV:</b> EM (Dechow et al., 1995; Haw et al., 2004) <b>IV:</b> Ownership concentration <b>MOD:</b> IDV-COLL culture (Hofstede)	Social network perspective	Ownership concentration has a positive (negative) effect on EM (EQ); this is more pronounced in East Asia (COLL culture).
Viana et al. (2021)	22 developed countries and 11 emerging market countries 33,918 observations (2006 – 2018)	Examine and compare the effect of culture and EM in developed and emerging market countries	<b>Method:</b> OLS <b>DV:</b> EM (Dechow et al., 1995; Roychowdhury, 2006) <b>IV:</b> Cultural dimensions – IDV, UA, PD, FO, Masculinity, Indulgence (Hofstede)	Gray (1998) framework	COLL (IDV) has a positive (negative) effect on EM, weaker in emerging market countries; UA has a negative effect on EM, stronger in emerging market countries.

### **6.5.3 The Effect of CORR on EM**

CORR is defined as “the misuse of public or business office for private gain. It includes transfer payments from bribe players to bureaucrats or business people” (Riahi-Belkaoui, 2004, p. 74). While CORR is a concerning issue all over the globe, it is particularly problematic in emerging market and developing countries due to the slower economic and institutional development in these countries (Kaymak & Bektas, 2015). The deficiency in political accountability and institutional laws protecting property rights may be a cause of higher CORR in these countries (Aidt, 2009).

CORR can unsettle a country’s values leading to instability (Kaymak & Bektas, 2015). The literature indicates that CORR has adverse impacts on several economic variables, such as investment, innovation, economic growth and the overall political environment resulting from lack of trust in government and democracy (Branco & Delgado, 2012; Mauro, 1995). Furthermore, CORR weakens the country’s efficiency of legal systems and the effectiveness of the government (Friedman et al., 2000; Seligson, 2002). Economists perceive CORR to be one of the main impediments to economic development as it leads to lower incomes and poverty (Mauro, 1995). While CORR creates macroeconomic problems, its consequences are no less severe in the micro dimension, that is, firm-level (Aidt, 2009).

The present study focuses on country-level CORR affecting managerial behavior. Thus, in context of the present study, CORR can be viewed as an “individual using a position in which he is trusted, to appropriate an organization’s goods or services that he does not deserve” (Granovetter, 2007, p.2). The literature suggests that firm’s operating in corrupted societies have greater information asymmetry, and hence, lower financial reporting quality (Bhattacharya et al., 2013; Boubakri et al., 2012). Firms may actively contribute in either defying or supporting corruption (Galang, 2012). Riahi-Belkaoui (2004) suggests that CORR creates an unethical atmosphere within firms. Managers may develop close networks with government officials, through means of bribery, to obtain opportunistic privileges, such as preferential regulatory terms and better treatment (such as, lower pressure, regulation, and scrutiny) (Burt, 1997; Granovetter, 1985; Xu et al., 2019). Furthermore, to obtain such political favours, managers may report less transparent financial information (Chaney et al., 2011), and even take immoral measures to suppress their corruptive behaviour and rent-seeking activities (Aidt, 2009). They may manage earnings more for this purpose of concealing the true performance of the firm, as well as concealing their rent-seeking activities, leading to lower quality accounting information (Riahi-Belkaoui, 2004). Despite this, there appears to be significantly limited literature examining the impact of CORR on accounting quality or EM (Kaymak & Bektas,

2015; Lourenço et al., 2018; Riahi-Belkaoui, 2004). Table 6.2 summarises the literature on the association between CORR and EM. Additionally, a few studies have examined the impact of accounting information on reducing CORR levels (for example, see Houqe & Monem, 2016; Malagueño et al., 2010; Wu, 2005). However, this issue is outside the scope of this study, as the present study examines the influence of CORR on EM, and on the CSR and EM relationship.

Table 6.2 Panel A summarises the relevant literature on the *individual* effect of CORR on EM, while Panel B shows the literature on the *joint* effect of COLL and CORR on EM. As shown in Panel A, this study has identified five prior studies examining the *individual* effect of CORR on EM (see Liu, 2016; Lourenço et al., 2018; Riahi-Belkaoui, 2004; Riahi-Belkaoui & AlNajjar, 2006; Xu et al., 2019).

Using a sample of 34 countries, Riahi-Belkaoui (2004) and Riahi-Belkaoui & AlNajjar (2006) report a positive relationship between CORR and earnings opacity, using sample of 34 countries between 1985 and 1998. Both studies use EM proxies to measure earnings opacity as an indicator of lower quality accounting information. Riahi-Belkaoui (2004) explain that the unethical environment resulting from CORR creates a higher demand for earnings opacity (EM) as management seek to hide their corruptive actions. Riahi-Belkaoui & AlNajjar (2006) find that, among other social and economic order factors, CORR levels positively influence earnings opacity (EM), leading to lower quality accounting information. Lourenço et al. (2018) examine the relationship between CORR and EM on sample of 1,281 observations from 33 countries, with 68 percent of the sample observations belonging to developed countries, and the remaining 32 percent of observations belonging to emerging market countries. The study reports that high CORR perception leads to higher EM in emerging market countries, but not in their developed counterparts. Lourenço et al. (2018) explain that the difference in the results between emerging market and developed countries is an is partly due to the weaker levels of INVPRO in the emerging market countries.

While the studies discussed above examine country-level CORR, two more studies examine firm-level corruption (see Liu, 2016; Xu et al., 2019). Liu (2016) highlights CORR as an explanatory factor for corporate misconduct. Using a sample of 61,013 observations from firms from USA, between 1988 and 2006, Liu (2016) suggests that firms with a culture of CORR (proxied by the CORR level of the directors' and/or officers' country of ancestry) are more likely to engage in corporate misconducts such as, EM, accounting fraud, option backdating and opportunistic insider trading. Xu et al. (2019) report a positive relationship between political CORR (at the judicial district-level) and EM, using a sample of 17,862 observations from firms from USA, between 2007 and 2014.

The small body of literature on the association between CORR and EM, report quite consistent findings, suggesting that CORR has a positive effect on EM.

There may be several reasons behind EM being higher in societies with high CORR pervasiveness. First, managers may use EM to conceal their rent-seeking activities and corruptive practices, such as bribery, from the general public and those that are affected by it (Riahi-Belkaoui, 2004; Riahi-Belkaoui & AlNajjar, 2006). Second, managers may manage earnings to conceal the true performance of their firms, and particularly, understate the firm's financial performance, to avoid pressures of paying bribes (Bishara, 2011). Third, CORR within organisations may lower the effectiveness of the internal control systems, such as corporate governance, increasing the opportunities for EM (García-Meca & Sánchez-Ballesta, 2009; Judge et al., 2008). The positive relationship between CORR and EM is consistent to the informal institution perspective of the institutional theory, suggesting that corruption creates an unethical atmosphere within the organisation, making rent-seeking behaviour more acceptable among the organisational members (Lourenço et al., 2018; Riahi-Belkaoui, 2004). Thus, CORR becomes part of the corporate culture and individual and group norms (Liu, 2016). Liu (2016) explains that when an individual enters a firm with a corruptive environment, they become more likely to engage in opportunistic behaviour, to blend into the existing group norms within the organisation. This may be true even when the individual's intrinsic values are contradictory to the group norms, as inability to blend into the group norms may result in negative consequences, such as, isolation of the individual by other members within the organisation. This may include, for example, socially distancing the individual, and reluctance in providing any assistance to the individual (Liu, 2016). While CORR becomes part of the group norms and belief systems, opportunistic actions such as EM may also become common practice within firms, as managers may consider EM to be more legitimate in corrupted societies (see Lewellyn & Bao, 2017).

Consistent to the literature, and to the informal institution perspective of the institutional theory, I expect to find a positive relationship between the CORR and EM. Additionally, deriving from the notion that CORR increases EM, I expect CORR to have an effect on the CSR-EM relationship. Thus, the following hypotheses are tested:

*H3.4: Consistent to the informal institution perspective, there is a positive and significant relationship between CORR and EM.*

*H3.5: CORR has a significant moderating effect on the relationship between CSR and EM.*

The present study also examines the *joint* effect of COLL and CORR on EM, and on the CSR-EM relationship. As shown in Panel B of Table 6.2, I have identified only one prior study examining the *joint* effect of COLL and CORR on EM (see Lewellyn & Bao, 2017). Using a sample of 13,341 observations from 26 countries, between 2012 and 2013, Lewellyn & Bao (2017) find COLL to have a negative effect on EM, and CORR to have a positive effect on EM. However, the study finds no significant *joint* or interaction effect of COLL and CORR on EM. The study explains that COLL, *individually*, inhibit EM incentives, as managers have greater concerns for collective welfare of insiders and stakeholders, while CORR creates more incentives for managers to engage in EM, while. When COLL and CORR are examined *jointly*, the study explains that the EM incentives created by CORR are so strong, that concerns for collective welfare in COLL societies, are no longer able to constrain EM (Lewellyn & Bao, 2017). The present study adopts a different perspective regarding COLL, as the present study expects COLL to create more EM incentives, resulting from the separation of ownership and management groups within firms. As discussed earlier, the present study adopts the perspective that managers generally consider corporate insiders as part of their in-group, while shareholders and other stakeholders are external groups. Thus, in COLL societies, when conflicts of interests exist between managers and shareholders, managers are likely to manage earnings more, due to greater concern of collective goals of their in-group. In terms of the effect of CORR on EM, the present study adopts similar perspectives to those presented in the literature, suggesting that CORR increases EM. Thus, driven by the notion that both COLL and CORR *individually* have a positive effect on EM, the present study expects the interaction of COLL and CORR *jointly* to have a positive effect on EM. Based on this argument, the present study also expects that the interaction of COLL and CORR *jointly* will have a significant effect on the CSR-EM relationship. Thus, the following hypotheses are tested:

*H3.6: Consistent to the informal institution perspective, the interaction of COLL and CORR has a positive effect on EM.*

*H3.7: The interaction of COLL and CORR has a significant moderating effect on the relationship between CSR and EM.*

**Table 6.2 Literature on the Relationship Between CORR and EM**

Panel A: Literature on the individual effect of CORR on EM					
(1)	(2)	(3)	(4)	(5)	(6)
Authors (Year)	Country Sample (Period)	Research Objective	Research method	Theories supported	Key findings
Riahi-Belkaoui (2004)	34 countries (1985 – 1998)	Examine the effect of CORR on EM (earnings opacity)	<b>Method:</b> OLS <b>DV:</b> EM (Bhattacharya et al., 2003) <b>IV:</b> CORR (Kaufmann et al., 1999)	n/a	CORR has a positive effect on EM.
Riahi-Belkaoui & AlNajjar (2006)	34 countries (1985 – 1998)	Examine the effects of social, economic and accounting order on EM (earnings opacity)	<b>Method:</b> OLS <b>DV:</b> EM (Bhattacharya et al., 2003) <b>IV:</b> Social order (Quality of life); Economic order (CORR (Kaufmann et al., 1999), economic freedom, economic growth)); Accounting order (level of disclosure; auditors adoption of international accounting standards).	Contingency theory	CORR, rule of law and economic growth have positive effects on EM; Economic freedom and quality of life have negative effects EM.
Liu (2016)	USA 8,236 firms / 61,013 observations (1988 – 2006)	Examine the effect of corporate corruption culture on corporate misconduct	<b>Method:</b> OLS <b>DV:</b> EM (Dechow et al., 1995; Kothari et al., 2005); accounting fraud; option backdating; opportunistic insider trading <b>IV:</b> CORR culture (corruption in the officer’s/director’s country of ancestry)	Corporate culture theory	CORR culture has a positive effect on corporate misconduct, including EM.
Lourenço et al. (2018)	33 countries 427 firms / 1,281 observations (2011 – 2013)	Examine the effect of CORR on EM	<b>Method:</b> OLS <b>DV:</b> EM (Dechow et al., 1995) <b>IV:</b> CORR (Transparency International)	Rent-extraction perspective	CORR has a positive effect on EM in emerging markets, but not in developed markets. INVPRO has a negative effect on EM in developed markets, but not in emerging markets.
Xu et al. (2019)	USA 17,862 observations (2007 – 2014)	Examine the effect of local political CORR at judicial district level on EM	<b>Method:</b> OLS, 2SLS <b>DV:</b> EM (Kothari et al., 2005; Roychowdhury, 2006) <b>IV:</b> CORR (convictions from federal judicial district)	Inefficiency theory	CORR has a positive effect on EM
Panel B: Literature on the joint effect of COLL and CORR on EM					
Authors (Year)	Country Sample (Period)	Research Objective	Research method	Theories supported	Key findings
Lewellyn & Bao (2017)	26 countries 13,341 observations (2012 – 2013)	Examine the effect of culture and CORR on EM	<b>Method:</b> HLM <b>DV:</b> EM (Han et al., 2010; Tucker & Zarowin, 2006) <b>IV:</b> Cultural dimensions – COLL; PD (GLOBE study); CORR (World Bank’s WGI database)	Institutional theory	COLL and PD have negative effects on EM; CORR has a positive effect on EM; Interaction of PD and CORR has a negative effect on EM. No significant interaction effect of COLL and CORR.

#### **6.5.4 The Effect of INVPRO on EM**

INVPRO is defined as legal systems that protect the rights of investors from expropriation of managers and controlling shareholders. INVPRO imposes contracts that constrain the extraction of private control benefits by controlling shareholders and managers (Claessens et al., 2002; Dyck & Zingales, 2004; La Porta et al., 1998), and allows investors to take disciplinary actions (such as, replacing managers). As discussed in Chapter 1, EM is an agency cost that often arises due to the separation of ownership and control of organisations, resulting in information asymmetry between shareholders and managers. Managers may often take advantage of their greater knowledge of the firm to opportunistically manage earnings for their self-interest (Dechow & Schrand, 2004). However, the existence of strong INVPRO provides shareholders with greater protection and power to take disciplinary actions against managers' opportunistic actions. Thus, INVPRO is likely to constrain managers' opportunities and incentives to manage earnings, as EM may result in significant negative consequences for managers in countries with strong INVPRO (Leuz et al., 2003).

There is an expanse of literature examining the relationship between INVPRO and EM. Table 6.3 shows a summary the relevant literature examining the relationship between INVPRO and EM. Panel A of Table 6.3 presents prior studies that discuss the *individual* effect of INVPRO on EM, and Panel B presents prior studies that discuss the *joint* effect of INVPRO on EM.

Prior studies are quite consistent in reporting that strong INVPRO mitigates EM (for example, see Burgstahler et al., 2006; Cahan et al., 2008; Francis & Wang, 2008; Fung et al., 2013; Haw et al., 2011; Haw et al., 2004; Houque et al., 2012; Kanagaretnam et al., 2014; Leuz et al., 2003; Persakis & Iatridis, 2016; Shen & Chih, 2005). Using a sample of 70,955 firm-year observations from 31 countries, between 1990 and 1999, Leuz et al. (2003) find a negative relationship between INVPRO and EM. Haw et al. (2004) and Kanagaretnam et al. (2014) examines the role of legal and extra-legal institutions on EM. Haw et al. (2004) uses a sample of 25,210 observations from 9 East Asian and 13 Western European countries, between 1996 and 1999. While the study does not specifically focus on INVPRO, Haw et al. (2004) considers the protection of minority shareholders as a component of the overall legal institutions. The study reports lower EM in countries with strong legal and extra-legal institutions (including INVPRO for minority shareholders). Kanagaretnam et al. (2014) use a sample of 14,412 bank-year observations from 35 countries, between 1993 – 2006, using INVPRO as a proxy for legal institutions. The study also finds a negative relationship between legal and extra-legal institutions and EM (Kanagaretnam et al., 2014). Shen & Chih (2005), Burgstahler et al. (2006) and Cahan et al. (2008) also report a negative relationship between INVPRO and EM. Shen & Chih

(2005) use a sample of 70,955 firm-year observations from banks from 48 countries, between 1993 and 1999. The results suggest that although strong INVPRO mitigates EM in high-income countries, in low-income countries, strong legal enforcement may have a contradictory effect. Shen & Chih (2005) explain that in low-income countries, bank managers may manage earnings more, to avoid potential penalties arising decreased earnings (or losses). Burgstahler et al. (2006) use a sample of 378,122 observations from 13 European countries, between 1997 and 2003, reporting a negative effect of INVPRO on EM. Cahan et al. (2008) use a sample of 55,357 firm-year observations from 44 countries, between 1993 and 2002, reporting a negative relationship between INVPRO and EM. Fung et al. (2013) examine how the differences in INVPRO, between H-Shares and Hong Kong shares, affect EM, using a sample of 2,031 firm-year observations from firms in Hong Kong, between 1994 to 2003. The study reports a negative effect of INVPRO and EM, evidenced by higher EM among H-share firms (subject to lower INVPRO) (Fung et al., 2013). Chen, et al. (2016) find that code of ethics has a negative effect on EM, in countries with weaker INVPRO. Francis & Wang (2008), Haw et al. (2011) and Persakis & Iatridis (2016) examine audit quality along with INVPRO. Francis & Wang (2008) adopt a different approach, suggesting that INVPRO has a negative indirect effect on EM via Big 4 auditors, on a sample of 85,193 firm-year observations from 42 countries, between 1995 and 2004. Haw et al. (2011) also find a negative relationship between INVPRO and EM. Using a sample of 3,992 observations from 8 East Asian countries, between 2001 and 2004, Haw et al. (2011) also report that Big 4 auditors have a negative effect on EM, only in countries with strong INVPRO, but not in those with weak INVPRO. Houque et al. (2012), using a sample of 104,348 observations from 46 countries, between 1998 and 2007, also report a negative relationship between INVPRO and EM. Additionally, the study finds that the interaction of INVPRO and IFRS adoption also has a negative effect on EM, although IFRS adoption, on its own, has no significant effect on EM. Persakis & Iatridis (2016) find INVPRO and audit quality to have negative effects on EM, individually and jointly, on a sample of 137,091 firm-year observations from 18 countries, between 2005 and 2012. Bao & Lewellyn (2017) examine the moderating effect on INVPRO on the relationship between ownership types and EM, using a sample of 1,200 firms from 24 emerging market countries, between 2008 and 2013. The study finds that while ownership concentration has a positive effect on EM, INVPRO weakens this relationship (Bao & Lewellyn, 2017).

Some prior studies have also examined the effect of INVPRO on the CSR-EM relationship (for example, see Chih et al., 2008; Joubert, 2020; Martínez-Ferrero et al., 2015; Scholtens & Kang, 2013). These studies are not repeated in Table 6.3, since these studies have already been summarized in

the CSR-EM literature discussed in Chapter 2. Using a sample of 46 countries Chih et al. (2008) find that INVPRO weakens the positive relationship between CSR and EM (specifically, earnings aggressiveness). Martínez-Ferrero et al. (2015) report that INVPRO strengthens the negative relationship between CSR and EM, using a sample of 26 countries. Consistent to this, Joubert (2020) also report a strengthening effect of INVPRO on the negative CSR-EM relationship, using a sample of 9 countries. Scholtens & Kang (2013) find a negative relationship between INVPRO and EM, suggesting that CSR strengthens this negative relationship.

As evidenced from the discussion of the relevant literature presented above, the literature is consistent in reporting a negative relationship between INVPRO and EM. The negative relationship between INVPRO and EM is consistent to the formal institutions perspective of the institutional theory, suggesting that institutional systems create corporate norms, aligning managerial actions to legitimate behaviour as defined by the institution (Bao & Lewellyn, 2017). Leuz et al. (2003) explain that strong INVPRO limit the opportunities for insiders (specifically, managers and controlling shareholders) to opportunistically use the firms' resources to obtain private benefits of control. This in turn reduces the incentives to manage earnings, since lower opportunities to extract private control benefits may mean that insiders have less to hide (Leuz et al., 2003). Cahan et al. (2008) explain that in countries with strong INVPRO, managers experience greater constraints to manage earnings, since shareholders are able to take legal actions against managers' opportunistic actions. Thus, strong INVPRO mitigates managers' incentives and opportunities to manage earnings (Cahan et al., 2008). Furthermore, the literature also suggests that INVPRO has a significant effect on the CSR-EM relationship. The literature suggests that INVPRO has a role in strengthening the negative relationship between CSR and EM (for example, see Joubert, 2020; Martínez-Ferrero et al., 2015), and weakening the positive (opportunistic) relationship between CSR and EM (for example, see Chih et al., 2008). Managers, engaged in CSR, in countries with strong INVPRO are more likely to be long-term oriented (that is, myopia avoidant) (see Joubert, 2020). Consistent with literature, and to the formal institutions perspective of the institutional theory, I expect to find INVPRO to have a negative effect on EM, and a moderating effect on the CSR-EM relationship. Thus, I test the following hypotheses:

*H3.8: Consistent to the formal institutions perspective, there is a negative and significant relationship between INVPRO and EM.*

*H3.9: INVPRO has a significant moderating effect on the relationship between CSR and EM.*

The present study also examines the *joint* effect of COLL and INVPRO on EM and on the CSR-EM relationship. Some prior studies have examined the *joint* effect of COLL and INVPRO on EM. It is essential to consider culture when examining differences in INVPRO across countries (Stulz & Williamson, 2003). Table 6.3 Panel B presents a summary of these studies. I have identified only two studies that examine the *joint* (or interaction) effect of COLL and INVPRO and EM (see Han et al., 2010; Paredes & Wheatley, 2017). Several other studies examine COLL and INVPRO *individually* (see Callen et al., 2011; Douppnik, 2008; Nabar & Boonlert-U-Thai, 2007; Zhang et al., 2013),

Using a sample of 96,409 observations 32 countries, between 1992 and 2003, Han et al. (2010) suggest that IDV and EM are positively related (that is, negative relationship between COLL and EM), while INVPRO and EM are negatively related. The study suggests that the interaction of IDV and INVPRO has a positive effect on EM. Han et al. (2010) explain that in countries with IDV (that is low COLL) culture, managers are more likely to manage earnings due to prioritizing self-interest over group welfare. This is more prominent in countries with strong INVPRO. Paredes & Wheatley (2017), using a sample of 31 countries, find that IDV has a positive effect on accruals-based EM, but a negative effect on real-earnings management (REM). The study also finds that the effect of INVPRO on EM loses its statistical significance when culture is included, indicating that culture has a stronger effect, than INVPRO, in determining EM (Paredes & Wheatley, 2017).

Douppnik (2008) and Callen et al. (2011) each use samples of 31 countries, and report a negative association between IDV and EM (that is, positive relationship between COLL and EM), and between INVPRO and EM. Douppnik (2008) and Callen et al. (2011) also suggest that cultural factors have a stronger effect, in contrast to INVPRO, in determining managers' engagement in EM. Nabar & Boonlert-U-Thai (2007) report a negative association between IDV and EM (that is, positive relationship between COLL and EM), and between INVPRO and EM, across a sample of 30 countries. Zhang et al. (2013) examine a sample of 41 countries, suggesting a positive relationship between COLL and EM, and a negative relationship between INVPRO and EM. The study also finds that COLL has a stronger effect on EM than INVPRO (Zhang et al., 2013).

Yamen et al. (2021) examine the links between culture, institutional quality and EM. Using a sample involving 38 countries, the study reports that culture has a negative effect on accruals-based EM, but not REM, while INVPRO has a negative effect on REM but not on accruals-based EM. The study uses an overall measure of culture using IDV and PD dimensions. However, the study does not report results on these individual cultural dimensions. Similarly, the study uses an overall measure of

institutional quality using a number of proxies, including political stability, voice and accountability, regulatory quality, rule of law, government effectiveness and corruption control. However, the study does not report results on these proxies individually.

Overall, the literature suggests that COLL and INVPRO *jointly* have a significant effect in EM (see (Han et al., 2010; Paredes & Wheatley, 2017)). This is consistent to the institutional theory. Theoretically, I expect COLL and INVPRO to have contrasting effects on EM. While I expect COLL to have a positive effect on EM, consistent to the informal institutions perspective, I expect INVPRO to have a negative effect on EM, consistent to the formal institutions perspective. Furthermore, the mixed findings in the literature make it difficult to predict the sign of this effect (that is, positive or negative effect). Also, given the notion COLL and INVPRO *jointly* affects EM, I expect to find a *joint* moderating effect of COLL and INVPRO on the CSR-EM relationship. Thus, the following hypotheses are tested:

*H3.10: Consistent to the institutional theory, the interaction of COLL and INVPRO has a significant effect on EM.*

*H3.11: The interaction of COLL and INVPRO has a significant moderating effect on the relationship between CSR and EM.*

**Table 6.3 Literature on the Relationship Between INVPRO and EM**

Panel A: Literature on the individual effect of INVPRO on EM					
(1)	(2)	(3)	(4)	(5)	(6)
Authors (Year)	Country Sample (Period)	Research Objective	Research method	Theories supported	Key findings
Leuz et al. (2003)	31 countries 8,616 firms / 70,955 observations (1990 – 1999)	Examine the effect if INVPRO on EM	<b>Method:</b> OLS and 2SLS <b>DV:</b> EM (aggregate EM based on discretionary accruals, smoothing, magnitude of accruals and loss avoidance) <b>IV:</b> INVPRO (La Porta et al., 1998; La Porta et al., 1997)	Managerial opportunism perspective	INVPRO has a negative effect on EM.
Haw et al. (2004)	9 East Asian and 13 Western European countries 25,210 observations (1996 – 1999)	Examine the effects of legal and extra-legal institutions on EM	<b>Method:</b> OLS <b>DV:</b> EM (Dechow & Dichev, 2002; Jones, 1991b) <b>IV:</b> Legal institutions (legal tradition, minority rights protection, the efficiency of the judicial system, or disclosure standards); Extra-legal institutions (effectiveness of competition laws, diffusion of the press, and tax compliance)	Agency problem perspective	Legal and extra-legal institutions have negative effects in EM, arising from differences in cash flow and control rights.
Shen & Chih (2005)	48 countries 17,154 banks/ 70,955 observations (1993 – 1999)	Examine prevalence of EM in the sample countries, the incentives behind EM, and reasons behind EM variations across countries	<b>Method:</b> Country-wise comparison of EM; OLS <b>DV:</b> EM (Burgstahler & Dichev, 1997; Degeorge et al., 1999; Leuz et al., 2003) <b>IV:</b> INVPRO (La Porta et al., 1998; Leuz et al., 2003)	Prospect theory	INVPRO and transparency in accounting disclosure have negative effects on EM.
Burgstahler et al. (2006)	13 European countries 378,122 observations (1997 – 2003)	Examine the interaction effect of market forces and INVPRO on EM	<b>Method:</b> OLS <b>DV:</b> EM (Leuz et al., 2003) <b>IV:</b> INVPRO (La Porta et al., 1998); Market forces	n/a	INVPRO has a negative effect on EM in both private and public European firms; market forces and INVPRO has an interaction effect on EM.
Cahan et al. (2008)	44 countries 55,357 observations (1993 – 2002)	Examine the effect of INVPRO on the relationship between earnings smoothing	<b>Method:</b> OLS <b>DV:</b> Earnings informativeness (Tucker & Zarowin, 2006) <b>IV:</b> EM (Bhattacharya et al., 2003; Leuz et al., 2003) <b>MOD:</b> INVPRO (La Porta et al., 1998; Leuz et al., 2003)	Managerial opportunism perspective / Efficient communication perspective	INVPRO has a negative effect on EM. Income smoothing enhances earnings informativeness in strong INVPRO countries.
Francis & Wang (2008)	42 countries 85,193 observations (1995 – 2004)	Examine the joint effect of INVPRO and Big 4 auditor on EM	<b>Method:</b> OLS <b>DV:</b> EM (Ball et al., 2000; Basu, 1997; Burgstahler & Dichev, 1997; Frankel et al., 2002) <b>IV:</b> INVPRO (La Porta et al., 1998) <b>MED:</b> Big4 vs non Big4 auditors	n/a	INVPRO has a negative indirect effect on EM, via Big 4 auditors

Haw et al. (2011)	8 East Asian countries 3,992 observations (2001 – 2004)	Examine the effects of concentrated ownership, INVPRO and Big 4 auditor on EM	<b>Method:</b> OLS <b>DV:</b> EM (McVay, 2006) <b>IV:</b> INVPRO (La Porta et al., 1998); Big4 vs non Big4 auditors; Ownership concentration	Transparent financial reporting and external monitoring perspectives	INVPRO has a negative effect on EM. Concentrated ownership has a positive effect on EM. Big4 auditors has a negative effect on EM only in countries with strong INVPRO, but not in those with weak INVPRO
Houqe et al. (2012)	46 countries 104,348 observations (1998 – 2007)	Examine the effects of mandatory IFRS adoption and INVPRO on EM	<b>Method:</b> OLS <b>DV:</b> EM (DeFond & Park, 2001; Francis & Wang, 2008) <b>IV:</b> INVPRO (WEF); IFRS adoption	Economic theory	INVPRO has a negative effect on EM; IFRS adoption has no significant effect on EM; the interaction of INVPRO and IFRS has a negative effect on EM
Fung et al. (2013)	Hong Kong 2,031 observations (1994 – 2003)	Examine the effect of INVPRO differences (H-Shares and Hong Kong shares) on EM	<b>Method:</b> OLS <b>DV:</b> EM (Kothari et al., 2005) <b>IV:</b> H-Shares and Hong Kong shares (dummy)	n/a	INVPRO has a negative effect on EM - H-share firms (with lower levels of INVPRO than other Hong Kong shares) are associated with significantly higher levels of EM.
Kanagaretnam et al. (2014)	35 countries 14,412 bank-year observations (1993 – 2006)	Examine the effects of legal and extra-legal institutions on EM and earnings quality	<b>Method:</b> 2SLS <b>DV:</b> EM (loan loss provisions meet or beat target) <b>IV:</b> Legal institutions (La Porta et al., 1998); Extra-legal institutions ((Dyck & Zingales, 2004))	Information perspective; Opportunistic perspective	INVPRO has a negative (positive) effect on EM (earnings quality).
Persakis & Iatridis (2016)	18 countries 137,091 observations (2005 – 2012)	Examine the joint effect of INVPRO and audit quality on EM	<b>Method:</b> OLS <b>DV:</b> EM (Basu, 1997; Dechow et al., 1995; Kormendi & Lipe, 1987; Leuz et al., 2003; Ohlson, 1995) <b>IV:</b> INVPRO (World Economic Forum), Audit quality	n/a	INVPRO and audit quality have negative effects on EM, individually and jointly
Bao & Lewellyn (2017)	24 emerging market countries 1,200 firms (2008 – 2013)	Examine the effect of ownership on EM, and the moderating effect of INVPRO	<b>Method:</b> OLS <b>DV:</b> EM (Han et al., 2010) <b>IV:</b> Ownership (institutional and concentrated); INVPRO (Djankov et al., 2008)	Agency theory; Institutional theory	Ownership concentration has a positive effect on EM, weakened by INVPRO
<b>Panel B: Literature on the joint effect of COLL and INVPRO on EM</b>					
Authors (Year)	Country Sample (Period)	Research Objective	Research method	Theories supported	Key findings
Nabar & Boonlert-Uthai (2007)	30 countries	Examine the effect of culture, language, religion and INVPRO on EM	<b>Method:</b> OLS and 2SLS <b>DV:</b> EM (Leuz et al., 2003) <b>IV:</b> Cultural dimensions – IDV, UA, PD, Masculinity (Hofstede); INVPRO (La Porta et al., 1998; Leuz et al., 2003); language; religion	n/a	IDV (COLL) and INVPRO have negative (positive) effects on EM; UA has a positive effect on EM.

Douppnik (2008)	31 countries	Examine the effect of culture and INVPRO on EM	<b>Method:</b> OLS <b>DV:</b> EM (Leuz et al., 2003) <b>IV:</b> Cultural dimensions – IDV,UA, PD, Masculinity, FO (Hofstede); INVPRO (La Porta et al., 1998; Leuz et al., 2003); language; religion	Gray (1998) framework	IDV (COLL) has negative (positive) effect on EM; UA has a positive effect on EM; INVPRO does not have a significant effect on EM when culture is included.
Han et al. (2010)	32 countries 96,409 observations (1992-2003)	Examine the effect of culture and INVPRO on EM	<b>Method:</b> OLS and Country-weighted least squares <b>DV:</b> EM (Tucker & Zarowin, 2006) <b>IV:</b> Cultural dimensions – IDV,UA, PD, Masculinity (Hofstede); INVPRO (La Porta et al., 1998)	Gray (1998) framework	IDV (COLL) has a positive effect on EM, strengthened by INVPRO. UA has a negative effect on EM, but a positive effect in countries with strong INVPRO.
Callen et al. (2011)	31 countries	Examine the effect of culture and religion on EM	<b>Method:</b> OLS <b>DV:</b> EM (Leuz et al., 2003) <b>IV:</b> Cultural dimensions – IDV,UA, PD, Masculinity, FO (Tang & Koveos, 2008); religion; INVPRO (Leuz et al., 2003)	n/a	IDV (COLL) and INVPRO have negative (positive) effects on EM. UA has a positive effect on EM. INVPRO does not have a significant effect on EM when culture is included.
Zhang, Liang & Sun (2013)	41 countries	Examine the effect of culture and INVPRO on EM and private control benefits (PCB)	<b>Method:</b> 2LS <b>DV:</b> EM (Leuz et al., 2003); PCB <b>IV:</b> COLL culture (Hofstede; GLOBE study); INVPRO (Djankov et al., 2008; La Porta et al., 1998)	Social network theory	COLL (INVPRO) has a positive (negative) effect on EM and PCB
Paredes & Wheatley (2017)	31 countries 252,935 observations (1987-2012)	Examine the effect of audit quality, culture and INVPRO on EM	<b>Method:</b> HLM <b>DV:</b> EM (Roychowdhury, 2006) <b>IV:</b> Cultural dimensions – IDV,UA, PD, Masculinity (Hofstede); INVPRO (Leuz et al., 2003)	Gray (1998) framework	IDV has a positive effect on accruals-based EM, but a negative effect on REM; UA and masculinity have negative effects on EM; PD has a positive effect on EM; INVPRO has a lower significant effect on EM, when culture is included.

## 6.6 The Conceptual Framework

Figure 6.5 presents the conceptual framework that depicts the main relationships to be tested in this study. The main purpose of this study is to examine, in an emerging market context, the relationship between CSR and EM, the *individual* effects of COLL, CORR and INVPRO on the CSR-EM relationship, and the *joint* effects of COLL and CORR, and COLL and INVPRO on the CSR-EM relationship.

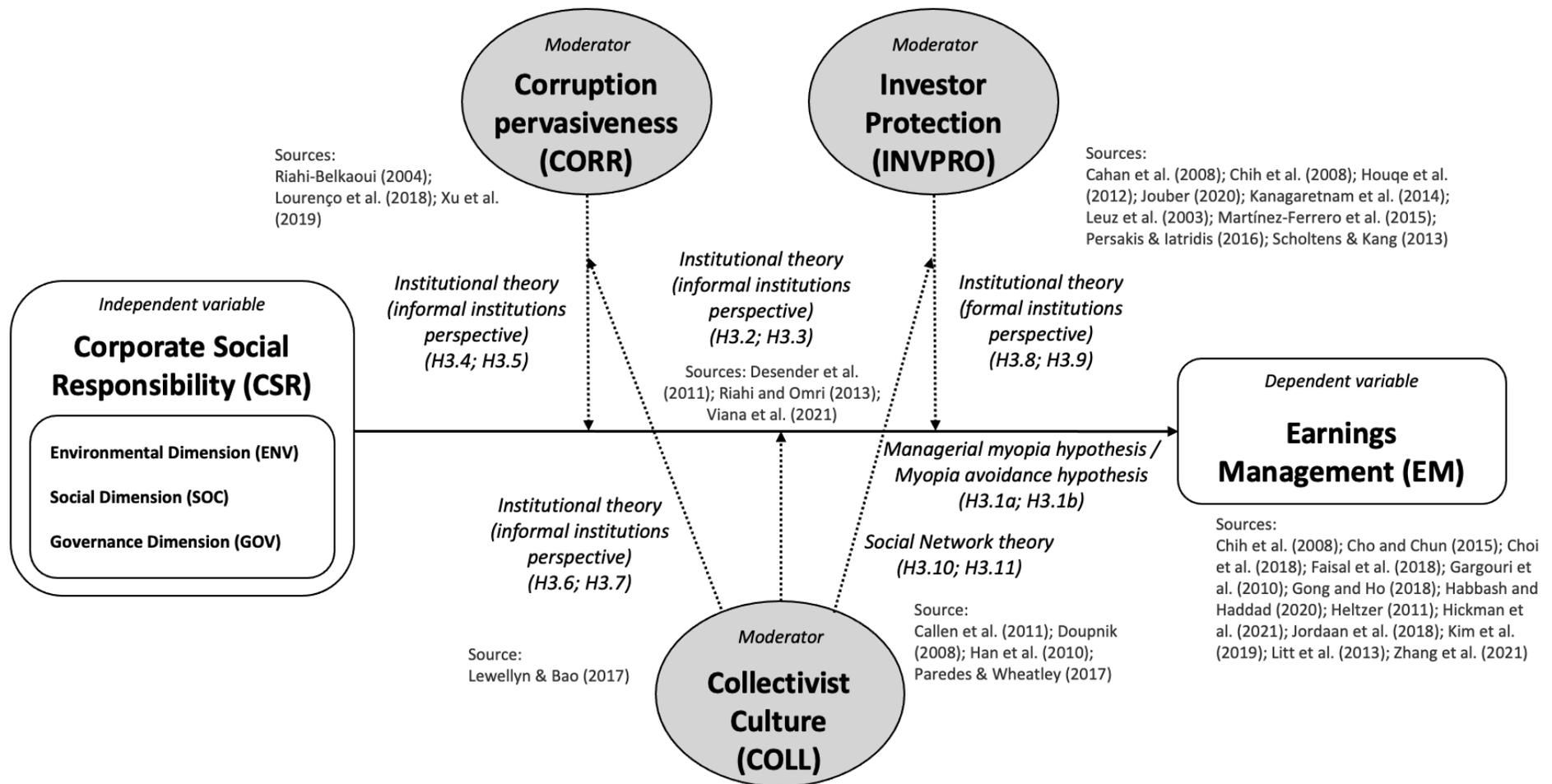


Figure 6.5 The Conceptual Framework

## 6.7 Data and Methodology

This section discusses the sample selection procedure for the present study, the main variables used in the study and the research methodology adopted to test the hypotheses developed in Section 6.5.

### 6.7.1 Data and Sample

The sample for this study is made up of non-financial firms from 10 emerging market countries listed on the Datastream Database. The sample countries selected for this study are based on MSCI classification of emerging markets. MSCI classifies 27 countries as emerging market countries, namely, Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Kuwait, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, Saudi Arabia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates (MSCI, 2021b). Initially, data is collected for all 27 countries. The country selection is then filtered based on CSR data. Any country with less than 20 firms having CSR information during the observed years is dropped from the sample. This results in the final sample of 10 countries – Brazil, China, India, Indonesia, Malaysia, Russia, South Africa, South Korea, Taiwan and Thailand.

Once the countries are finalized, the sample is further filtered. The final sample is selected based on the following criteria: 1) the firm must be publicly listed; 2) the firm must be a non-financial firm (firms with SIC codes between 6000 and 6799 are excluded); 3) the firm must have the required financial data for the sample period; 4) each Fama-French 12 industry grouping<sup>35</sup> must have a minimum of 8 firms; 4) the firms must have CSR information for the observed years.<sup>36</sup> The present study involves three moderating variables, namely COLL, CORR and INVPRO. The variable CORR is measured is obtained from two sources – 1) the Worldwide Global Indicators (WGI) index from World Bank; and 2) Transparency International. Due to unavailability of CORR data from Transparency International prior to 2012, the sample period for the present study starts from 2012. The variable INVPRO is also obtained from two sources – 1) World Economic Forum's (WEF) Global Competitiveness Index (GCI) Historical Dataset 2007 - 2017; and 2) Financial Freedom index (2017). Due unavailability of INVPRO data (from WEF's GCI Index Historical Dataset 2007 - 2017) after 2016, the sample period of the present study ends in 2016. Thus, the sample period for the present study

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<sup>35</sup> The present study uses the Fama-French 12 industry grouping for measuring EM (as discussed in greater details in section 6.7.2).

<sup>36</sup> Due to high amounts of missing data on CSR in emerging market countries, the final sample selection criteria means that any firm-year observation with missing CSR data is excluded from the sample selection.

involves a sample period from 2012 to 2016 inclusive. While this sample period has a shorter time frame than my first two research studies (reported Chapters 4 and 5, using sample periods between 2002 and 2017), shorter time frame and smaller sample size is common among prior studies examining emerging market countries, due to limitations of data availability. For example, Scholtens & Kang (2013) use a sample of 139 firms from 10 Asia-Pacific countries, for a 5-year period, between 2004 and 2008. Haw et al. (2011) use a sample of 3,992 observations from 8 East Asian countries, for a 4-year period, between 2001 and 2004. Additionally, a number of other studies, focussing on single emerging market countries, also use relatively smaller sample sizes and sample periods. For example, Kolsi & Attayah (2018), Gerged et al. (2020) and Chen & Hung (2021) all examine 5-year sample periods. Kolsi & Attayah (2018) use a sample of 170 observations from firms from UAE between 2010 and 2014; Gerged et al. (2020) use a sample of 300 observations from Kuwaiti firms between 2010 and 2014; and Chen & Hung (2021) use a sample of 3,495 observations from Taiwanese firms between 2010 and 2014. Furthermore, Jordaan et al. (2018), Pratiwi & Siregar (2019), Buerthey et al. (2020), Kumala & Siregar (2020), and Zhang et al. (2021) examine 3-year sample periods. Jordaan et al. (2018) examine a sample of 214 observations from South African firms for the years 2008, 2011 and 2013; Pratiwi & Siregar (2019) use a sample of 936 observations from Indonesian firms between 2014 and 2016; Buerthey et al. (2020) use a sample of 354 South African firms between 2013 and 2015; Kumala & Siregar (2020) use a sample of 105 observations from Indonesian firms, between 2012 and 2014; and Zhang et al. (2021) use a sample of 1,635 observations from Chinese firms between 2016 and 2018. Lastly, Faisal et al. (2018) and Habbash & Haddad (2020) use 2-year sample periods. Faisal et al. (2018) use a sample of 479 Indonesian firms for the years 2012 and 2013; and Habbash & Haddad (2020) use a sample of 225 observations from Saudi Arabian firms for the years 2015 and 2016. Thus, the sample size and period for the present study is consistent with prior studies based on emerging market countries.

Table 6.4 shows the sample selection procedure and distribution of the sample. Panel A shows the sample selection procedure. The initial sample size was 85,150 firm-year observations from 17,030 firms. The exclusion of financial firms (6,270 firm-years), firms with missing financial data over the sample period (6,845 firm-years), firms with less than 8 firms in their GIC industry grouping (195 firm-years), and observations with missing CSR data (68,368 firm-years) yields a final sample size of 3,472 firm-year observations from 771 firms. As evident, there is a large number of observations with missing CSR data, which I exclude. The number of observations in any given regression varies depending on the model-specific data requirements.

Table 6.4 Panel B reports the distribution of the sample by the Fama-French 12 industry groups. The sample is unevenly distributed across industries, with the other and manufacturing industries being dominant at 25.74% and 15.96% respectively.

Table 6.4 Panel C illustrates the distribution of the sample by country, year and the two subsamples - Low COLL and High COLL samples (the sub-samples are discussed in greater detail in section 6.7.6). The country distribution shows that the sample is unevenly distributed across countries, with China and Taiwan being the dominant countries, with 17.57% and 16.01% observations respectively, while Thailand and Indonesia are the least dominant countries in the sample, with 3.51% and 4.26% observations respectively. The year distribution shows that the full sample is unevenly distributed. The subsample distribution shows that the two subsamples are unevenly distributed, with 42.94% of the full sample comprising of firm-year observations from firms belonging to Low COLL countries, while 57.06% of the full sample comprise firm-year observations from firm belonging to High COLL countries.

The data utilised in this study are obtained from various secondary sources. All financial statement data have been collected from Datastream's Worldscope database. Initially, all financial statement data are collected for the period 2009 to 2017, to enable the use of lagged variables, as well as to measure EM\_DD (the alternate EM measure that is based on a 5-year standard deviation, discussed in greater detail in the next section). Additionally, the study also uses ESG score from Thomson Reuters ESG index. The data for COLL are obtained from the published scores by the GLOBE project from House et al. (2004) and the published scores on Hofstede's cultural dimensions from Hofstede Insights (2021). The data for the other national culture variables (that is, the control variables FO and PD) are obtained from House et al. (2004). The data for CORR is based on the 'control of corruption' index from the World Bank's WGI database, and the 'corruption perception index' from Transparency International. The data for INVPRO is based on the 'strength of investor protection' index from the WEF's GCI Historical data 2007-2017, and the investor protection scores from the Financial Freedom Index. Appendix A1 presents a list of the data used, along with their years of observation.

**Table 6.4 Sample Selection and Distribution of Sample**

<b>Panel A: Data and Sample</b>		
Description	Number of Observations	Number of firms
Initial sample (data available in Datastream)	85,150	17,030
Less: Financial firms	<u>(6,270)</u>	<u>(1,254)</u>
	78,880	15,776
Less: Firms with missing financial data for sample period	<u>(6,845)</u>	<u>(1,369)</u>
	72,035	14,407
Less: Firms with less than 8 firms in their Fama-French 12 industry grouping	<u>(195)</u>	<u>(39)</u>
	71,840	14,368
Less: Observations with missing CSR data	<u>(68,368)</u>	<u>(13,597)</u>
<b>Total</b>	<b>3,472</b>	<b>771</b>

<b>Panel B: Industry Distribution</b>		
Industry name	Total number of observations	% of observations
Consumer nondurables	295	8.50
Consumer durables	25	0.72
Manufacturing	554	15.96
Oil, gas and coal extraction and products	230	6.62
Chemicals and allied products	179	5.16
Business equipment	424	12.21
Telephone and television transmission	63	1.81
Utilities	358	10.31
Wholesale, retail and some services	277	7.98
Healthcare, medical equipment and drugs	208	5.99
Other	<u>859</u>	24.74
<b>Total</b>	<b>3,472</b>	<b>100%</b>

<b>Panel C: Distribution of observations by country, year and subsample</b>												
	Full sample		2012		2013		2014		2015		2016	
	n	%	n	%	n	%	n	%	n	%	n	%
Brazil	370	10.66	70	10.80	75	11.08	76	10.76	76	10.38	73	10.30
China	610	17.57	109	16.82	117	17.28	127	17.99	131	17.90	126	17.77
India	370	10.66	64	9.88	69	10.19	75	10.62	81	11.07	81	11.42
Indonesia	148	4.26	23	3.55	28	4.14	30	4.25	33	4.51	34	4.80
Malaysia	201	5.79	37	5.71	38	5.61	40	5.67	42	5.74	44	6.21
Russia	159	4.58	31	4.78	31	4.58	32	4.53	33	4.51	32	4.51
South Africa	470	13.54	99	15.28	95	14.03	93	13.17	92	12.57	91	12.83
South Korea	466	13.42	88	13.58	89	13.15	93	13.17	101	13.80	95	13.40
Taiwan	556	16.01	109	16.82	114	16.84	115	16.29	115	15.71	103	14.53
Thailand	122	3.51	18	2.78	21	3.10	25	3.54	28	3.83	30	4.23
Total (Full sample)	648	18.7%	677	19.5%	706	20.3%	732	21.1%	709	20.4%	3,472	100%
Low COLL sub-sample	1491	42.94	282	43.52	291	42.98	301	42.63	310	42.35	307	43.30
High COLL sub-sample	1981	57.06	366	56.48	386	57.02	405	57.37	422	57.65	402	56.70
Total (Full sample)	<b>3,472</b>	<b>100%</b>	<b>648</b>	<b>100%</b>	<b>677</b>	<b>100%</b>	<b>706</b>	<b>100%</b>	<b>732</b>	<b>100%</b>	<b>709</b>	<b>100%</b>

### 6.7.2 Dependent Variable

As discussed in prior chapters, the dependent variable in this study is EM, proxied by discretionary accruals, measured following the modified Jones model by Dechow et al. (1995). The model is estimated using the equation below for each country, each year and each industry (based on the Fama-French 12 industry classification<sup>37</sup>):

$$TA_{it} = \alpha_1 (1/A_{it-1}) + \alpha_2 (\Delta REV_{it} - \Delta REC_{it}) + \alpha_3 PPE_{it} + \varepsilon_{it} \quad (1)$$

where

$TA_{it}$  = total accruals in year  $t$  for firm  $i$  scaled by total assets at  $t - 1$ ;

$\Delta REV_{it}$  = change in revenues (revenues in year  $t$  less revenues in year  $t - 1$ ) for firm  $i$  scaled by total assets at  $t - 1$ ;

$\Delta REC_{it}$  = change in accounts receivables (net receivables in year  $t$  less net receivables in year  $t - 1$ ) for firm  $i$  scaled by total assets at  $t - 1$ ;

$PPE_{it}$  = gross property, plant and equipment in year  $t$  for firm  $i$  scaled by total assets at  $t - 1$ ;

$A_{it-1}$  = total assets in year  $t - 1$  for firm  $i$ ;

$\varepsilon_{it}$  = error term in year  $t$  for firm  $i$ .

Similar to Dechow et al. (1995), the following equation will be used to calculate the total accruals:

$$TA_{it} = (\Delta CA_{it} - \Delta CL_{it} - \Delta Cash_{it} + \Delta ST Debt_{it} - DEP_{it})/A_{it-1} \quad (2)$$

where

$\Delta CA_{it}$  = change in current assets (current assets in year  $t$  less current assets in year  $t - 1$ ) for firm  $i$ ;

$\Delta Cash_{it}$  = change in cash (cash in year  $t$  less cash in year  $t - 1$ ) for firm  $i$ ;

$\Delta CL_{it}$  = change in current liabilities (current liabilities in year  $t$  less current liabilities in year  $t - 1$ ) for firm  $i$ ;

$\Delta ST Debt$  = change in short-term debts (short-term debts in year  $t$  less short-term debts in

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<sup>37</sup> I use the Fama-French 12 industry classification (instead of the 2-digit SIC code as used in Chapters 4 and 5). This is because, due to the limited sample size of the emerging market sample, the use of 2-digit SIC codes would result in significant loss of data, making the sample size even smaller.

year  $t - 1$ ) for firm  $i$  (missing values for short-term debts are replaced with zero);

$DEP_{it}$  = depreciation and amortization expenses in year  $t$  for firm  $i$ ;

$A_{it-1}$  = total assets in year  $t - 1$  for firm  $i$ .

As in Studies 1 and 2 (reported in Chapters 4 and 5), to check the sensitivity of the regression analyses, I use an alternate measure of EM, based on the accruals quality model by Dechow & Dichev (2002). I include the modification suggested by Francis et al. (2005) by including change in revenue and property plant and equipment. Thus, to measure the alternate EM measure, EM\_DD, I estimate the following equation for each year and 2-digit SIC code:

$$TA_{it} = \beta_0 + \beta_1 CFO_{it-1} + \beta_2 CFO_{it} + \beta_3 CFO_{it+1} + \beta_4 \Delta REV_{it} + \beta_5 PPE_{it} + \varepsilon_{it} \quad (3)$$

where

$TA_{it}$  = total accruals (as measured in equation (2)) in year  $t$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$CFO_{it-1}$  = cash flow from operations in year  $t-1$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$CFO_{it}$  = cash flow from operations in year  $t$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$CFO_{it+1}$  = cash flow from operations in year  $t+1$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$\Delta REV_{it}$  = change in sales revenue (sales revenue in year  $t$  less sales revenue in year  $t - 1$ ) for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$PPE_{it}$  = gross property, plant and equipment in year  $t$  for firm  $i$  scaled by average total assets for years  $t$  and  $t-1$ ;

$\varepsilon_{it}$  = error term in year  $t$  for firm  $i$ .

As discussed in Chapters 4 and 5, EM\_DD (the alternate measure for EM) is measured as the 5-year standard deviation of the residual  $\varepsilon_{it}$  from equation (3) using the Dechow & Dichev (2002) model (EM\_DD). A higher value indicates higher EM, whereas a lower value indicates lower EM and better-quality accruals.

### **6.7.3 Independent Variables**

The independent variable for the present study is CSR, based on the ESG scores obtained from Thomson Reuters' ESG index. The ESG scores are firm-level, annual data, discussed in greater details in Chapter 3. The ESG score is based on a weighted average score of the three ESG (or CSR) dimensions – ENV (with a weighting of 34%), SOC (with a weighting of 35.5%) and GOV (with a weighting of 30.5%) (Thomson Reuters, 2018). The present study also uses these three individual CSR dimensions – ENV, SOC and GOV, in addition to using the ESG score as a measure for overall CSR,

ENV refers to the environmental dimension or pillar of CSR. The ENV score, from Thomson Reuters ESG index, is based on three categories with uneven weighting, namely – 1) resource use; 2) emissions; and 3) innovation (Thomson Reuters, 2018). The first ENV category, resource use, with a weighting of 11% of the overall ESG score, measures performance on the reduction of resource use (such as, materials, energy and water) and use of eco-efficient solutions. The second ENV category, emissions, with a weighting of 12% of the overall ESG score, measures performance on emission reduction. The third ENV category, innovation, with a weighting of 11% of the overall ESG score, measures performance on developing environmental technologies, processes and eco-designed products (Thomson Reuters, 2018).

SOC refers to the social dimension or pillar of CSR. The SOC score, from Thomson Reuters ESG index, is based on four categories with uneven weighting, namely – 1) workforce; 2) human rights; 3) community; and 4) product responsibility (Thomson Reuters, 2018). The first SOC category, workforce, with a weighting of 16% of the overall ESG score, measures performance on the creating and ensuring job satisfaction, safe workplace, equal opportunities, diversity and development opportunities for employees. The second SOC category, human rights, with a weighting of 4.5% of the overall ESG score, measures performance on effectively respecting basic human rights agreements. The third SOC category, community, with a weighting of 8% of the overall ESG score, measures performance on protecting public health and maintaining business ethics. The fourth SOC category, product responsibility, with a weighting of 7% of the overall ESG score, measures performance on creating good quality products and services, ensuring health and safety, honesty and data privacy for customers (Thomson Reuters, 2018).

GOV refers to the governance dimension or pillar of CSR. The GOV score, from Thomson Reuters ESG index, is based on three categories with uneven weighting, namely – 1) management; 2)

shareholders; and 3) CSR strategy (Thomson Reuters, 2018). The first GOV category, management, with a weighting of 19% of the overall ESG score, measures performance and commitment towards following best practices of corporate governance policies. The second GOV category, shareholders, with a weighting of 7% of the overall ESG score, measures performance on equal treatment of stakeholders and using anti-takeover strategies. The third GOV category, CSR strategy, with a weighting of 4.5% of the overall ESG score, measures performance on communication of the firms' integration of ESG practices in their daily operations (Thomson Reuters, 2018).

To test the sensitivity of my analyses, I use alternate measures of each of the three ESG dimensions. Consistent to the process followed in Chapter 4, and following Gao and Zhang (2015), I compute dummy variables for each CSR dimension. The dummy variables equal 1, if the ESG dimension score for the firm is greater than the median (by year and two-digit SIC code classification), and 0 otherwise. Thus, the alternate measure of ENV is ENV\_DUM (a dummy variable that equals 1 if the ENV score is greater than the median ENV for the year and industry, and 0 otherwise); the alternate measure of SOC is SOC\_DUM (a dummy variable that equals 1 if the SOC score is greater than the median SOC for the year and industry, and 0 otherwise); and the alternate measure of GOV is GOV\_DUM (a dummy variable that equals 1 if the GOV score is greater than the median GOV for the year and industry, and 0 otherwise).

#### **6.7.4 Moderating Variables**

The present study uses three moderating variables, namely, COLL, CORR and INVPRO.

##### ***Institutional Collectivism (COLL)***

The first moderating variable for the present study is COLL, based on the GLOBE measure of institutional collectivism. The use of Hofstede's cultural dimensions, although very common in the literature, has been the subject of some concern regarding its reliability and validity (Zhang et al., 2013). The GLOBE study measures were developed to overcome the weaknesses of Hofstede's cultural dimensions. The Globe research project appears to involve more recent and extensive research on cultural dimensions, involving a study of 18,000 managers across 62 societies (House et al., 2004; Samson & Daft, 2009). In addition to the four dimensions used by Hofstede, the Globe study introduces five more dimensions; the total of nine cultural dimensions include Assertiveness, Future Orientation, Gender Differentiation, Power Distance, Societal COLL, Individual COLL, Performance Orientation and Humane Orientation (House et al., 2004). While the Globe research cultural dimensions are mostly very similar to Hofstede's cultural dimensions, the Globe research

provides an extension to the Individualism-COLL dimension, originally proposed by Hofstede. The Globe research argues that this dimension may have different implications at the societal and organizational level and thus proposes a separation of this dimension into two components, namely, institutional COLL and in-group COLL (House et al., 2004). Institutional COLL refers to institutional practices where group values and loyalty are valued more than individual goals (House et al., 2004). In-group COLL refers to the degree of interdependence and loyalty towards family (House et al., 2004). Since the present study examines managerial behaviour within firms (that is, institutions), and institutional practices, the Institutional COLL score is more appropriate for the context of the present study.

The GLOBE measure of COLL is based on a scale of 1 to 7, with 1 showing countries with the lowest institutional COLL and 7 showing the highest institutional COLL. The moderating variable COLL is a continuous variable, measured as a percentage of the total score of 7 for the institutional COLL scores for each of the 10 countries in my sample.

As an alternate measure of COLL, I use the Hofstede's cultural dimension Individualism-Collectivism (COLL\_H). COLL\_H is measured as the reverse score of the IDV score from Hofstede Insights (2021).

### ***Corruption pervasiveness (CORR)***

The second moderating variable, CORR, is based on the 'control of corruption' index from World Bank's WGI database. The WGI database summarizes assessments of the country-level governance quality (that is, governance provided by enterprises, citizens and expert survey respondents) (World Bank, 2020). The WGI database collects its data from a number of sources, including, survey institutes, think tanks, private organisations and international organisations. The control of corruption index is a reflection of the "perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests" (World Bank, 2020). The index is based on a scale of -2.5 to 2.5, where -2.5 represents weakest control (high corruption), and 2.5 represent highest control (low corruption).

Following Lewellyn & Bao (2017), I measure CORR as a reverse score of the control of corruption score from the WGI database.

As an alternate measure of CORR, I use CORR\_TRI, measured by reverse-scoring the corruption perception index from Transparency International. The corruption perception index captures

assessment of corrupt behaviour (such as, bribery, diversion of public funds, use of public office for private gain, nepotism and state capture) in the public sector. The index is based on a scale of 0 to 100, with 0 representing the highest corruption and 100 representing no corruption (Transparency International, 2021).

### ***Investor Protection (INVPRO)***

The third moderating variable, INVPRO, is based on the 'strength of investor protection' index from the GCI from the WEF database. Several prior studies use the investor protection scores compiled by La Porta et al. (1997). However, Spamann (2010) highlights some concerns with this measure, finding that there are significant differences in the Anti-Directors Rights Index between common law and code law countries. Thus, following Houque et al., 2012 and Persakis & Iatridis, 2016, the present study uses an updated measure of INVPRO from the WEF database. As noted above, the present study specifically uses the strength of investor protection index that is based on a scale of 0 to 10, with 0 representing the weakest level (or no) INVPRO, and 10 representing the strongest INVPRO (World Economic Forum, 2020). WEF measures the INVPRO index as a combination of – 1) the extent of disclosure index (representing transparency of transactions), 2) the extent of director liability index (representing director's liability for self-dealing), and 3) the ease of shareholder suit index (representing shareholders' ability to take legal actions against officers and directors for misconduct) (World Economic Forum, 2020).

The present study measures INVPRO as a continuous variable, based on a percentage of the total score of 10, for each country and year.

As an alternate measure of INVPRO, I use INVPRO\_FF. INVPRO\_FF is a static score of INVPRO, based on a scale of 0 to 10, obtained from the Financial Freedom index. As above, INVPRO is measured as a continuous variable, based on a percentage of the total score of 10 for each country.

### ***6.7.5 Control Variables***

To avoid problems of correlated omitted variables, this study includes several control variables that are known to impact EM according to prior studies. The firm-level control variables used in the present study are the same as those used in the first two research studies as reported in Chapters 4 and 5. The present study includes 5 firm-level control variables – 1) SIZE (firm size measured as

the natural logarithm of market value of equity); ROA<sup>38</sup> (firm performance measured as income before extraordinary items, scaled by lagged total assets); LEV (leverage measured as long-term debts divided by total assets); RD (research and development intensity measured as the total R&D expenses divided by net sales); and MB (growth opportunities measured as the market to book ratio). Additionally, since the present study uses an international sample, it includes two country-level control variables relating to cultural dimensions, namely FO, representing the Future Orientation dimension of culture, and PD, representing the Power Distance dimension of culture. Guan et al. (2005) suggest a positive relationship between FO and EM. Several studies suggest that PD has an effect on EM. Some studies suggest a positive relationship between PD and EM (for example, see Guan & Pourjalali, 2010; Kanagaretnam et al., 2011), while others suggest a negative relationship (for example, see Lewellyn & Bao, 2017; Paredes & Wheatley, 2017; Riahi & Omri, 2013).

Similar to prior chapters, all firm-level variables are winsorized at the 1<sup>st</sup> and 99<sup>th</sup> percentiles, to minimise the undesirable effects of outliers. Table 6.5 lists all the variables used in the present study and the definitions and measurements of each variable.

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<sup>38</sup> The present study uses firm-level ROA as a control for firm performance. In Chapter 4 and 5, I use industry-adjusted ROA, measured as the ROA for each firm-year minus the average ROA for the industry-year. The present study uses HLM model for analysis, that requires all variables to be centered. Since ROA, in the present study, is mean-centered for the regression models (discussed in greater detail in section 6.7.5), I do not use industry-adjusted ROA for this study.

**Table 6.5 Definition and Measurement of Variables**

Variable	Symbol	Definition and Method of measurement
<i>Dependent variable</i>		
Earnings Management	EM	Absolute value of discretionary accruals using the modified Jones model (Dechow et al., 1995): $TA_{it} = \alpha_i [1/A_{it-1}] + \beta_{1i} (\Delta REV_{it} - \Delta REC_{it}) + \beta_{2i} (PPE_{it}) + \varepsilon_{it}$
Earnings Management alternate measure	EM_DD	Accruals quality model following Dechow & Dichev (2002): $TA_{it} = \beta_0 + \beta_{1i} CFO_{it-1} + \beta_{2i} CFO_{it} + \beta_{3i} CFO_{it+1} + \beta_{4i} \Delta REV_{it} + \beta_{5i} PPE_{it} + \varepsilon_{it}$
<i>Independent Variable</i>		
Corporate Social Responsibility	CSR	ESG score from Thomson Reuters ESG index.
Environmental dimension	ENV	Environmental dimension score from Thomson Reuters ESG index.
Social dimension	SOC	Social dimension score from Thomson Reuters ESG index.
Governance dimension	GOV	Governance dimension score from Thomson Reuters ESG index.
Environmental dimension alternate measure	ENV_DUM	Dummy variable equals 1 if the Thomson Reuters ENV score is greater than the median (by year and industry classification), and 0 otherwise.
Social dimension alternate measure	SOC_DUM	Dummy variable equals 1 if the Thomson Reuters SOC score is greater than the median (by year and industry classification), and 0 otherwise.
Governance dimension alternate measure	GOV_DUM	Dummy variable equals 1 if the Thomson Reuters GOV score is greater than the median (by year and industry classification), and 0 otherwise.
<i>Moderating Variables</i>		
Collectivism culture	COLL	Institutional Collectivism score from the GLOBE study.
Collectivism culture alternate measure	COLL_H	Inverse measure of Hofstede's cultural dimension IDV-COLL.
Corruption pervasiveness	CORR	Inverse measure of control of corruption index from World Bank's WGI index.
Corruption pervasiveness alternate measure	CORR_TRI	Inverse measure of corruption perception index from Transparency International.
Investor Protection	INVPRO	Strength of investor protection from WEF's GCI Historical Data 2007-2017.
Investor Protection alternate measure	INVPRO_FF	Investor protection score from Financial Freedom index.
<i>Control Variables</i>		
Firm Size	SIZE	Natural logarithm of market of market value of equity
Firm Leverage	LEV	Long-term debts divided by total assets
Firm Performance	ROA	Earnings before interest and tax scaled by lagged total assets
Research and Development Intensity	RD	Research and Development expense divided by total sales
Firm Growth opportunities	MB	Market to Book ratio
Future Orientation	FO	Future orientation cultural dimension from GLOBE study
Power Distance	PD	Power Distance cultural dimension from GLOBE study
<i>Instrument Variables (for 2SLS)</i>		
Industry median ENV	ENV_M	The industry median of ENV (based on Fama-French 48 industry classification, used as an instrument for ENV to address endogeneity)
Industry median SOC	SOC_M	The industry median of SOV (based on Fama-French 48 industry classification, used as an instrument for SOC to address endogeneity)
Industry median GOV	GOV_M	The industry median of GOV (based on Fama-French 48 industry classification, used as an instrument for GOV to address endogeneity)

### **6.7.5 Research Models**

This section discusses the research models used in this study to address research objective 3, that is, to investigate *when* CSR affects EM, by examining the contexts COLL culture, CORR and INVPRO, in emerging market countries. To address research objective 3, I state the following three research questions:

*Research Question 3.1:* Does CSR have a significant effect on EM in emerging market countries?

*Research Question 3.2:* Do COLL and CORR, *individually and jointly*, have significant effects on the CSR-EM relationship in emerging market countries?

*Research Question 3.3:* Do COLL and INVPRO, *individually and jointly*, have significant effects on the CSR-EM relationship in emerging market countries?

The present study adopts the Hierarchical Linear Modelling (HLM) technique, since the sample involves two levels of variables – level 1 being the firm-level variables, and level 2 being the country-level. The dependent variable (EM), the independent variables (CSR, ENV, SOV and GOV), and most of the control variables (SIZE, LEV, ROA, RD and MB) are firm-level variables, while the moderating variables (COLL, CORR and INVPRO) and two of the control variables (FO and PD) are country-level variables. The firm-level variables (that is, level 1) are nested within the countries (that is, level 2). Since the country-level variables are nested and clustered, they are not independent, and may lead to violation of the assumptions required for using linear regressions, or ordinary least squares (OLS) estimations (Paredes & Wheatley, 2017). When a study involves multi-level variables, using OLS estimation may increase the possibility of type 1 errors and cause the results to be biased, misestimated and heteroskedastic (Bao & Lewellyn, 2017; Lewellyn & Bao, 2017; Paredes & Wheatley, 2017; Rabe-Hesketh & Skrondal, 2008; Raudenbush & Bryk, 2002). Prior studies recommend the use of HLM technique to be a more suitable approach for analyzing multi-level data, since HLM technique reduces bias in the estimation of standard error of the regression coefficients (for example, see Lewellyn & Bao, 2017; Paredes & Wheatley, 2017). Thus, following prior studies, the present study uses HLM technique to examine the effects of country-level factors (COLL, CORR and INVPRO) on the CSR-EM relationship (based on firm-level CSR and EM), after controlling for both firm-level and country-level factors.

Following Bao and Lewellyn (2017), all firm-level variables (EM, EM\_DD, CSR, ENV, SOC, GOV, SIZE, LEV, ROA, RD and MB) are centered using mean-centering, and the country-level variables (COLL,

CORR, CORR\_TRI, INVPRO, INVPRO\_FF, FO and PD) are centered using group-centering, with country being the group. All regression models use dummy variables to capture industry effects, based on the Fama-French 12 industry classification. The research analysis is undertaken in two stages, as discussed below. Table 6.6 presents a summary of the research analyses undertaken to test the hypotheses.

**Table 6.6 Summary of Research Questions and Hypotheses testing**

Research Question	Hypothesis	Theory	Expected sign
3.1. Does CSR have a significant effect on EM in emerging market countries?	H3.1a: Consistent with the managerial myopia hypothesis, there is a positive and significant relationship between CSR and EM.	Managerial myopia hypothesis	$\beta_1 = +$ (Equation 4a) $\alpha_1, \alpha_2, \alpha_3 = +$ (Equation 4b)
	H3.1b: Consistent with the myopia avoidance hypothesis, there is a negative and significant relationship between CSR and EM.	Myopia avoidance hypothesis	$\beta_1 = -$ (Equation 4a) $\alpha_1, \alpha_2, \alpha_3 = -$ (Equation 4b)
3.2. Do COLL and CORR, <i>individually</i> and <i>jointly</i> , have significant effects on the CSR-EM relationship in emerging market countries?	H3.2: Consistent with the informal institutions perspective, there is a positive and significant relationship between COLL and EM.	Institutional theory (informal institutions perspective)	$\alpha_4 = +$ (Equation 5)
	H3.3: COLL has a significant moderating effect on the relationship between CSR and EM.	Managerial myopia hypothesis / Myopia avoidance hypothesis (stronger/weaker)	$\alpha_6, \alpha_7, \alpha_8 = +/-$ (Equation 5)
	H3.4: Consistent with the informal institutions perspective, there is a positive and significant relationship between CORR and EM.	Institutional theory (informal institutions perspective)	$\alpha_5 = +$ (Equation 5)
	H3.5: CORR has a significant moderating effect on the relationship between CSR and EM.	Managerial myopia hypothesis / Myopia avoidance hypothesis (stronger/weaker)	$\alpha_9, \alpha_{10}, \alpha_{11} = +/-$ (Equation 5)
	H3.6: Consistent with the informal institutions perspective, the interaction of COLL and CORR has a positive effect on EM.	Institutional theory (informal institutions perspective)	$\alpha_{12} = +$ (Equation 5)
	H3.7: The interaction of COLL and CORR has a significant moderating effect on the relationship between CSR and EM.	Managerial myopia hypothesis / Myopia avoidance hypothesis (stronger/weaker)	$\alpha_{13}, \alpha_{14}, \alpha_{15} = +/-$ (Equation 5)
3.3. Do COLL and INVPRO, <i>individually</i> and <i>jointly</i> , have significant effects on the CSR-EM relationship in emerging market countries?	H3.8: Consistent to the formal institutions perspective, there is a negative and significant relationship between INVPRO and EM.	Institutional theory (formal institutions perspective)	$\alpha_5 = -$ (Equation 6)
	H3.9: INVPRO has a significant moderating effect on the relationship between CSR and EM.	Managerial myopia hypothesis / Myopia avoidance hypothesis (stronger/weaker)	$\alpha_9, \alpha_{10}, \alpha_{11} = +/-$ (Equation 6)
	H3.10: Consistent to the institutional theory, the interaction of COLL and INVPRO has a significant effect on EM.	Institutional theory (formal institutions perspective)	$\alpha_{12} = +/-$ (Equation 6)
	H3.11: The interaction of COLL and INVPRO has a significant moderating effect on the relationship between CSR and EM.	Managerial myopia hypothesis / Myopia avoidance hypothesis (stronger/weaker)	$\alpha_{13}, \alpha_{14}, \alpha_{15} = +/-$ (Equation 6)

### **Base models to test of hypotheses H3.1a and H3.1b**

First, I examine the relationship between CSR and EM, and the relationship between the CSR dimensions (ENV, SOC and GOV) and EM. Since the present study uses a totally different sample than the ones used in the first two studies (as reported in Chapters 4 and 5), the CSR and EM relationship is tested again on this new sample involving 10 emerging market countries. As part of Phase 1 of the analysis, I address research question 3.1, and test hypotheses H3.1a and H3.1b, by estimating the following base model equations as HLM:

$$EM_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 ROA_{it} + \beta_5 RD_{it} + \beta_6 MB_{it} + \beta_7 FO + \beta_8 PD + \varepsilon_{it} \quad (4a)$$

$$EM_{it} = \alpha_0 + \alpha_1 ENV_{it} + \alpha_2 SOC_{it} + \alpha_3 GOV_{it} + \alpha_4 SIZE_{it} + \alpha_5 LEV_{it} + \alpha_6 ROA_{it} + \alpha_7 RD_{it} + \alpha_8 MB_{it} + \alpha_9 FO + \alpha_{10} PD + \varepsilon_{it} \quad (4b)$$

where

$EM_{it}$  = Earnings management in year  $t$  for firm  $i$ , proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995);

$CSR_{it}$  = The ESG score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$ENV_{it}$  = The environmental dimension score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$SOC_{it}$  = The social dimension score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$GOV_{it}$  = The governance dimension score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ROA_{it}$  = Return on assets in year  $t$  for firm  $i$ , measured as income before extraordinary items, scaled by lagged total assets;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ ;

$FO$  = GLOBE measure of future orientation dimension of country-level culture;

$PD$  = GLOBE measure of power distance dimension of country-level culture.

Equations (4a) and (4b) are estimated as part of testing hypotheses H3.1 and H3.2, and address research question 3.1, by examining the relationship between CSR and EM. While equation (4a) examines the effect of overall CSR on EM, equation (4b) examines the effect of ENV, SOC and GOV (that is, the CSR dimensions) on EM. Hypotheses H3.1a and H3.1b test two opposing views on the relationship between CSR and EM. H3.1a tests whether CSR has a positive effect on EM (consistent with the managerial myopia hypothesis), while H3.1b tests whether CSR has a negative effect on EM (consistent with the myopia avoidance hypothesis). The effect of overall CSR on EM is captured by the coefficient  $\beta_1$  from equation (4a), and the effects of ENV, SOC and GOV are captured by the coefficients  $\alpha_1$ ,  $\alpha_2$  and  $\alpha_3$  respectively, from equation (4b). A positive and statistically significant value on one or more of these coefficients ( $\beta_1$  from equation (4a), and  $\alpha_1$ ,  $\alpha_2$  and  $\alpha_3$  from equation (4b)), will support hypothesis H3.1a, suggesting a positive relationship between CSR and EM. In contrast, a negative and statistically significant value on one or more of these coefficients ( $\beta_1$  from equation (4a), and  $\alpha_1$ ,  $\alpha_2$  and  $\alpha_3$  from equation (4b)), will support hypothesis H3.1b, suggesting a negative relationship between CSR and EM. Finding support for H3.1a and/or H3.1b will address research question 3.1.

The main purpose of Phase 1 of the analysis is to establish a relationship between CSR and EM, unconditional of any moderating variables. The results from the base model analysis (discussed in greater detail in section 6.8.4) establishes a relationship between the CSR dimensions (ENV and SOC) and EM, but not between overall CSR and EM. Thus, in the main model analyses, I examine the individual CSR dimensions as opposed to overall CSR.

### **Main model 1 to test hypotheses H3.2 to H3.7**

To address research question 3.2, and test hypotheses H3.2 to H3.7, I estimate the following equation as HLM, following moderation approach using the Process Model 3 developed by Hayes, (2013b):

$$EM_{it} = \alpha_0 + \alpha_1 ENV_{it} + \alpha_2 SOC_{it} + \alpha_3 GOV_{it} + \alpha_4 COLL_t + \alpha_5 CORR_t + \alpha_6 ENV_{it} * COLL_t + \alpha_7 SOC_{it} * COLL_t + \alpha_8 GOV_{it} * COLL_t + \alpha_9 ENV_{it} * CORR_t + \alpha_{10} SOC_{it} * CORR_t + \alpha_{11} GOV_{it} * CORR_t + \alpha_{12} COLL_t * CORR_t + \alpha_{13} ENV_{it} * COLL_t * CORR_t + \alpha_{14} SOC_{it} * COLL_t * CORR_t + \alpha_{15} GOV_{it} * COLL_t * CORR_t + \alpha_{16} SIZE_{it} + \alpha_{17} LEV_{it} + \alpha_{18} ROA_{it} + \alpha_{19} RD_{it} + \alpha_{20} MB_{it} + \alpha_{21} FO_t + \alpha_{22} PD + \varepsilon_{it} \quad (5)$$

where

$EM_{it}$  = Earnings management in year  $t$  for firm  $i$ , proxied by discretionary accruals using the

modified Jones model by Dechow et al. (1995);

$ENV_{it}$  = The environmental dimension score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$SOC_{it}$  = The social dimension score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$GOV_{it}$  = The governance dimension score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$COLL$  = GLOBE measure of institutional COLL dimension of country-level culture;

$CORR_t$  = CORR pervasiveness in a country, measured by reverse-scoring the 'control of CORR' measure from World Bank's WGI index;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ROA_{it}$  = Return on assets in year  $t$  for firm  $i$ , measured as income before extraordinary items, scaled by lagged total assets;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ ;

$FO$  = GLOBE measure of future orientation dimension of country-level culture;

$PD$  = GLOBE measure of power distance dimension of country-level culture.

### ***Test of hypotheses H3.2 and H3.3***

As the first step to addressing research question 3.2, I test hypotheses H3.2 and H3.3, by estimating equation (5). H3.2 tests the relationship between COLL and EM that is captured by the coefficient  $\alpha_4$  from equation (5). A positive and statistically significant value on  $\alpha_4$  will provide support for hypothesis H3.2. H3.3 tests the moderating effect of COLL on the relationship between the CSR dimensions (ENV, SOC and GOV) and EM. This is captured by the coefficient  $\alpha_6$ ,  $\alpha_7$  and  $\alpha_8$  from equation (5). A positive or negative statistically significant value on one or more of the coefficients ( $\alpha_6$ ,  $\alpha_7$  and  $\alpha_8$ ) will indicate that COLL has a moderating effect on the relationship between CSR and EM and will provide support for hypothesis (H3.3). Specifically, a positive value on either  $\alpha_6$ ,  $\alpha_7$  and  $\alpha_8$  from equation (5) will suggest that COLL has a strengthening (weakening) effect of the positive (negative) relationship between the CSR dimensions and EM, while a negative value will suggest

that COLL has a weakening (strengthening) effect of the positive (negative) relationship between the CSR dimensions and EM. The effect of ENV on EM, conditional on COLL, is estimated as the sum of the coefficients  $\alpha_1 + \alpha_6 * COLL$  from equation (5); the effect of SOC on EM, conditional on COLL, is estimated as the sum of the coefficients  $\alpha_2 + \alpha_7 * COLL$  from equation (5); and effect of GOV on EM, conditional on COLL, is estimated as the sum of the coefficients  $\alpha_3 + \alpha_8 * COLL$  from equation (5). The conditional effects provide further validation to the moderating effect of COLL, by showing whether the relationship between the CSR dimensions and EM changes with the level of COLL. Statistically significant coefficients on one or more of these conditional effects will provide further validation to support hypothesis H3.3 and will address research question 3.2 partially by explaining the *individual* effect of COLL on the CSR-EM relationship.

### ***Test of hypotheses H3.4 and H3.5***

As the second step to addressing research question 3.2, I test hypotheses H3.4 and H3.5, by estimating equation (5). H3.4 tests the relationship between CORR and EM that is captured by the coefficient  $\alpha_5$  from equation (5). A positive and statistically significant value on  $\alpha_5$  will provide support for hypothesis H3.4. H3.5 tests the moderating effect of CORR on the relationship between the CSR dimensions (ENV, SOC and GOV) and EM. This is captured by the coefficients  $\alpha_9$ ,  $\alpha_{10}$  and  $\alpha_{11}$  from equation (5). A positive or negative statistically significant value on either one or more of the coefficients  $\alpha_9$ ,  $\alpha_{10}$  and  $\alpha_{11}$  will indicate that CORR has a moderating effect on the relationship between CSR and EM and will provide support for hypothesis H3.5. Specifically, a positive value on either of the coefficients,  $\alpha_9$ ,  $\alpha_{10}$  and  $\alpha_{11}$ , from equation (5) will suggest that CORR has a strengthening (weakening) effect of the positive (negative) relationship between the CSR dimensions and EM, while a negative value will suggest that CORR has a weakening (strengthening) effect of the positive (negative) relationship between the CSR dimensions and EM. The effect of ENV on EM, conditional on CORR, is estimated as the sum of the coefficients  $\alpha_1 + \alpha_9 * CORR$  from equation (5); the effect of SOC on EM, conditional on CORR, is estimated as the sum of the coefficients  $\alpha_2 + \alpha_{10} * CORR$  from equation (5); and the effect of GOV on EM, conditional on CORR, is estimated as the sum of the coefficients  $\alpha_3 + \alpha_{11} * CORR$  from equation (5). The conditional effects provide further validation to the moderating effect of CORR, by showing whether the relationship between the CSR dimensions and EM changes with the level of CORR. Statistically significant coefficients on one or more of these conditional effects will provide further validation to support hypothesis H3.5, and will address partially research question 3.2, by explaining the *individual* effect of CORR on the CSR-EM relationship.

### ***Test of hypotheses H3.6 and H3.7***

As the final step to addressing research question 3.2, I test hypotheses H3.6 and H3.7, by estimating equation (5) to examine the *joint* effect of COLL and CORR on the relationship between CSR and EM. H3.6 tests the *joint* effect of COLL and CORR on EM that is captured by the coefficient  $\alpha_{12}$  from equation (5). A positive and statistically significant value on  $\alpha_{12}$  will provide support for hypothesis H3.6. H3.7 tests the effect of the interaction of COLL and EM on the relationship between the CSR dimensions (ENV, SOC and GOV) and EM (that is, the 3-way interaction). This is captured by the coefficients  $\alpha_{13}$ ,  $\alpha_{14}$  and  $\alpha_{15}$  from equation (5). A positive or negative statistically significant value on either of the coefficients  $\alpha_{13}$ ,  $\alpha_{14}$  and  $\alpha_{15}$  will indicate that COLL and CORR *jointly* have a moderating effect on the relationship between CSR and EM and provide support for hypothesis H3.7. Specifically, a positive value on  $\alpha_{13}$ ,  $\alpha_{14}$  and  $\alpha_{15}$  from equation (5) will suggest that the interaction of COLL and CORR has a strengthening (weakening) effect of the positive (negative) relationship between the CSR dimensions and EM, while a negative value will suggest that the interaction of COLL and CORR has a weakening (strengthening) effect of the positive (negative) relationship between the CSR dimensions and EM. The effect of ENV on EM, conditional on the interaction of COLL and CORR, is estimated as the sum of the coefficients  $\alpha_1 + \alpha_6COLL + \alpha_9CORR_t + \alpha_{13}COLL*CORR_t$  from equation (5); the effect of SOC on EM, conditional on the interaction of COLL and CORR, is estimated as the sum of the coefficients  $\alpha_2 + \alpha_7COLL + \alpha_{10}CORR_t + \alpha_{14}COLL*CORR_t$  from equation (5); and effect of GOV on EM, conditional on the interaction of COLL and CORR, is estimated as the sum of the coefficients  $\alpha_3 + \alpha_8COLL + \alpha_{11}CORR_t + \alpha_{15}COLL*CORR_t$  from equation (5). The conditional effects provide further validation to the *joint* moderating effect of COLL X CORR, by showing whether the relationship between the CSR dimensions and EM changes with the level of COLL and CORR jointly. Statistically significant coefficients on one or more of these conditional effects will provide further validation to support hypothesis H3.7 and will address research question 3.2.

### ***Main model 2 to test hypotheses H3.8 to H3.11***

To address research question 3.3, and test hypotheses H3.8 to H3.11, I estimate the following equation as HLM, following the moderation approach using the Process Model 3 developed by Hayes (2013):

$$EM_{it} = \alpha_0 + \alpha_1ENV_{it} + \alpha_2SOC_{it} + \alpha_3GOV_{it} + \alpha_4COLL + \alpha_5INVPRO_t + \alpha_6ENV_{it}*COLL + \alpha_7SOC_{it}*COLL + \alpha_8GOV_{it}*COLL + \alpha_9ENV_{it}*INVPRO_t + \alpha_{10}SOC_{it}*INVPRO_t + \alpha_{11}GOV_{it}*INVPRO_t + \alpha_{12}COLL*INVPRO_t$$

$$\begin{aligned}
& + \alpha_{13}ENV_{it} * COLL * INVPRO_t + \alpha_{14}SOC_{it} * COLL * INVPRO_t + \alpha_{15}GOV_{it} * COLL * INVPRO_t + \alpha_{16}SIZE_{it} + \alpha_{17}LEV_{it} \\
& + \alpha_{18}ROA_{it} + \alpha_{19}RD_{it} + \alpha_{20}MB_{it} + \alpha_{21}FO_t + \alpha_{22}PD + \varepsilon_{it} \quad (6)
\end{aligned}$$

where

$EM_{it}$  = Earnings management in year  $t$  for firm  $i$ , proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995);

$ENV_{it}$  = The environmental dimension score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$SOC_{it}$  = The social dimension score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$GOV_{it}$  = The governance dimension score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$COLL$  = GLOBE measure of institutional COLL dimension of country-level culture;

$INVPRO_t$  = Strength of INVPRO index for a country from WEF's GCI data;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ROA_{it}$  = Return on assets in year  $t$  for firm  $i$ , measured as income before extraordinary items, scaled by lagged total assets;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ ;

$FO$  = GLOBE measure of future orientation dimension of country-level culture;

$PD$  = GLOBE measure of power distance dimension of country-level culture.

### **Test of hypotheses H3.8 and H3.9**

By estimating equation (6), first I test hypotheses H3.8 and H3.9. H3.8 examines the relationship between INVPRO and EM that is captured by the coefficient  $\alpha_5$  from equation (6). A negative and statistically significant value on  $\alpha_5$  will provide support for hypothesis H3.8. H3.9 tests the moderating effect of INVPRO on the relationship between the CSR dimensions (ENV, SOC and GOV) and EM. This is captured by the coefficient  $\alpha_9$ ,  $\alpha_{10}$  and  $\alpha_{11}$  from equation (6). A statistically significant value on either of the coefficients  $\alpha_9$ ,  $\alpha_{10}$  and  $\alpha_{11}$  will indicate that INVPRO has a moderating effect

on the relationship between CSR and EM and will provide support for hypothesis H3.9. Specifically, a positive value on either one or more of the coefficients,  $\alpha_9$ ,  $\alpha_{10}$  and  $\alpha_{11}$  from equation (6) will suggest that INVPRO has a strengthening (weakening) effect of the positive (negative) relationship between the CSR dimensions and EM, while a negative value will suggest that INVPRO has a weakening (strengthening) effect of the positive (negative) relationship between the CSR dimensions and EM. The effect of ENV on EM, conditional on INVPRO, is estimated as the sum of the coefficients  $\alpha_1 + \alpha_9 * INVPRO$  from equation (6); the effect of SOC on EM, conditional on INVPRO, is estimated as the sum of the coefficients  $\alpha_2 + \alpha_{10} * INVPRO$  from equation (6); and effect of GOV on EM, conditional on INVPRO, is estimated as the sum of the coefficients  $\alpha_3 + \alpha_{11} * INVPRO$  from equation (6). The conditional effects provide further validation to the moderating effect of INVPRO, by showing whether the relationship between the CSR dimensions and EM changes with the level of INVPRO. Statistically significant coefficients on one or more of these conditional effects will provide further validation to support hypothesis H3.9, and will partially address research question 3.3, by explaining the *individual* effect of INVPRO on the CSR-EM relationship.

#### ***Test of hypotheses H3.10 and H3.11***

Equation (6) also tests hypotheses H3.10 and H3.11. H3.10 tests the *joint* effect of COLL and INVPRO on EM. This is captured by the coefficient  $\alpha_{12}$  from equation (6). A statistically significant value on  $\alpha_{12}$  will provide support for hypothesis H3.10. Specifically, a positive and significant value on  $\alpha_{12}$  will suggest that the interaction of COLL and INVPRO has a positive effect on EM, while a negative value will suggest that the interaction of COLL and INVPRO has a negative effect on EM. H3.11 tests the effect of the interaction of COLL and INVPRO on the relationship between the CSR dimensions (ENV, SOC and GOV) and EM (that is, the 3-way interaction). This is captured by the coefficients  $\alpha_{13}$ ,  $\alpha_{14}$  and  $\alpha_{15}$  from equation (6). A significant value on either one or more of the coefficients  $\alpha_{13}$ ,  $\alpha_{14}$  and  $\alpha_{15}$  will indicate that COLL and INVPRO jointly have a moderating effect on the relationship between CSR and EM and provide support to hypothesis H3.11. Specifically, a positive value on  $\alpha_{13}$ ,  $\alpha_{14}$  and/or  $\alpha_{15}$  from equation (6) will suggest that the interaction of COLL and INVPRO has a strengthening (weakening) effect of the positive (negative) relationship between the CSR dimensions and EM, while a negative value will suggest that the interaction of COLL and INVPRO has a weakening (strengthening) effect of the positive (negative) relationship between the CSR dimensions and EM. The effect of ENV on EM, conditional on the interaction of COLL and INVPRO, is estimated as the sum of the coefficients  $\alpha_1 + \alpha_6 COLL + \alpha_9 INVPRO_t + \alpha_{13} COLL * INVPRO_t$  from equation (6); the effect of SOC on EM, conditional on the interaction of COLL and INVPRO, is estimated as the sum of the

coefficients  $\alpha_2 + \alpha_7COLL + \alpha_{10}INVPRO_t + \alpha_{14}COLL * INVPRO_t$  from equation (6); and effect of GOV on EM, conditional on the interaction of COLL and INVPRO, is estimated as the sum of the coefficients  $\alpha_3 + \alpha_8COLL + \alpha_{11}INVPRO_t + \alpha_{15}COLL * INVPRO_t$  from equation (6). The conditional effects provide further validation to the moderating effect of COLL X INVPRO, by showing whether the relationship between the CSR dimensions and EM changes with the level of COLL and INVPRO *jointly*. Statistically significant coefficients on one or more of these conditional effects will provide further validation to support hypothesis H3.11, and will address research question 3.3, by explaining the *joint* effect of COLL and INVPRO on the CSR-EM relationship.

### 6.7.6 Robustness Check

As a robustness check, I re-perform the research analysis using a split sample approach. The full sample is split into two subsamples, namely Low COLL and High COLL subsamples. The Low COLL subsample includes all countries with a COLL score that is lower than the median COLL score of the full sample, while the High COLL subsample includes all countries with a COLL score that is higher than the median COLL score. The Low COLL subsample includes the countries Brazil, India, Russia, South Africa and Thailand while the High COLL subsample includes the countries China, Indonesia, Malaysia, South Korea and Taiwan. I estimate the following equation, following Process Model 1, developed by Hayes (2013), in each of the two subsamples:

$$EM_{it} = \alpha_0 + \alpha_1ENV_{it} + \alpha_2SOC_{it} + \alpha_3GOV_{it} + \alpha_4CORR_t + \alpha_5INVPRO_t + \alpha_6ENV_{it} * CORR_t + \alpha_7SOC_{it} * CORR_t + \alpha_8GOV_{it} * CORR_t + \alpha_9ENV_{it} * INVPRO_t + \alpha_{10}SOC_{it} * INVPRO_t + \alpha_{11}GOV_{it} * INVPRO_t + \alpha_{12}SIZE_{it} + \alpha_{13}LEV_{it} + \alpha_{14}ROA_{it} + \alpha_{15}RD_{it} + \alpha_{16}MB_{it} + \alpha_{17}FO_t + \alpha_{18}PD + \varepsilon_{it} \quad (7)$$

where

$EM_{it}$  = Earnings management in year  $t$  for firm  $i$ , proxied by Discretionary accruals using the modified Jones model by Dechow et al. (1995);

$ENV_{it}$  = The environmental dimension score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$SOC_{it}$  = The social dimension score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$GOV_{it}$  = The governance dimension score from Thomson Reuters ESG index in year  $t$  for firm  $i$ ;

$CORR_t$  = CORR pervasiveness in a country, measured by reverse-scoring the 'control of CORR' measure from World Bank's WGI index;

$INVPRO_t$  = Strength of INVPRO index for a country from WEF's GCI data;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ROA_{it}$  = Return on assets in year  $t$  for firm  $i$ , measured as income before extraordinary items, scaled by lagged total assets;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ ;

$FO$  = GLOBE measure of future orientation dimension of country-level culture;

$PD$  = GLOBE measure of power distance dimension of country-level culture.

Equation (7) examines the effects of CORR and INVPRO on the relationship between the CSR dimensions and EM on the relationship between the CSR dimensions and EM. The equation is estimated for each of the 2 subsamples, to show the *joint* effect of COLL and CORR, and the *joint* effect of COLL and INVPRO on the CSR-EM relationship.

### **6.7.7 Sensitivity analysis**

To test the sensitivity of the HLM estimation model, I estimate equation (8) using HLM technique. Equation (8) is a re-estimation of equation (7), with the main variables (EM, ENV, SOC, GOV, CORR and INVPRO) replaced with their alternate specifications (EM\_DD, ENV\_DUM, SOC\_DUM, GOV\_DUM, CORR\_TRI and INVPRO\_FF respectively). Equation (8) is estimated on two subsamples, based on the alternate measure of COLL, that is COLL\_H. COLL\_H is obtained by reverse-scoring the IDV score of Hofstede's IDV-COLL dimension. The full sample is split into two subsamples, namely Low COLL\_H and High COLL\_H subsamples. The Low COLL\_H subsample includes all countries with a COLL\_H score that is lower than the mean COLL\_H score of the full sample, while the High COLL\_H subsample includes all countries with a COLL\_H score that is higher than the mean COLL\_H score. The Low COLL\_H subsample includes the countries Brazil, India, Russia and South Africa, while the High COLL\_H subsample includes the countries, China, Indonesia, Malaysia, South Korea, Taiwan and Thailand. The classification using COLL\_H score is slightly different from the classification based on the COLL score – specifically, the difference lies in the classification of Thailand as a high COLL\_H country. I estimate the following equation, following Process Model 1, developed by Hayes (2013), in each of the two subsamples, based on COLL\_H (the alternate measure of COLL):

$$EM\_DD_{it} = \alpha_0 + \alpha_1 ENV\_DUM_{it} + \alpha_2 SOC\_DUM_{it} + \alpha_3 GOV\_DUM_{it} + \alpha_4 CORR\_TRI_t + \alpha_5 INVPRO\_FF_t + \alpha_6 ENV\_DUM_{it} * CORR\_TRI_t + \alpha_7 SOC\_DUM_{it} * CORR\_TRI_t + \alpha_8 GOV\_DUM_{it} * CORR\_TRI_t + \alpha_9 ENV\_DUM_{it} * INVPRO\_FF_t + \alpha_{10} SOC\_DUM_{it} * INVPRO\_FF_t + \alpha_{11} GOV\_DUM_{it} * INVPRO\_FF_t + \alpha_{12} SIZE_{it} + \alpha_{13} LEV_{it} + \alpha_{14} ROA_{it} + \alpha_{15} RD_{it} + \alpha_{16} MB_{it} + \alpha_{17} FO_t + \alpha_{18} PD + \varepsilon_{it} \quad (8)$$

where

$EM\_DD_{it}$  = Earnings management in year  $t$  for firm  $i$ , proxied by accruals quality model by Dechow & Dichev (2002);

$ENV\_DUM_{it}$  = Dummy variable taking the value of 1 if the ENV score of the firm is greater median ENV (based on each year and industry), and 0 otherwise.

$SOC\_DUM_{it}$  = Dummy variable taking the value of 1 if the SOC score of the firm is greater median SOC (based on each year and industry), and 0 otherwise.

$GOV\_DUM_{it}$  = Dummy variable taking the value of 1 if the GOV score of the firm is greater median GOV (based on each year and industry), and 0 otherwise.

$CORR\_TRI_t$  = CORR pervasiveness in a country, measured by reverse-scoring the 'corruption perception index' measure from Transparency International;

$INVPRO\_FF_t$  = INVPRO score for a country from Financial Freedom Index;

$SIZE_{it}$  = Firm size in year  $t$  for firm  $i$ , measured as the natural logarithm of market value of equity;

$LEV_{it}$  = Firm leverage in year  $t$  for firm  $i$ , measured as long-term debts divided by total assets;

$ROA_{it}$  = Return on assets in year  $t$  for firm  $i$ , measured as income before extraordinary items, scaled by lagged total assets;

$RD_{it}$  = Research and development intensity in year  $t$  for firm  $i$ , measured as research and development expenses divided by net sales;

$MB_{it}$  = Market to book ratio in year  $t$  for firm  $i$ ;

$FO$  = GLOBE measure of future orientation dimension of country-level culture;

$PD$  = GLOBE measure of power distance dimension of country-level culture.

### 6.7.8 Accounting for Endogeneity

As discussed in Chapters 4 and 5, the results may be subject to endogeneity issues due to the CSR dimensions. Endogeneity may cause the estimates to be biased and inconsistent (Bhandari et al., 2018). Consistent to the approach followed in the first 2 research studies, as reported in Chapters 4 and 5, I use 2SLS estimation with instrument variables, to address endogeneity.

Following Nguyen et al. (2019), I use the median value of the independent variable, calculated for each Fama-French 48 industry grouping. Thus, I use 3 instruments for the 3 independent variables (ENV, SOC and GOV). For the independent variable ENV, I use ENV\_M as an instrument, measured as the median ENV for each Fama-French 48 industry grouping; for SOC, I use SOC\_M as an instrument, measured as the median SOC for each Fama-French 48 industry grouping; and for GOV, I use GOV\_M as an instrument, measured as the median GOV for each Fama-French 48 industry grouping.

To address endogeneity, I re-estimate the main model equations (5) and (6), using 2SLS estimation technique with the instrument variables ENV\_M, SOC\_M and GOV\_M.

## **6.8 Results and Findings**

### **6.8.1 Descriptive Statistics**

Table 6.7 shows the descriptive statistics for all the variables in the sample. Panel A shows the number of observations, mean, median, maximum and minimum values and standard deviation of the variables for the full sample; Panel B presents the descriptive statistics (that is, number of observations and mean) for the full sample by country; and Panel C shows the descriptive statistics (that is, number of observations, mean and standard deviation) for each of the two subsamples, namely Low COLL and High COLL subsamples.

**Table 6.7 Descriptive Statistics of the Key Variables (2012-2016)**

Panel A shows the summary statistics of the key variables for the full sample; Panel B shows the summary statistics for each country; and Panel C shows the summary statistics for the two subsamples, Low COLL and High COLL subsamples. EM and EM\_DD are the two alternate measures of the dependent variable. EM refers to earnings management, proxied by Discretionary accruals using the modified Jones model by Dechow et al. (1995). EM\_DD refers to alternate earnings management specification, proxied by accruals quality model by Dechow & Dichev (2002). CSR, the independent variable, is the ESG score obtained from Thomson Reuters. ENV, SOC and GOV, also independent variables, are the scores on the individual CSR dimensions (Environmental, Social and Governance dimensions respectively), obtained from Thomson Reuters. ENV\_DUM, SOC\_DUM and GOV\_DUM are the alternate measures of the CSR dimensions, measured as a dummy variable which equals 1 if the score on the dimension is greater than the median score of that dimension for each year and industry, and 0 otherwise. COLL, CORR and INVPRO are the country-level moderating variables. COLL is the GLOBE measure of institutional collectivism. CORR is the corruption pervasiveness in a country, measured by reverse-scoring the 'control of CORR' measure from World Bank's WGI database. INVPRO is the strength of INVPRO index for a country from WEF's GCI Historical Data. COLL\_H, CORR\_TRI and INVPRO\_FF are the alternate measures of the moderating variables. COLL\_H is the reverse-score of Hofstede's IDV cultural dimension. CORR\_TRI is the reverse-score of the 'corruption perception index' from Transparency International. INVPRO\_FF is the investor protection score from the Financial Freedom Index. SIZE, LEV, ROA, RD and MB are the firm-level control variables. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ROA is measured as the income before extraordinary items, scaled by lagged total assets. RD refers to R&D intensity, measured as R&D expenses divided by net sales. MB is the market to book ratio. FO and PD are the country-level control variables, representing the GLOBE measures for the cultural dimensions Future Orientation and Power Distance, respectively.

<b>Panel A: Full sample - Descriptive Statistics</b>						
	<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Std. Dev.</b>
<i>Dependent variables</i>						
EM	3,361	0.0772	0.0485	0.0002	3.0317	0.1163
EM_DD	3,355	0.0727	0.0561	0.0000	0.5893	0.0628
<i>Independent variables</i>						
CSR	3,472	0.5137	0.4898	0.0684	20.1600	0.7683
ENV	3,472	0.1611	0.1567	0.0152	0.3347	0.0764
SOC	3,472	0.1715	0.1779	0.0101	0.3497	0.0844
GOV	3,472	0.1527	0.1524	0.0088	0.2974	0.0664
ENV_DUM	2799	0.5095	1.0000	0.0000	1.0000	0.5000
SOC_DUM	2799	0.5188	1.0000	0.0000	1.0000	0.4997
GOV_DUM	2799	0.5041	1.0000	0.0000	1.0000	0.5001
<i>Moderating variables</i>						
COLL	10	0.6421	0.6465	0.5466	0.7423	0.0536
CORR	50	1.0546	1.1240	0.6480	1.4160	0.2029
INVPRO	50	0.6426	0.6350	0.4300	0.8700	0.1099
COLL_H	10	0.6950	0.7700	0.3500	0.8600	0.1659
CORR_TRI	50	0.5744	0.6000	0.3800	0.7300	0.0970
INVPRO_FF	10	0.6160	.5700	0.4300	0.8900	0.1541
<i>Control variables</i>						
SIZE	3,434	17.9349	17.4961	9.8274	24.4621	2.5538
LEV	3,466	0.1664	0.1446	0.0000	1.1478	0.1464
ROA	3,447	0.0955	0.0785	-7.1772	3.0385	0.1965
RD	3,456	0.0143	0.0000	0.0000	3.5175	0.0903
MB	3,428	2.7677	1.5500	-7.4100	43.6600	3.6877
FO	10	0.5542	0.5581	0.4110	0.6538	0.0688
PD	10	0.7461	0.7506	0.5867	0.8039	0.0631

<b>Panel B: Descriptive Statistics by country</b>																				
	Brazil		China		India		Indonesia		Malaysia		Russia		South Africa		South Korea		Taiwan		Thailand	
	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean
<i>Dependent variables</i>																				
EM	337	0.0711	590	0.0954	365	0.0931	147	0.1078	199	0.0861	156	0.0585	448	0.0568	449	0.0653	550	0.0698	120	0.0842
EM_DD	345	0.0770	582	0.0817	364	0.0742	146	0.0959	197	0.0826	155	0.0647	451	0.0530	453	0.0714	547	0.0680	115	0.0786
<i>Independent variables</i>																				
CSR	370	0.5355	610	0.3821	370	0.5300	148	0.4796	201	0.4889	159	0.4745	470	0.5440	466	0.7327	556	0.4433	122	0.5555
ENV	370	0.1777	610	0.1186	370	0.1822	148	0.1431	201	0.1523	159	0.1550	470	0.1710	466	0.1915	556	0.1535	122	0.1842
SOC	370	0.2025	610	0.1116	370	0.1916	148	0.1932	201	0.1886	159	0.1661	470	0.2116	466	0.1790	556	0.1404	122	0.2269
GOV	370	0.1554	610	0.1519	370	0.1562	148	0.1433	201	0.1480	159	0.1533	470	0.1613	466	0.1509	556	0.1493	122	0.1444
ENV_DUM	306	0.5948	476	0.2710	291	0.5876	116	0.3966	164	0.4573	128	0.2969	399	0.6115	381	0.6614	444	0.4910	94	0.7553
SOC_DUM	306	0.6765	476	0.1681	291	0.5773	116	0.5862	164	0.5854	128	0.3516	399	0.7444	381	0.6168	444	0.3941	94	0.8617
GOV_DUM	306	0.5163	476	0.5273	291	0.4777	116	0.5431	164	0.5183	128	0.5313	399	0.5489	381	0.5039	444	0.4302	94	0.4787
<i>Moderating variables</i>																				
CORR	5	1.0992	5	1.1336	5	1.1672	5	1.2136	5	0.8928	5	1.3792	5	1.0080	5	0.6912	5	1.1632	5	1.0992
INVPRO	5	0.5980	5	0.4660	5	0.6840	5	0.5820	5	0.8120	5	0.5240	5	0.7400	5	0.6660	5	0.6540	5	0.7000
CORR_TRI	5	0.5880	5	0.6160	5	0.6240	5	0.6580	5	0.5000	5	0.7180	5	0.5640	5	0.4540	5	0.3880	5	0.6340
<i>Control variables</i>																				
SIZE	359	15.575	601	16.880	366	18.616	143	23.493	201	15.765	156	19.424	468	15.748	465	22.018	554	17.549	121	17.759
LEV	370	0.2529	607	0.1540	368	0.1694	148	0.1629	201	0.2091	159	0.2340	470	0.1328	466	0.1497	555	0.1078	122	0.2618
ROA	370	0.0612	602	0.0693	365	0.1432	148	0.1871	198	0.1180	159	0.1148	466	0.1188	464	0.0683	553	0.0727	122	0.1299
RD	367	0.0022	607	0.0178	368	0.0063	148	0.0005	201	0.0009	159	0.0003	464	0.0007	466	0.0215	554	0.0446	122	0.0000
MB	365	2.9218	577	2.0613	368	4.8880	148	4.9503	200	2.9731	159	1.7180	470	2.7155	464	1.7864	556	2.0953	121	4.6498

**Panel C: Descriptive Statistics by subsamples**

	Low COLL subsample (n = 1,491)			High COLL subsample (n = 1,981)		
	N	Mean	Std. Dev.	N	Mean	Std. Dev.
<i>Dependent variables</i>						
EM	1426	0.0720	0.1186	1,935	0.0811	0.1144
EM_DD	1430	0.0675	0.0565	1,925	0.0765	0.0668
<i>Independent variables</i>						
CSR	1491	0.5320	0.1591	1,981	0.4999	1.0076
ENV	1491	0.1748	0.0713	1,981	0.1508	0.0786
SOC	1491	0.2008	0.0719	1,981	0.1494	0.0865
GOV	1491	0.1563	0.0617	1,981	0.1499	0.0696
ENV_DUM	1218	0.5796	0.4938	1,581	0.4554	0.4982
SOC_DUM	1218	0.6552	0.4755	1,581	0.4137	0.4926
GOV_DUM	1218	0.5164	0.4999	1,581	0.4946	0.5001
<i>Moderating variables</i>						
CORR	25	1.1634	0.1312	25	0.9458	0.2053
INVPRO	25	0.6492	0.0974	25	0.6360	0.1228
CORR_TRI	25	0.6256	0.0555	25	0.5232	0.1034
INVPRO_FF	5	0.6120	0.1659	5	0.6200	0.1609
<i>Control variables</i>						
SIZE	1,470	16.9757	1.9297	1,964	18.6528	2.7231
LEV	1,489	0.1931	0.1627	1,977	0.1463	0.1293
ROA	1,482	0.1109	0.2540	1,965	0.0838	0.1371
RD	1,480	0.0023	0.0079	1,976	0.0232	0.1185
MB	1,483	3.3562	4.2102	1,945	2.3190	3.1615
FO	5	0.5340	0.0866	5	0.5745	0.0462
PD	5	0.7442	0.0894	5	0.7480	0.0309

As shown in Table 6.7 Panel A, the mean value of the dependent variable for EM is 0.0720 for the full sample. The mean value for the alternate measure of the dependent variable, EM\_DD, is 0.0675, which is very close to the mean value of the primary measure EM (0.0772). The dependent variable EM is measured by discretionary accruals, using the modified Jones model by Dechow et al. (1995), while EM\_DD is measured using the accrual quality model by Dechow & Dichev (2002). The mean values for the dependent variables, EM and EM\_DD, are consistent to prior studies, based on emerging market samples, using accruals-based EM. For example, Rezaee et al. (2020) report a mean EM of 0.070 using a sample of Chinese firms. Gong & Ho (2018) and Kim et al. (2019) report mean EM of 0.060 and 0.066 respectively, both using samples of Chinese firms. Pratiwi & Siregar, (2019) report mean EM of 0.0632 using a sample of Indonesian firms. Cho and Chun (2015), Choi et al. (2018) and Chun and Cho (2017) report mean EM of 0.0570, 0.0550 and 0.0530 respectively, using samples of Korean firms.

The mean value of the independent variable, CSR, is 0.5137, indicating that firms in emerging market countries score 51% on their CSR performance, on average. This is close to the mean CSR reported in Chapters 4 and 5 (0.5264 and 0.5260 respectively). The mean CSR is also consistent to prior studies using emerging market samples. For example, Buertey et al. (2020) report mean CSR of 53.53% using a sample of South African firms. Cho and Chun (2017) report mean CSR of 45.29% using a sample of Korean firms. The mean values of the CSR dimensions, ENV, SOC and GOC are 0.1611, 0.1715 and 0.1527 respectively, suggesting a consistent performance on each CSR dimension, albeit a slightly higher performance in SOC initiatives in emerging market countries. The mean values of the alternate measure of ENV, SOC and GOV, that is ENV\_DUM, SOC\_DUM and GOV\_DUM, are 0.5095, 0.5188 and 0.5041 respectively. This also suggests consistent performance on each CSR dimension, with a slightly higher performance in SOC initiatives within emerging market countries.

The country-level moderating variables, COLL, and COLL\_H have mean values of 0.6421 and 0.6950 respectively. COLL is based on the institutional collectivism score from the GLOBE study, while COLL\_H is based on Hofstede's IDV-COLL cultural dimension score. This is consistent to anticipation, as emerging market countries (specifically Asian countries) are generally characterized as having COLL culture (for example, see Lyu et al., 2016).

CORR and CORR\_TRI have mean values of 1.0546 and 0.5744 respectively. CORR is measured by reverse-scoring the 'control of corruption' index from World Banks WGI data. The mean value of

CORR (1.0546) is consistent to Lewellyn and Bao (2017), reporting a mean CORR of 1.10. CORR\_TRI is measured by reverse-scoring the 'corruption perception index' from Transparency International. The mean value of CORR\_TRI (0.5744) being above 50% indicates higher CORR on average. This is consistent to the anticipation that emerging market countries have higher CORR pervasiveness (for example, see Lourenço et al., 2018; Riahi-Belkaoui, 2003, 2004).

INVPRO and INVPRO\_FF have mean values of 0.6426 and 0.6160 respectively, suggesting an average score of 62 to 64% on the strength of INVPRO. This is close to Persakis & Iatridis (2016) reporting a mean value of 7.3 out of 10 on the strength of INVPRO on a sample of 18 countries. The lower average INVPRO is consistent to the expectation that emerging market countries are generally characterized as having weaker INVPRO in comparison to developed countries (for example, see DeFond, 2010; Leuz et al., 2003).

The firm-level control variables SIZE and LEV have mean values of 17.9349 and 0.1664 respectively, while ROA, RD and MB have mean values of 0.0955, 0.0143 and 2.7677 respectively. The country-level control variables, FO and PD, have mean values of 0.5646 and 0.7349, respectively.

Table 6.6 Panel B shows the number of observations and mean values for the variables for each of the 10 emerging market countries used in the sample for the present study. The table excludes the variables COLL, COLL\_H and INVPRO\_F, as these are static country-level data, hence country-averages cannot be calculated. As shown in the table, Indonesia has the highest average EM (mean EM = 0.1078; mean EM\_DD = 0.0959), while South Africa has the lowest average EM (mean EM = 0.0568; mean EM\_DD = 0.0530). Thailand has the highest average performance on overall CSR (mean CSR = 0.5555) and the SOC dimension of CSR (mean SOC = 0.2269), but the lowest average performance on the GOV dimension (mean GOV = 0.1493). South Korea has the highest average performance on ENV initiatives (mean ENV = 0.1915), while South Africa has the highest average performance on GOV initiatives (mean GOV = 0.1613). China has the lowest average performance on overall CSR (mean CSR = 0.3821) and on the ENV and SOC dimensions of CSR (mean ENV = 0.1186; mean SOC = 0.1116). Based on the 'control of corruption' index from the World Bank's WGI data, India has the highest average CORR pervasiveness (mean CORR = 1.1672), while South Korea has the lowest CORR pervasiveness (mean CORR = 0.6912). However, based on the 'corruption perception' index from Transparency International, Russia has the highest CORR pervasiveness (mean CORR\_TRI = 0.7180), while Taiwan has the lowest CORR pervasiveness (mean CORR\_TRI = 0.3880). Malaysia has a highest average strength of INVPRO (mean INVPRO = 0.3880), while China

has the lowest average INVPRO (mean INVPRO = 0.8120).

Table 6.6 Panel C shows the number of observations, mean values and standard deviations for the variables for the two subsamples – Low COLL and High COLL subsamples. The subsamples are formed by splitting the full sample at the median COLL. COLL is based on the institutional COLL score from the GLOBE study. The Low COLL subsample has 1,491 firm-year observations, and includes the countries Brazil, India, Russia, South Africa and Thailand; the high COLL subsample has 1,981 firm-year observations and includes the countries China, Indonesia, Malaysia, South Korea and Taiwan. As anticipated, average EM is greater in high COLL countries (mean EM = 0.0811; mean EM\_DD = 0.0765) in comparison to low COLL countries (mean EM = 0.0720; mean EM\_DD = 0.0675). CSR performance is greater in low COLL countries (mean CSR = 0.5320; mean ENV = 0.1748; mean SOC = 0.2008; mean GOV = 0.1563) in comparison to high COLL countries (mean CSR = 0.4999; mean ENV = 0.1508; mean SOC = 0.1494; mean GOV = 0.1499). Contrary to expectations, CORR is higher in low COLL countries (mean CORR = 1.1634; mean CORR\_TRI = 0.6256) in comparison to high COLL countries (mean CORR = 0.9458; mean CORR\_TRI = 0.5232). There is not much difference in the strength of INVPRO between low COLL countries (mean INVPRO = 0.6492; mean INVPRO\_FF = 0.6120) and high COLL countries (mean INVPRO = 0.6360; mean INVPRO\_FF = 0.6200).

### **6.8.2 Correlation**

Table 6.8 illustrates the correlation matrix showing the Pearson's correlation coefficients among the main variables for this study. The main dependent variable, EM, is negatively correlated with CSR (-0.0288) at the 10% level of significance, and with ENV (-0.0765) at the 1% level of significance. The other CSR dimensions (ENV and SOC) and the alternate measures of the CSR dimensions (ENV\_DUM, SOC\_DUM and GOV\_DUM) do not have statistically significant correlations with EM. The alternate measure of the dependent variable, EM\_DD, is also negatively correlated with CSR (-0.0414) at the 5% level of significance. EM\_DD has negative and significant correlations with the CSR dimensions ENV (-0.1079) and SOC (-0.0869), as well as with the alternate measures ENV\_DUM (-0.1156) and SOC DUM (-0.1047), at the 1% level of significance.

The moderating variable COLL does not have a statistically significant correlation with EM or EM\_DD. COLL has a positive correlation with CSR (0.0379) at the 5% level of significance, but negative correlations with the CSR dimensions ENV (-0.0425) and ENV\_DUM (-0.0451) at the 5% level of significance, and with SOC (-0.1868) and SOC\_DUM (-0.1383) at the 1% level of significance.

However, COLL does not have statistically significant correlations with GOV or GOV\_DUM. The alternate measure COLL\_H has positive and significant correlations with both EM (0.0507) and EM\_DD (0.1067) at the 1% level of significance. COLL\_H has negative and significant correlations with the CSR dimensions ENV (-0.1131), SOC (-0.2595), GOV (-0.0638), ENV\_DUM (-0.0981), SOC\_DUM (-0.2123) at the 1% level of significance, and with GOV\_DUM (-0.0336) at the 10% level of significance. However, COLL\_H does not have a statistically significant correlation with overall CSR.

The moderating variable CORR has positive and significant correlations with both EM (0.0536) and EM\_DD (0.0455) at the 1% level of significance. CORR has negative and significant correlations with CSR (-0.0388) and ENV (-0.0754) at the 5% and 1% level of significance respectively, positive correlation with SOC (0.0502) at the 1% level of significance, but no statistically significant correlation with GOV. CORR has negative and significant correlations with the alternate measures of the CSR dimensions ENV\_DUM (-0.0988) and SOC\_DUM (-0.0351) at the 1% and 10% level of significance respectively, but a positive correlation with GOV\_DUM (0.0470) at the 5% level of significance. The alternate measure CORR\_TRI also has positive and significant correlations with both EM (0.0572) and EM\_DD (0.0442) at the 1% level of significance. CORR\_TRI has negative and significant correlations with CSR (-0.0350), ENV (-0.0698) and SOC (0.0622) at the 1% level of significance, but no statistically significant correlation with GOV.

CORR\_TRI has a negative correlation with ENV\_DUM (-0.0905) at the 1% level of significance, a positive correlation with GOV\_DUM (0.0512) at the 1% level of significance, but no statistically significant correlation with SOC\_DUM.

The moderating variable INVPRO has negative and significant correlations with both EM (-0.0719) and EM\_DD (-0.0850) at the 1% level of significance. INVPRO has a positive correlation with CSR (0.0607) at the 1% level of significance. INVPRO also has positive and significant correlations with the CSR dimensions ENV (0.1916) and SOC (0.2722), and their alternate measures ENV\_DUM (0.1767) and SOC\_DUM (0.2632) at the 1% level of significance, but no significant correlation with GOV or GOV\_DUM. The alternate measure INVPRO\_FF has a negative correlation with EM (-0.0413) at the 5% level of significance, and with EM\_DD (-0.0682) at the 1% level of significance. INVPRO\_FF has a positive correlation with CSR (0.0288) at the 10% level of significance. INVPRO\_FF has positive and significant correlations with the CSR dimensions ENV (0.0965), SOC (0.2394), ENV\_DUM (0.1344) and SOC\_DUM (0.2458) at the 1% level of significance, but no significant correlation with

GOV or GOV\_DUM.

The control variable SIZE does not have a statistically significant correlation with either EM or EM\_DD. SIZE has positive and significant correlations, at the 1% level of significance, with overall CSR (0.1002), with the three CSR dimensions - ENV (0.2226), SOC (0.1268) and GOV (0.0460), and with the alternate measures of the CSR dimensions – ENV\_DUM (0.1391) and SOC\_DUM (0.0954). SIZE also has a positive correlation with GOV\_DUM (0.0471), but at the 5% level of significance. SIZE has positive and significant correlations with the collectivism measures – COLL (0.5202) and COLL\_H (0.4049) at the 1% level of significance. SIZE has negative and significant correlations with the corruption measures – CORR (-0.0920) and CORR\_TRI (-0.0892), and the investor protection measures – INVPRO (-0.0482) and INVPRO\_FF (-0.2425), at the 1% level of significance.

The control variable ROA has a positive correlation with EM (0.0298), but a negative correlation with EM\_DD (-0.0300) at the 10% level of significance. ROA has positive and significant correlations with SOC (0.0632) and GOV (0.0287) at the 1% and 10% level of significance respectively, and with SOC\_DUM (0.0319) and GOV\_DUM (0.0570) at the 10% and 1% level of significance respectively. However, ROA does not have significant correlations with CSR, ENV or ENV\_DUM. ROA has negative correlations with COLL (-0.0341) at the 5% level of significance, and COLL\_H (-0.0709) at the 1% level of significance. ROA has positive and significant correlations with CORR (0.0773), CORR\_TRI (0.0773), INVPRO (0.0699) and INVPRO\_FF (0.0732) at the 1% level of significance.

The control variable RD has a positive correlation with EM\_DD (0.0886) at the 1% level of significance, but no significant correlation with EM. RD has negative and significant correlations with SOC (-0.0513) and SOC\_DUM (-0.0968) at the 1% level of significance, and with ENV\_DUM (-0.0476) at the 5% level of significance, but no significant correlation with CSR, ENV, GOV or GOV\_DUM. RD has positive correlations with COLL (0.0710) and COLL\_H (0.1037) at the 1% level of significance. RD has negative and significant correlations with CORR (-0.1312) and CORR\_TRI (-0.1309) at the 1% level of significance, and with INVPRO\_FF (-0.0376) at the 5% level of significance, but no significant correlation with INVPRO.

The control variable MB has positive correlations with both EM (0.0738) and EM\_DD (0.0623) at the 1% level of significance, and also with the social CSR dimension measures – SOC (0.0430) and SOC\_DUM (0.0482) at the 5% level of significance. MB does not have statistically significant correlations with the overall CSR, with the ENV and GOV dimensions, or the alternate measures ENV\_DUM and GOV\_DUM. MB has negative correlations with COLL (-0.1470) at the 5% level of

significance, and COLL\_H (-0.0878) at the 1% level of significance. MB has positive and significant correlations with CORR (0.1253), CORR\_TRI (0.1280), INVPRO (0.0818) and INVPRO\_FF (0.0607) at the 1% level of significance.

The country-level control variable FO has a negative correlation with EM\_DD (-0.0421) at the 5% level of significance, but no significant correlation with EM. FO has positive and significant correlations with ENV (0.0776), SOC (0.1445), ENV\_DUM (0.1138) and SOC\_DUM (0.1669) at the 1% level of significance, but no significant correlation with CSR, GOV or GOV\_DUM. FO has positive and significant correlations with COLL (0.0917), INVPRO (0.6504) and INVPRO\_FF (0.7078) at the 1% level of significance, and negative and significant correlations with COLL\_H (-0.3933), CORR (-0.4071) and CORR\_TRI (-0.3692) at the 1% level of significance.

The country-level control variable PD has a positive correlation with EM (0.0382) at the 5% level of significance, and with EM\_DD (0.0921) at the 1% level of significance. PD has positive and significant correlations with CSR (0.0353) at the 5% level of significance, and with ENV (0.0730) at the 1% level of significance. PD has positive and significant correlations with SOC (-0.0530) and SOC\_DUM (-0.0588) at the 1% level of significance, and GOV (-0.0435) and GOV\_DUM (-0.0346) at the 5% and 10% level of significance respectively.

PD has positive correlations with COLL (0.0758) and COLL\_H (0.6254) at the 1% level of significance. PD has negative and significant correlations with INVPRO (-0.1831), INVPRO\_FF (-0.4983) and CORR\_TRI (-0.0577) at the 1% level of significance, but no significant correlation with CORR.

The correlation matrix shows that several of the independent variables are correlated with other. Furthermore, the country-level variables are also correlated to each other. However, the Variation Inflation Factor (VIF) results, as discussed in the next section, suggest that there is no multicollinearity issues in the research models.

**Table 6.8 Correlation Matrix**

The table presents the Pearson's correlation matrix between the key variables. EM and EM\_DD are the two alternate measures of the dependent variable. EM refers to earnings management, proxied by Discretionary accruals using the modified Jones model by Dechow et al. (1995). EM\_DD refers to alternate earnings management specification, proxied by accruals quality model by Dechow & Dichev (2002). CSR, the independent variable, is the ESG score obtained from Thomson Reuters. ENV, SOC and GOV, also independent variables, are the scores on the individual CSR dimensions (Environmental, Social and Governance dimensions respectively), obtained from Thomson Reuters. ENV\_DUM, SOC\_DUM and GOV\_DUM are the alternate measures of the CSR dimensions, measured as a dummy variable which equals 1 if the score on the dimension is greater than the median score of that dimension for each year and industry, and 0 otherwise. COLL, CORR and INVPRO are the country-level moderating variables. COLL is the GLOBE measure of institutional collectivism. CORR is the corruption pervasiveness in a country, measured by reverse-scoring the 'control of CORR' measure from World Bank's WGI database. INVPRO is the strength of INVPRO index for a country from WEF's GCI Historical Data. COLL\_H, CORR\_TRI and INVPRO\_FF are the alternate measures of the moderating variables. COLL\_H is the reverse-score of Hofstede's IDV cultural dimension. CORR\_TRI is the reverse-score of the 'corruption perception index' from Transparency International. INVPRO\_FF is the investor protection score from the Financial Freedom Index. SIZE, LEV, ROA, RD and MB are the firm-level control variables. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ROA is measured as the income before extraordinary items, scaled by lagged total assets. RD refers to R&D intensity, measured as R&D expenses divided by net sales. MB is the market to book ratio. FO and PD are the country-level control variables, representing the GLOBE measures for the cultural dimensions Future Orientation and Power Distance, respectively.

		1	2	3	4	5	6	7	8	9	10	11
1	EM	1										
2	EM_DD	0.3197***	1									
3	CSR	-0.0288*	-0.0414**	1								
4	ENV	-0.0765***	-0.1079***	0.2116***	1							
5	SOC	-0.0215	-0.0869***	0.2150***	0.7284***	1						
6	GOV	-0.0220	-0.0268	0.1368***	0.3556***	0.3734***	1					
7	ENV_DUM	-0.0240	-0.1156***	0.1753***	0.7254***	0.5517***	0.2767***	1				
8	SOC_DUM	-0.0124	-0.1047***	0.1622***	0.5675***	0.7563***	0.2667***	0.5425***	1			
9	GOV_DUM	-0.0165	-0.0019	0.0721***	0.2241***	0.2514***	0.6810***	0.2046***	0.2103***	1		
10	COLL	-0.0045	-0.0043	0.0379**	-0.0425**	-0.1868***	-0.0157	-0.0451**	-0.1383***	0.0004	1	
11	CORR	0.0536***	0.0455***	-0.0388**	-0.0754***	0.0502***	0.0162	-0.0988***	-0.0351*	0.0470**	-0.4046***	1
12	INVPRO	-0.0719***	-0.0850***	0.0607***	0.1916***	0.2722***	0.0083	0.1767***	0.2632***	-0.006	-0.0616***	-0.3569***
13	COLL_H	0.0507***	0.1067***	-0.0166	-0.1131***	-0.2595***	-0.0638***	-0.0981***	-0.2123***	-0.0336*	0.4020***	-0.3434***
14	CORR_TRI	0.0572***	0.0442***	-0.0350***	-0.0698***	0.0622***	0.0166	-0.0905***	-0.0186	0.0512***	-0.3723***	0.9832***
15	INVPRO_FF	-0.0413**	-0.0682***	0.0288*	0.0965***	0.2394***	0.0103	0.1344***	0.2458***	0.0057	-0.0362**	-0.3201***
16	SIZE	-0.0148	-0.0232	0.1002***	0.2226***	0.1268***	0.0460***	0.1391***	0.0954***	0.0471**	0.5202***	-0.0920***
17	LEV	-0.0605***	-0.1093***	0.0373**	0.0851***	0.1221***	0.0381**	0.0418**	0.0510***	0.0401**	-0.1976***	0.1844***
18	ROA	0.0298*	-0.0300*	0.0028	0.0264	0.0632***	0.0287*	0.0294	0.0319*	0.0570***	-0.0341**	0.0773***
19	RD	0.0251	0.0886***	-0.0043	0.0152	-0.0513***	0.0184	-0.0476**	-0.0968***	0.0221	0.0710***	-0.1312***
20	MB	0.0738***	0.0623***	-0.0159	-0.0100	0.0430**	-0.0227	0.0164	0.0482**	0.0212	-0.1470***	0.1253***
21	FO	-0.0088	-0.0421**	0.0276	0.0776***	0.1445***	0.0241	0.1138***	0.1669***	0.0030	0.0917***	-0.4071***
22	PD	0.0382**	0.0921***	0.0353**	0.0730***	-0.0530***	-0.0435**	0.0133	-0.0588***	-0.0346*	0.0758***	-0.0112

		12	13	14	15	16	17	18	19	20	21	22
12	INVPRO	1										
13	COLL_H	-0.3854***	1									
14	CORR_TRI	-0.3554***	-0.3630***	1								
15	INVPRO_FF	0.7847***	-0.3966***	-0.2803***	1							
16	SIZE	-0.0482***	0.4049***	-0.0892***	-0.2425***	1						
17	LEV	-0.0308*	-0.0312*	0.1814***	-0.0459***	-0.0005	1					
18	ROA	0.0699***	-0.0709***	0.0773***	0.0732***	-0.0131	-0.1038***	1.0000				
19	RD	-0.0110	0.1037***	-0.1309***	-0.0376**	-0.0075	-0.0860***	-0.0536***	1			
20	MB	0.0818***	-0.0878***	0.1280***	0.0607***	-0.1359***	-0.1064***	0.3135***	0.0358**	1		
21	FO	0.6504***	-0.3933***	-0.3692***	0.7078***	-0.2189***	-0.1221***	0.0400**	-0.0119	0.0660***	1	
22	PD	-0.1831***	0.6254***	-0.0577***	-0.4983***	0.5055***	0.1234***	-0.0286*	0.0348**	0.0286*	-0.4755***	1

\*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively

### **6.8.3 Test of Multicollinearity**

As discussed in previous chapters, to test for multicollinearity problems that may arise due to the existence of a strong linear relationship between two or more independent variables, I use the variation inflation factor (VIF). To interpret the VIF results, I use the general rule of thumb that a VIF value of 10 or above indicates the existence of multicollinearity (see Takezawa, 2014). The variables used in the present study do not appear to suffer from significant multicollinearity problems as evident through variation inflation factors (VIF) values being far below the threshold of 10 for all regression models. Table 6.9 shows the results of the VIF analysis of all regression models used in the present study.

Columns (1) and (2) of Table 6.9 present the VIF results of the base model equations (4) and (4b) respectively. Equation (4a) has a mean VIF of 1.42 (the values ranging from 1.02 to 2.33); equation (4b) has a mean VIF of 1.55 (the values ranging from 1.04 to 2.39). Columns (3) to (4) present the VIF results of the main model equations (5) and (6) respectively. Equation (5) has a mean VIF of 2.45 (the values ranging from 1.05 to 7.90); equation (6) has a mean VIF of 1.83 (the values ranging from 1.05 to 3.12). Column (5) presents the VIF results of the equation (7), estimated for robustness check. Equation (7) has a mean VIF of 1.89 (the values ranging from 1.05 to 3.41). Column (6) presents the VIF results of the equation (8), estimated as part of the sensitivity analysis. Equation (8) has a mean VIF of 2.25 (the values ranging from 1.08 to 5.69). Thus, the VIF values being far below the general threshold of 10 suggests that the variables do not suffer from multicollinearity issues.

**Table 6.9 Variation Inflation Factor (VIF) Results**

The table reports the results of the multicollinearity tests based on estimating the variation inflation factor (VIF). Columns (1) and (2) present the VIF results for equations (4a) and (4b) respectively; Columns (3) and (4) present the VIF results for equations (5) and (6) respectively; and Columns (5) and (6) present the VIF results for equations (7) and (8) respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). EM\_DD refers to alternate earnings management specification, proxied by accruals quality model by Dechow & Dichev (2002). CSR, the independent variable, is the ESG score obtained from Thomson Reuters. ENV, SOC and GOV, also independent variables, are the scores on the individual CSR dimensions (Environmental, Social and Governance dimensions respectively), obtained from Thomson Reuters. COLL, CORR and INVPRO are the country-level moderating variables. COLL is the GLOBE measure of institutional collectivism. CORR is the corruption pervasiveness in a country, measured by reverse-scoring the 'control of CORR' measure from World Bank's WGI database. INVPRO is the strength of INVPRO index for a country from WEF's GCI Historical Data. ENV\_DUM, SOC\_DUM and GOV\_DUM are the alternate measures of the CSR dimensions, measured as a dummy variable which equals 1 if the score on the dimension is greater than the median score of that dimension for each year and industry, and 0 otherwise. COLL, CORR and INVPRO are the country-level moderating variables. COLL is the GLOBE measure of institutional collectivism. CORR\_TRI and INVPRO\_FF are the alternate measures of the moderating variables. CORR\_TRI is the reverse-score of the 'corruption perception index' from Transparency International. INVPRO\_FF is the investor protection score from the Financial Freedom Index. SIZE, LEV, ROA, RD and MB are the firm-level control variables. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ROA is measured as the income before extraordinary items, scaled by lagged total assets. RD refers to R&D intensity, measured as R&D expenses divided by net sales. MB is the market to book ratio. FO and PD are the country-level control variables, representing the GLOBE measures for the cultural dimensions Future Orientation and Power Distance, respectively. Industry dummies include a set of dummy variables to capture industry effects, based on Fama-French 12 industry classification.

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Independent variables</i>	Eq (4a)	Eq (4b)	Eq (5)	Eq (6)	Eq (7)	Eq (8)
CSR	1.02					
ENV		2.31	3.01	2.34	2.5	
SOC		2.31	3.12	2.41	2.53	
GOV		1.27	1.65	1.35	1.44	
COLL			1.47	1.16		
ENV x COLL			3.31	2.58		
SOC x COLL			4.12	2.92		
GOV x COLL			2.05	1.54		
CORR			2.28		1.7	
ENV x CORR			3.9		3.22	
SOC x CORR			4.09		3.41	
GOV x CORR			2.12		1.8	
COLL x CORR			2.34			
ENV x COLL x CORR			5.72			
SOC x COLL x CORR			7.19			
GOV x COLL x CORR			3.09			
INVPRO				2.23	1.84	
ENV x INVPRO				2.31	2.19	
SOC x INVPRO				2.39	2.28	
GOV x INVPRO				1.49	1.3	
COLL x INVPRO				1.44		
ENV x COLL x INVPRO				2.9		
SOC x COLL x INVPRO				3.12		
GOV x COLL x INVPRO				1.73		
ENV_DUM						1.57
SOC_DUM						1.65
GOV_DUM						1.18
CORR_TRI						3.75
ENV_DUM x CORR_TRI						3.85
SOC_DUM x CORR_TRI						3.58
GOV_DUM x CORR_TRI						2.52
INVPRO_FF						5.69
ENV_DUM x INVPRO_FF						2.9
SOC_DUM x INVPRO_FF						3.41
GOV_DUM x INVPRO_FF						2.46
SIZE	1.28	1.51	1.56	1.55	1.54	1.44
LEV	1.14	1.14	1.15	1.14	1.15	1.15
ROA	1.26	1.26	1.27	1.27	1.27	1.26
RD	1.04	1.04	1.05	1.05	1.05	1.25
MB	1.43	1.45	1.47	1.47	1.46	1.46
FO	1.35	1.35	1.77	2.46	2.62	2.56

PD	1.35	1.35	2.03	1.53	1.48	1.79
<i>Industry dummies</i>						
Dum 1	1.38	1.39	1.47	1.4	1.44	1.58
Dum 2	1.06					
Dum 3	1.53	1.56	1.87	1.6	1.86	1.99
Dum 4	1.46	1.49	1.76	1.54	1.72	1.73
Dum 5	2.03	2.05	2.49	2.07	2.42	2.68
Dum 6	1.59	1.62	1.81	1.64	1.77	1.9
Dum 7	2.33	2.39	2.87	2.43	2.8	3.14
Dum 8	1.6	1.63	1.86	1.65	1.79	1.98
Dum 9	1.05	1.06	1.12	1.07	1.11	1.1
Dum 10	1.77	1.78	2.17	1.84	2.14	2.36
<b>Mean VIF</b>	1.42	1.55	2.45	1.83	1.89	2.25

#### **6.8.4 Base Model Results of Estimation of Equations (4a) and (4b)**

Table 6.10 presents the results of the base model analysis based on estimation of equations (4a) and (4b), using HLM method, testing the unconditional relationships between CSR and EM, and between the CSR dimensions (ENV, SOC and GOV) and EM. Table 6.10 Column (1) presents the results from estimating equation (4a), while Column (2) presents the results from estimating equation (4b).

**Table 6.10 HLM Estimation Output of Equations (4a) and (4b)**

The table presents the estimation results of equations (4a) and (4b) in Columns (1) and (2) respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). CSR is the firm-level ESG score obtained from Thomson Reuters. ENV, SOC and GOV are the firm-level scores on the environmental, social and governance dimensions of ESG, obtained from Thomson Reuters. The firm level control variables include SIZE, LEV, ROA, RD and MB, and dummy variable to capture industry effects (based on Fama-French 12 industry classification). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ROA is measured as the income before extraordinary items, scaled by lagged total assets. RD refers to R&D intensity, measured as R&D expenses divided by net sales. MB is the market to book ratio. All firm level independent and control variables are centered using group mean centering. The country level control variables include PD and FO, that represent the GLOBE measures of the cultural dimensions of power distance and future orientation respectively. All country level variables are centered using grand mean centering method. Standard errors are shown in parenthesis.

Variables	(1) EM (Equation 4a)	(2) EM (Equation 4b)
CONSTANT	0.0990*** (0.0081)	0.0978*** (0.0081)
<i>Firm level</i>		
CSR	-0.0018 (0.0025)	
ENV		-0.1688*** (0.0400)
SOC		0.1205*** (0.0379)
GOV		0.0007 (0.0325)
SIZE	-0.0038* (0.0021)	-0.0024 (0.0023)
LEV	-0.0310** (0.0150)	-0.0308** (0.0150)
ROA	0.0588*** (0.0168)	0.0581*** (0.0168)
RD	0.0221 (0.0216)	0.0272 (0.0215)
MB	0.0003 (0.0007)	0.0004 (0.0007)
Industry effects	Yes	Yes
<i>Country level</i>		
FO	0.1109 (0.0960)	0.1114 (0.0949)
PD	0.1307 (0.0988)	0.1288 (0.0976)
Wald $\chi^2$	88.81	107.03
N	3,286	3,286

\*\*\*, \*\*, and \* indicate statistical significance at the 1%, 5%, and 10% levels, respectively

As shown in Column (1), the equation (4a) is based on 3,286 firm-year observations, owing to missing variables. The Wald chi-square is 88.81. The result shows that CSR does not have a statistically significant relationship with EM ( $\alpha_1 = -0.0018$ ). The firm level control variables SIZE

( $\alpha_2 = -0.0038$ ;  $p < 0.10$ ) and LEV ( $\alpha_3 = -0.0310$ ;  $p < 0.05$ ) have negative relationships with EM, significant at the 10% and 5% level of significance respectively. ROA ( $\alpha_4 = 0.0588$ ;  $p < 0.05$ ) has a positive relationship with EM, significant at the 5% level of significance. However, RD ( $\alpha_5 = 0.0221$ ) and MB ( $\alpha_6 = 0.0003$ ) do not have statistically significant relationships with EM. The country level control variables FO ( $\alpha_7 = 0.1109$ ) and PO ( $\alpha_8 = 0.1307$ ) also do not have statistically significant relationships with EM.

As shown in Column (2), equation (4b) is also based on 3,286 firm-year observations. The Wald chi-square is 107.03. The results show that there is a negative relationship between ENV ( $\alpha_1 = -0.1688$ ;  $p < 0.01$ ) and EM at the 1% level of significance. The result is consistent with the myopia avoidance hypothesis, providing support for hypothesis H3.1b, suggesting that managers involved in environmental initiatives are less likely to manage earnings. In contrast, the results show a positive relationship between SOC ( $\alpha_2 = 0.1205$ ;  $p < 0.01$ ) and EM at the 1% level of significance. This provides support for hypothesis H3.1a and is consistent with the managerial myopia hypothesis. The result suggests that managers involved on social initiatives are more likely to manage earnings. GOV ( $\alpha_3 = 0.0007$ ) does not have a statistically significant relationship with EM. The mixed results relating to the CSR dimensions explain why I did not find a statistically significant relationship between overall CSR and EM from estimating equation (4a). Since one dimension (ENV) has a negative effect on EM, and another dimension (SOC) has a positive effect on EM, the overall effect of CSR and EM is not significant.

In terms of the firm-level control variables, LEV ( $\alpha_5 = -0.0308$ ;  $p < 0.01$ ) has a negative and significant relationship with EM at the 5% level of significance, while ROA ( $\alpha_6 = 0.0581$ ;  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance. However, the other control variables (SIZE, RD, MB, FO and PD) do not have statistically significant relationships with EM.

### **6.8.5 Main Model Results of Estimation of Equation (5)**

Based on the base model results discussed above, the study suggests that there is no statistically significant relationship between overall CSR and EM, but there are statistically significant relationships between the CSR dimensions (specifically, ENV and SOC) and EM. Thus, in the main models, I use the CSR dimensions (ENV, SOC and GOV) as the independent

variables, instead of using overall CSR.

Table 6.11 presents the results of the first main analysis model, based on the estimation of equation (5), using the HLM method, testing the relationship between the three CSR dimensions and EM, and the *individual* and *joint* moderating effects of COLL and CORR. Table 6.11 Column (1) presents the regression coefficients, while Columns (2) and (3) present the standard errors and p-values respectively, from estimating equation (5). Equation (5) is based on 3,286 firm-year observations. The Wald chi-square is 163.45.

**Table 6.11 HLM Estimation Output of Equation (5)**

The table presents the estimation results of equation (5), estimated using HLM. Column (1) presents the regression coefficients, while Columns (2) and (3) present the standard errors and p-values respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). ENV, SOC and GOV are the firm-level scores on the environmental, social and governance dimensions of ESG, obtained from Thomson Reuters. COLL and CORR are the country-level moderator variables. COLL is the country-level moderator variable, representing the GLOBE measure of institutional COLL cultural dimension. CORR represents the level of CORR pervasiveness, measured as the reverse-score of control of CORR index from World Bank WGI database. The firm level control variables include SIZE, LEV, ROA, RD and MB, and dummy variable to capture industry effects (based on Fama-French 12 industry classification. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ROA is measured as the income before extraordinary items, scaled by lagged total assets. RD refers to R&D intensity, measured as R&D expenses divided by net sales. MB is the market to book ratio. All firm level independent and control variables are centered using group mean centering. The country level control variables include PD and FO, that represent the GLOBE measures of the cultural dimensions of power distance and future orientation respectively. All country level variables are centered using grand mean centering method.

Variables	(1)	(2)	(3)
	EM (coefficient)	Std error	p-value
CONSTANT	0.1040	0.0064	0.0000
<i>Firm level – independent variables</i>			
ENV	-0.2095	0.0457	0.0000
SOC	0.1632	0.0440	0.0000
GOV	-0.0177	0.0369	0.6310
<i>Country level – moderating variables</i>			
CORR	0.0542	0.0144	0.0000
COLL	0.0918	0.0448	0.0400
<i>Interactions</i>			
ENV x CORR	-0.1479	0.2334	0.5260
SOC x CORR	0.0764	0.2179	0.7260
GOV x CORR	0.1087	0.1860	0.5590
ENV x COLL	-1.5715	0.8578	0.0670
SOC x COLL	2.6161	0.8541	0.0020
GOV x COLL	-0.7079	0.7630	0.3530
COLL x CORR	1.1303	0.3220	0.0000
ENV x COLL x CORR	-9.5142	5.3722	0.0770
SOC x COLL x CORR	13.5364	5.1980	0.0090
GOV x COLL x CORR	-7.0848	4.4661	0.1130
<i>Firm level – control variables</i>			
SIZE	-0.0015	0.0023	0.5040
LEV	-0.0309	0.0150	0.0390
ROA	0.0547	0.0168	0.0010
RD	0.0273	0.0216	0.2070
MB	0.0004	0.0007	0.5830
Industry effects	Yes		
<i>Country level – control variables</i>			
FO	0.2327	0.0495	0.0000
PD	0.2367	0.0420	0.0000
Wald $\chi^2$	163.45		
N	3,286		

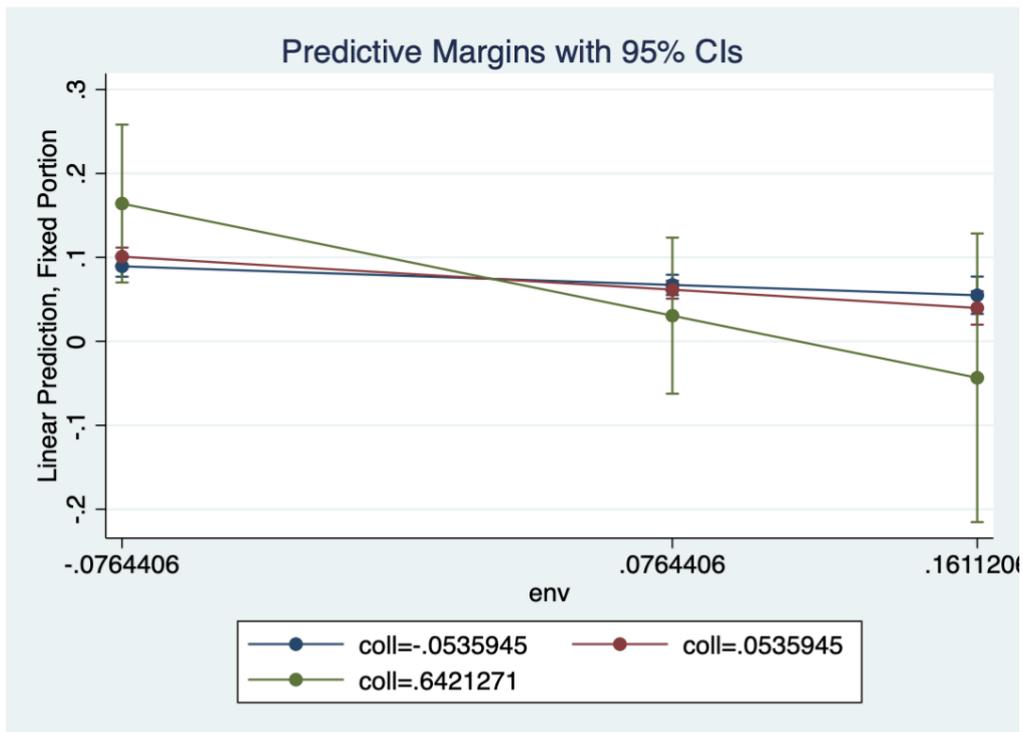
### ***Hypothesis H3.2 and H3.3 test results***

Column (1) shows a negative relationship between ENV ( $\alpha_1 = -0.2095$ ;  $p < 0.01$ ) and EM at the 1% level of significance, and a positive relationship between SOC ( $\alpha_2 = 0.1632$ ;  $p < 0.01$ ) and EM at the 1% level of significance, but no statistically significant relationship between GOV ( $\alpha_3 = -0.0177$ ) and EM. The results are consistent with the base model analysis.

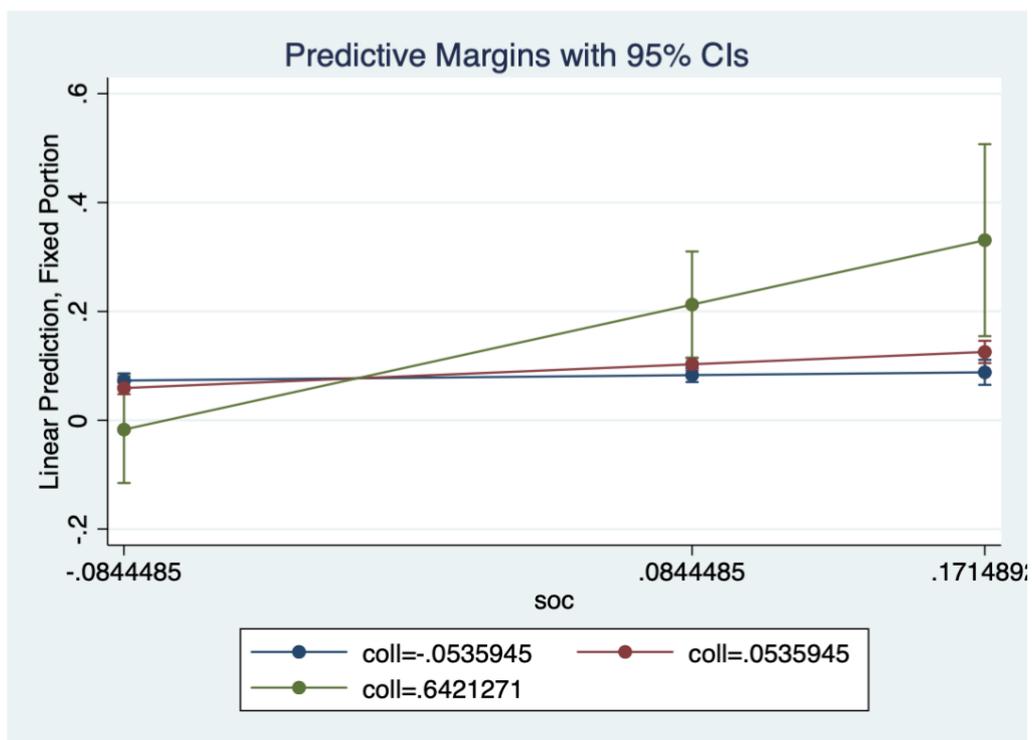
The country level variable COLL ( $\alpha_5 = 0.0918$ ;  $p < 0.05$ ) has a positive relationship with EM at the 5% level of significance. Thus, the result provides support for hypothesis H3.2. Consistent with the informal institutions perspective of the institutional theory, the result suggests that EM is more prevalent in countries with high institutional COLL.

The interaction of COLL with ENV, that is, ENV x COLL ( $\alpha_9 = -1.5715$ ,  $p < 0.10$ ), has a negative effect on EM at the 10% level of significance. This suggests that COLL has a moderating (strengthening) effect on the negative relationship between ENV and EM. SOC x COLL ( $\alpha_{10} = 2.6161$ ,  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance, suggesting that COLL has a moderating (strengthening) effect on the positive relationship between SOC and EM. However, GOV x COLL ( $\alpha_{11} = -0.7079$ ) does not have a statistically significant relationship with EM. The results suggest that the relationship between CSR and EM is exacerbated by institutional COLL. In countries with high institutional COLL, the negative relationship between ENV and EM becomes more pronounced, while the positive relationship between SOC and EM also becomes more pronounced. This provides partial support for hypothesis H3.3, suggesting that COLL, *individually*, strengthens the relationship between the CSR dimensions (ENV and SOC) and EM.

To further check the statistical significance of the moderating effect of COLL on the relationships between ENV and EM, and between SOC and EM, I perform probing on the interaction effects to examine the relationship between ENV and EM, and between SOC and EM, at “-1 standard deviation, mean, and +1 standard deviation” on COLL. A graphical representation of the probing results is shown in Figure 6.6 below. Panel A of Figure 6.6 shows the graphical representation of the probing results of the interaction of ENV and COLL (ENV x COLL), while Panel B shows the probing results of the interaction of SOC and COLL (SOC x COLL).



**Panel A** Interaction of ENV and COLL



**Panel B** Interaction of SOC and COLL

**Figure 6.6** Probing Results of the Interaction of COLL with the CSR Dimensions (Equation (5))

As shown in Figure 6.6 Panel A, the blue line shows that at Low COLL the regression line has a slight downward slope, suggesting that the relationship between ENV and EM is negative. The red line has a slightly steeper downward slope, suggesting that the size of the negative relationship between ENV and EM is larger at moderate levels of COLL. The green line shows a much steeper downward slope, suggesting that at High COLL, the negative relationship between ENV and EM becomes even more pronounced. This suggests that as the level of COLL increases, the negative relationship between ENV and EM becomes more pronounced. This further validates the findings that COLL *individually* has a strengthening effect on the negative relationship between ENV and EM.

As shown in Figure 6.6 Panel B, the blue line shows that at Low COLL the regression line is almost horizontal, suggesting that no significant relationship between SOC and EM. The red line has a slightly steeper upward slope, suggesting that a positive relationship between SOC and EM at moderate levels of COLL. The green line shows a much steeper upward slope, suggesting that at High COLL, the positive relationship between SOC and EM becomes even more pronounced. Thus, the results suggest that as the level of COLL increases, the positive relationship between SOC and EM becomes more pronounced. This further validates the findings that COLL *individually* has a strengthening effect on the positive relationship between SOC and EM.

#### ***Hypothesis H3.4 and H3.5 test results***

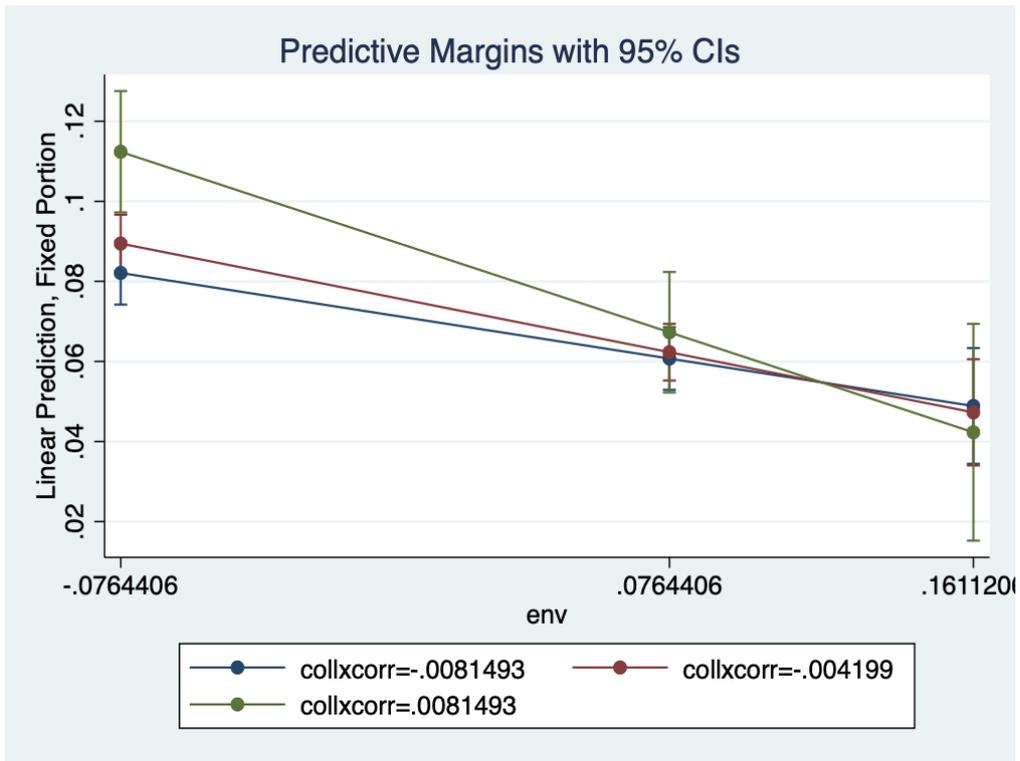
As shown in Column (1) of Table 6.11, the country level variable CORR ( $\alpha_4 = 0.0542$ ;  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance. This provides support for hypothesis H3.4 and is consistent with the informal institutions perspective, suggesting that EM is more prevalent in countries with higher CORR pervasiveness.

The interactions of CORR with ENV, SOC and GOV, that is, ENV x CORR ( $\alpha_6 = -0.1479$ ), SOC x CORR ( $\alpha_7 = 0.0764$ ) and GOV x CORR ( $\alpha_8 = 0.1087$ ) respectively, do not have statistically significant relationships with EM. Thus, the result does not provide support for hypothesis H3.5, suggesting that CORR *individually* does not have a significant moderating effect on the relationship between the CSR dimensions and EM.

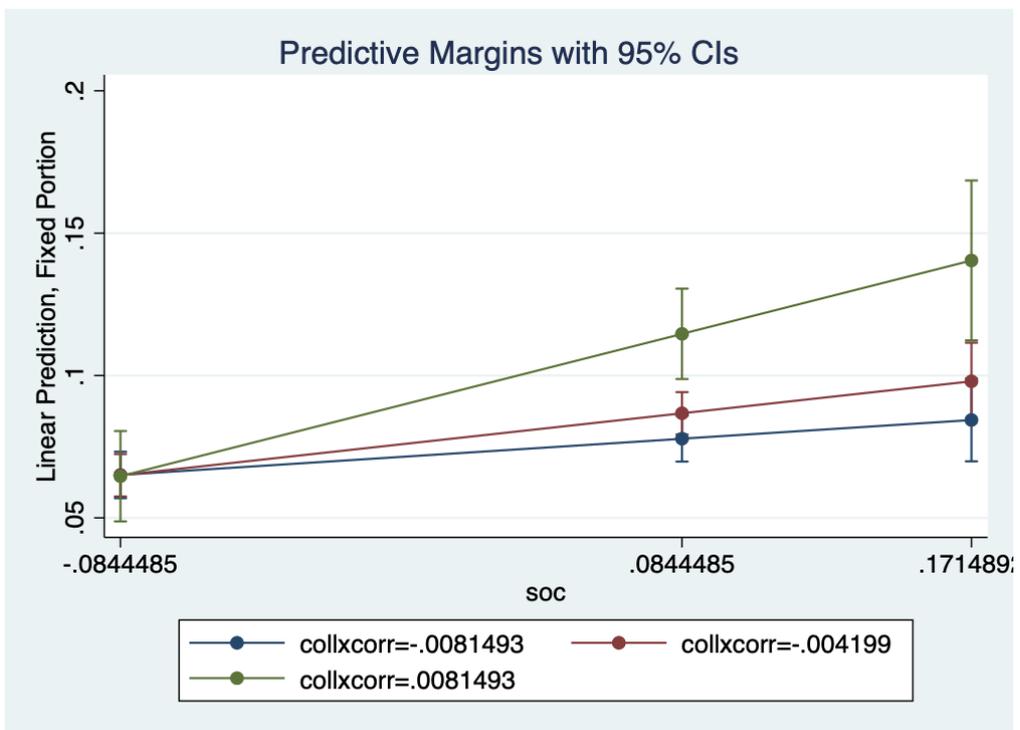
### ***Hypothesis H3.6 and H3.7 test results***

As shown in Column (1) of Table 6.11, the interaction term COLL x CORR ( $\alpha_{12} = 1.1303$ ,  $p < 0.01$ ) has a positive and significant relationship on EM at the 1% level of significance. The result provides support for hypothesis H3,6, suggesting that CORR pervasiveness and institutional COLL *jointly* escalate EM.

In terms of the joint effect of institutional COLL and CORR, ENV x COLL x CORR ( $\alpha_{13} = -0.7079$ ,  $p < 0.10$ ) has a negative relationship with EM at the 10% level of significance. This suggests that the interaction between CORR and COLL *jointly* has a moderating effect on the relationship between ENV and EM. The joint interaction effect, SOC x COLL x CORR ( $\alpha_{14} = 13.5364$ ,  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance. This suggests the interaction between COLL and CORR has a *joint* moderating effect on the relationship between SOC and ENV. However, GOV x COLL x CORR ( $\alpha_{15} = -7.0848$ ) does not have a statistically significant relationship with EM. Overall, the results provide partial support for hypothesis H3.7, suggesting that the interaction of COLL and CORR makes the relationship between the CSR dimensions and EM stronger. In countries with *joint* high CORR and high institutional COLL, the negative relationship between ENV and EM, and the positive relationship between SOC and EM become more pronounced. To further confirm the joint interaction effects, I perform probing to test the relationship between ENV and EM, and between SOC and EM, at “-1 standard deviation, mean, and +1 standard deviation” on COLL x CORR. A graphical representation of the probing results is shown in Figure 6.7 below. Panel A of Figure 6.7 shows the graphical representation of the probing results of the interaction of ENV, COLL and CORR (ENV x COLL x CORR), while Panel B shows the probing results of the interaction of SOC, COLL and CORR (SOC x COLL x CORR).



**Panel A Interaction of ENV, COLL and CORR**



**Panel B Interaction of SOC, COLL and CORR**

**Figure 6.7 Probing Results of the Interaction of COLL and CORR with the CSR Dimensions (Equation 5)**

As shown in Panel A in Figure 6.7, the blue line shows that at Low COLL and low CORR, the regression line has a slight downward slope, suggesting that the relationship between ENV and EM is negative. The red line has a slightly steeper downward slope, suggesting that the size of the negative relationship between ENV and EM is larger at moderate levels of COLL and CORR. The green line shows a much steeper downward slope, suggesting that at high COLL and CORR, the negative relationship between ENV and EM becomes even more pronounced. This suggests that as the level of COLL and CORR increases *jointly*, the negative relationship between ENV and EM becomes more pronounced. This further validates the findings that COLL and CORR *jointly* have a strengthening effect on the negative relationship between ENV and EM.

As shown in Panel A in figure 6.7, the blue line shows that at Low COLL and low CORR, the regression line is upward, suggesting that there is a positive relationship between SOC and EM. The red line has a slightly steeper upward slope, suggesting that the positive relationship between SOC and EM becomes more pronounced at moderate levels of COLL and CORR. The green line shows a much steeper upward slope, suggesting that at High COLL and CORR, the positive relationship between SOC and EM becomes even more pronounced. Thus, the results suggest that as the level of COLL and CORR increases *jointly*, the positive relationship between SOC and EM becomes more pronounced. This further validates the findings that COLL and CORR *jointly* have a strengthening effect on the positive relationship between SOC and EM.

In terms of the results of the relationship between the control variables and EM, from estimating equation (5), the results show that the firm-level control variable, LEV ( $\alpha_{17} = -0.0309$ ;  $p < 0.05$ ) has a negative and significant relationship with EM at the 5% level of significance, while ROA ( $\alpha_{18} = 0.0547$ ;  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance. However, the other firm-level control variables (SIZE, RD, MB) have no significant relationship with EM. The country-level control variables, FO ( $\alpha_{21} = 0.2327$ ;  $p < 0.01$ ) and PD ( $\alpha_{22} = 0.2367$ ;  $p < 0.01$ ), both have positive relationships with EM at the 1% level of significance.

### **6.8.6 Main Model Results of Estimation of Equation (6)**

Table 6.12 presents the results of the second main analysis model, based on the estimation of equation (6), using HLM method, testing the relationship between the three CSR dimensions and EM, and the *individual* and *joint* moderating effects of COLL and INVPRO. Table 6.12 Column (1) presents the regression coefficients, while Columns (2) and (3) present the standard errors and p-values respectively, from estimating equation (6). Equation (5) is based on 3,286 firm-year observations. The Wald chi-square is 133.11.

**Table 6.12 HLM Estimation Output of Equation (6)**

Column (1) presents the regression coefficients, while Columns (2) and (3) present the standard errors and p-values respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). ENV, SOC and GOV are the firm-level scores on the environmental, social and governance dimensions of ESG, obtained from Thomson Reuters. COLL and INVPRO are the country-level moderating variables. COLL is the GLOBE measure of institutional collectivism. INVPRO is the strength of INVPRO index for a country from WEF's GCI Historical Data. The firm-level control variables include SIZE, LEV, ROA, RD and MB, and dummy variable to capture industry effects (based on Fama-French 12 industry classification. SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ROA is measured as the income before extraordinary items, scaled by lagged total assets. RD refers to R&D intensity, measured as R&D expenses divided by net sales. MB is the market to book ratio. All firm level independent and control variables are centered using group mean centering. The country level control variables include PD and FO, that represent the GLOBE measures of the cultural dimensions of power distance and future orientation respectively. All country level variables are centered using grand mean centering method.

Variables	(1)	(2)	(3)
	EM (coefficient)	Std error	p-value
CONSTANT	0.0952	0.0073	0.0000
<i>Firm level – independent variables</i>			
ENV	-0.1683	0.0402	0.0000
SOC	0.1048	0.0386	0.0070
GOV	0.0000	0.0334	1.0000
<i>Country level – moderating variables</i>			
INVPRO	-0.1159	0.0344	0.0010
COLL	-0.1178	0.0786	0.1340
<i>Interactions</i>			
ENV x INVPRO	0.5728	0.3997	0.1520
SOC x INVPRO	-0.6455	0.3910	0.0990
GOV x INVPRO	-0.0277	0.3370	0.9350
ENV x COLL	-0.6037	0.7575	0.4250
SOC x COLL	1.3313	0.7182	0.0640
GOV x COLL	-0.1087	0.6588	0.8690
COLL x INVPRO	-0.7518	0.6093	0.2170
ENV x COLL x INVPRO	-2.4268	10.0027	0.8080
SOC x COLL x INVPRO	-4.3243	9.5287	0.6500
GOV x COLL x INVPRO	-3.6331	8.5499	0.6710
<i>Firm level – control variables</i>			
SIZE	-0.0023	0.0023	0.3170
LEV	-0.0337	0.0150	0.0240
ROA	0.0592	0.0168	0.0000
RD	0.0303	0.0215	0.1590
MB	0.0005	0.0007	0.4600
Industry effects	Yes		
<i>Country level – control variables</i>			
FO	0.2914	0.0875	0.0010
PD	0.1799	0.0740	0.0150
Wald $\chi^2$	133.11		
N	3,286		

### ***Hypothesis H3.8 and H3.9 test results***

As shown in Column (1) of Table 6.12, the results concerning the relationship between the CSR dimensions and EM are consistent with the previous results. ENV ( $\alpha_1 = -0.1683$ ;  $p < 0.01$ ) has a negative relationship with EM at the 1% level of significance; SOC ( $\alpha_2 = 0.1048$ ;  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance; GOV ( $\alpha_3 = 0.0000$ ) does not have a statistically significant relationship with EM.

The country level variable, INVPRO ( $\alpha_4 = -0.1159$ ;  $p < 0.01$ ) has a negative relationship with EM at the 1% level of significance. This provides support for hypothesis H3.8 and is consistent with the formal institutions perspective, suggesting that in countries with strong INVPRO, managers have fewer opportunities and incentives to manage earnings.

The interactions of INVPRO with ENV and GOV, that is, ENV x INVPRO ( $\alpha_6 = 0.5728$ ) and GOV x INVPRO ( $\alpha_8 = -0.0277$ ) respectively, do not have statistically significant relationships with EM. However, SOC x INVPRO ( $\alpha_7 = -0.6455$ ;  $p < 0.10$ ) has a negative relationship with EM at the 10% level of significance. This suggests that INVPRO moderates (weakens) the positive relationship between SOC and EM. The result provides partial support for hypothesis H3.9, suggesting that INVPRO *individually* has a moderating effect on the relationship between the CSR dimension (SOC) and EM.

To further confirm this moderating effect, the interaction effect is probed to examine the relationship between SOC and EM at “-1 standard deviation, mean, and +1 standard deviation” on INVPRO. A graphical representation of the probing results is shown in Figure 6.8 below.

The blue line on Figure 6.8 represents low levels of INVPRO. The upward slope on the blue line suggests that at low levels of INVPRO, there is a positive relationship between SOC and EM. The red line represents moderate levels of INVPRO. The red line being horizontal suggests a non-significant relationship between SOC and EM at moderate levels of INVPRO. The green line represents high levels of INVPRO. The downward slope on the green line suggests that the relationship between SOC and EM becomes negative at high levels of INVPRO. Thus, the graph shows that as the level of INVPRO increases, the positive relationship between SOC and EM becomes weaker. This further validates the finding that INVPRO *individually* weakens the

relationship between SOC and EM.

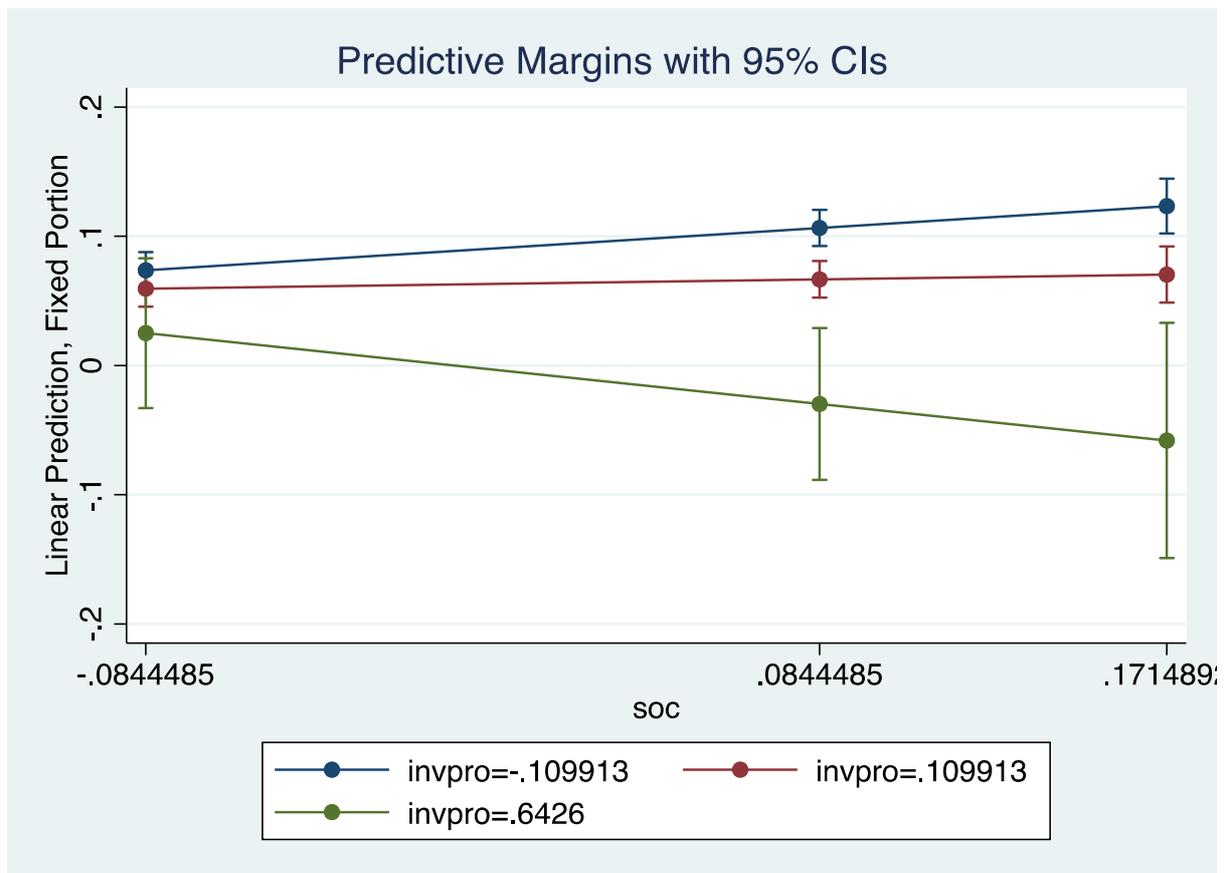


Figure 6.8 Probing results of the interaction of INVPRO with the SOC dimension (Equation (6))

**Hypothesis H3.10 and H3.11 test results**

As shown in Column (1) of Table 6.12, when INVPRO is included in the regression, COLL ( $\alpha_5 = -0.1178$ ) no longer has a statistically significant relationship with EM. The interaction of COLL with ENV and GOV, that is, ENV x COLL ( $\alpha_9 = -0.6037$ ) and GOV x COLL ( $\alpha_{11} = -0.1087$ ), also does not have statistically significant relationship with EM. However, SOC x COLL ( $\alpha_{10} = 1.3313$ ,  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance, suggesting that COLL has a moderating (strengthening) effect on the positive relationship between SOC and EM, consistent with the original findings.

The interaction of COLL and INVPRO, that is COLL x INVPRO ( $\alpha_{12} = -0.1087$ ), does not have a statistically significant relationship with EM. Thus, the results do not find support for

hypothesis H3.10, suggesting that COLL and INVPRO *jointly* do not have a statistically significant effect on EM.

The *joint* interaction of INVPRO and COLL does not have a statistically significant moderating effect on the relationship between any of the CSR dimensions and EM. This is evident as the results show no EM to be significantly related to either of the joint interaction variables ENV x COLL x INVPRO ( $\alpha_{13} = -2.4268$ ), SOC x COLL x INVPRO ( $\alpha_{14} = -4.3243$ ) or GOV x COLL x INVPRO ( $\alpha_{15} = -3.6331$ ). Thus, the results do not find support for hypothesis H3.11, suggesting that COLL and INVPRO *jointly* do not have a statistically significant moderating effect on the relationship between the CSR dimensions and EM.

The results relating to the control variables remain consistent with the previous results. The firm-level control variable LEV ( $\alpha_{17} = -0.0337$ ;  $p < 0.05$ ) has a negative and significant relationship with EM at the 5% level of significance, while ROA ( $\alpha_{18} = 0.0592$ ;  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance. However, the other control variables (SIZE, RD, MB) have no significant relationship with EM. The country level control variables FO ( $\alpha_{21} = 0.2914$ ;  $p < 0.10$ ) and PD ( $\alpha_{22} = 0.1799$ ;  $p < 0.10$ ) both have positive relationships with EM at the 10% level of significance.

#### **6.8.7 Results of Robustness Check – Split Sample HLM estimation of equation (7)**

Table 6.13 shows the results of estimation of equation (7), testing the moderating effects of CORR and INVPRO on the relationship between the three CSR dimensions and EM, using the HLM method performed individually on each of the 2 subsamples – Low COLL and High COLL subsamples. The COLL score is based on the GLOBE study institutional collectivism score. As discussed earlier in Section 6.7.6, the subsamples are formed by splitting the full sample at the median COLL score. All countries with a COLL score that is lower than the median COLL, are classified as having lower levels of COLL, forming the Low COLL subsample. All countries with a COLL score that is higher than the median COLL, are classified as having higher levels of COLL, forming the High COLL subsample. The two subsamples have equal number of countries, but uneven number of observations. The Low COLL subsample involves 1,491 firm-year observations (42.94% of the full sample), and includes the countries Brazil, India, Russia, South Africa and Thailand. The high COLL subsample involves 1,981 firm-year observations (57.06% of the full sample), and includes the countries China, Indonesia, Malaysia, South

**Table 6.13 HLM Estimation Output of Equation (7)**

The table presents the estimation results of equation (7) estimated using HLM, performed on the 2 subsamples (Low COLL and High COLL subsamples). Column (1) presents the regression coefficients, while columns (2) and (3) present the standard errors and p-values respectively, for the Low COLL subsample. respectively. Column (4) presents the regression coefficients, while columns (5) and (6) present the standard errors and p-values respectively, for the High COLL subsample. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). ENV, SOC and GOV are the firm-level scores on the environmental, social and governance dimensions of ESG, obtained from Thomson Reuters. CORR and INVPRO are the country-level moderating variables. CORR is the corruption pervasiveness in a country, measured by reverse-scoring the 'control of CORR' measure from World Bank's WGI database. INVPRO is the strength of INVPRO index for a country from WEF's GCI Historical Data. The firm-level control variables include SIZE, LEV, ROA, RD and MB, and dummy variable to capture industry effects (based on Fama-French 12 industry classification). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ROA is measured as the income before extraordinary items, scaled by lagged total assets. RD refers to R&D intensity, measured as R&D expenses divided by net sales. MB is the market to book ratio. All firm level independent and control variables are centered using group mean centering. The country-level control variables include PD and FO, that represent the GLOBE measures of the cultural dimensions of power distance and future orientation respectively. All country level variables are centered using grand mean centering method.

Variables	Low COLL subsample			High COLL subsample		
	(1) EM (coefficient)	(2) Std error	(3) p-value	(4) EM (coefficient)	(5) Std error	(6) p-value
CONSTANT	0.0833	0.0201	0.0000	0.1037	0.0075	0.0000
<i>Firm level – independent variables</i>						
ENV	-0.1140	0.0822	0.1650	-0.1891	0.0691	0.0060
SOC	0.0157	0.0836	0.8510	0.1375	0.0635	0.0300
GOV	0.0074	0.0733	0.9190	-0.0234	0.0545	0.6690
<i>Country level – moderating variables</i>						
CORR	0.1624	0.0567	0.0040	0.0701	0.0168	0.0000
INVPRO	-0.1859	0.0625	0.0030	-0.0495	0.0364	0.1740
<i>Interactions</i>						
ENV x CORR	-0.2449	0.6254	0.6950	-0.1318	0.2909	0.6510
SOC x CORR	0.4014	0.5922	0.4980	0.0820	0.2738	0.0490
GOV x CORR	-0.3647	0.5452	0.5030	0.0070	0.2312	0.9760
ENV x INVPRO	0.2320	0.7977	0.7710	0.5242	0.5209	0.3140
SOC x INVPRO	-0.8917	0.4802	0.0630	-0.1174	0.8023	0.8840
GOV x INVPRO	0.3487	0.7029	0.6200	-0.1607	0.3984	0.6870
<i>Firm level – control variables</i>						
SIZE	-0.0026	0.0035	0.4570	0.0006	0.0032	0.8400
LEV	0.0119	0.0227	0.5990	-0.0819	0.0207	0.0000
ROA	0.0372	0.0226	0.0990	0.0822	0.0264	0.0020
RD	-0.3258	0.4463	0.4650	0.0298	0.0208	0.1520
MB	0.0003	0.0010	0.7720	0.0005	0.0009	0.5880
Industry effects	Yes			Yes		
<i>Country level – control variables</i>						
FO	0.5393	0.1172	0.0000	0.2094	0.1026	0.0410
PD	0.1560	0.0587	0.0080	0.0196	0.1011	0.8470
Wald $\chi^2$	78.53			139.02		
N	1,401			1,885		

### **Results in the Low COLL subsample**

Table 6.13 Columns (1), (2) and (3) show the regression coefficient, standard error, and p-value from estimating equation (7) on the Low COLL subsample. The estimation involves 1,401 observations, owing to missing variables. The Wald chi-square is 78.53.

In the Low COLL subsample, the CSR dimensions ENV ( $\alpha_1 = -0.1140$ ), SOC ( $\alpha_2 = 0.0157$ ) and GOV ( $\alpha_3 = 0.0074$ ) do not have statistically significant relationships with EM. This suggests that in countries with low institutional COLL, the CSR dimensions do not have a significant effect on EM.

The country level independent variable CORR ( $\alpha_4 = 0.1624$ ,  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance. This suggests that EM is more prevalent in countries with *joint* low institutional COLL and high CORR. INVPRO ( $\alpha_5 = -0.1859$ ,  $p < 0.01$ ) has a negative effect on EM at the 1% level of significance. This suggests that low COLL and high INVPRO *jointly* constrains EM.

The CORR interaction variables ENV x CORR, SOC x CORR and GOV x CORR do not have statistically significant relationships with EM, suggesting that CORR does not have a moderating effect on the relationship between the CSR dimensions and EM within the Low COLL subsample. The INVPRO interaction variables ENV x INVPRO and GOV x INVPRO also do not have statistically significant relationships with EM. However, SOC x INVPRO ( $\alpha_{10} = -0.8917$ ,  $p < 0.10$ ) has a negative effect on EM at the 10% level of significance. This suggests that the interaction of INVPRO and SOC reduces EM in low COLL countries.

The firm level control variable ROA ( $\alpha_{14} = 0.0372$ ,  $p < 0.10$ ) has a positive relationship with EM at the 10% level of significance. However, the other firm-level control variables (SIZE, LEV, RD and MB) do not have a statistically significant relationship with EM. The country-level control variables FO ( $\alpha_{17} = 0.5393$ ,  $p < 0.01$ ) and PD ( $\alpha_{18} = 0.1560$ ,  $p < 0.01$ ) both have positive relationships with EM at the 1% level of significance.

### **Results in the High COLL subsample**

Table 6.13 Columns (4), (5) and (6) show the regression coefficient, standard error, and p-value from estimating equation (7) on the High COLL subsample. The estimation involves 1,885 observations, owing to missing variables. The Wald chi-square is 139.02.

In the High COLL subsample ENV ( $\alpha_1 = -0.1891$ ;  $p < 0.01$ ) has a negative relationship with EM at the 1% level of significance. SOC ( $\alpha_2 = 0.1375$ ;  $p < 0.01$ ) has a positive relationship with EM at the 5% level of significance. However, GOV ( $\alpha_3 = -0.0937$ ) does not have a statistically significant relationship with EM. The results suggest that in countries with higher institutional COLL, firms with higher ENV initiatives are less likely to engage in EM, but firms with higher social initiatives are more likely to engage in EM.

The country level moderating variable, CORR ( $\alpha_4 = 0.0701$ ;  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance. The result suggests that in countries with *joint* high institutional COLL and CORR, EM is more prevalent. INVPRO does not have a statistically significant relationship with EM in the high COLL subsample, suggesting that INVPRO no longer constrains EM when the country has high COLL.

The CORR interaction variables ENV x CORR and GOV x CORR do not have statistically significant relationships with EM. However, SOC x CORR ( $\alpha_7 = 0.0820$ ;  $p < 0.05$ ) has a positive and significant relationship with EM at the 5% level of significance. This suggests that in the high COLL subsample, CORR has a moderating effect on the relationship between SOC and EM, but not on the relationship between the other two CSR dimensions (ENV and GOV) and EM.

The INVPRO interaction variables ENV x INVPRO, SOC x INVPRO and GOV x INVPRO do not have statistically significant relationships with EM, suggesting that INVPRO does not have a moderating effect on the relationship between the CSR dimensions and EM within the High COLL subsample.

The results regarding the firm-level control variables show that LEV ( $\alpha_{13} = -0.0819$ ,  $p < 0.01$ ) has a negative relationship with EM at the 1% level of significance, while ROA ( $\alpha_{14} = 0.0822$ ,  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance. However, the other firm-level control variables (SIZE, RD and MB) do not have a statistically significant relationships with EM within the High COLL subsample. The country level control variable FO ( $\alpha_{17} = 0.2094$ ,  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance. However, PD does not have a statistically significant relationship with EM in the high COLL subsample.

### ***Comparison of results in the Low versus High COLL subsamples***

In this section, I compare the results between the two subsamples to examine whether the results vary between countries with low levels of institutional COLL and high levels of institutional COLL.

The results from the split sample show that there is a negative and significant relationship between ENV and EM in the High COLL subsample, but no significant relationship in the LOW COLL subsample. The result suggests COLL changes the relationship between ENV and EM. In particular, in higher COLL countries, managers undertaking more environmental initiatives are less likely to manage earnings. The relationship between SOC and EM is also different between the two subsamples. While there is a positive and significant relationship between SOC and EM in the High COLL subsample, there is no significant relationship between SOC and EM in the Low COLL subsample. This suggests that in high institutionally COLL countries, managers undertaking more social initiatives are more likely to manage earnings. The relationship between GOV and EM remain statistically insignificant in both subsamples, suggesting that in emerging market countries GOV does not affect EM, regardless of the level of institutional COLL.

Overall, the results regarding the relationship between the CSR dimensions and EM suggest that COLL has a strengthening effect. In countries with higher institutional COLL, the negative relationship between ENV and EM, and the positive relationship between SOC and EM are more pronounced. This is consistent with the original results that suggest a moderating effect of COLL on the relationship between the CSR dimensions (ENV and SOC) and EM.

The results regarding the effect of the country-level moderating variable, CORR, is also different across the two subsamples. CORR has a positive and significant effect on both the Low COLL and High COLL subsample. Therefore, I test the difference in the size of the coefficient, with the results reported in Table 6.14. The difference in the size of the coefficient of CORR between the Low and High COLL subsamples is -0.0923. This is obtained by subtracting the CORR coefficient ( $\alpha_{4\text{ Low COLL}} = 0.1624$ ,  $p < 0.05$ ) in the Low COLL subsample from the CORR coefficient ( $\alpha_{4\text{ High COLL}} = 0.0701$ ;  $p < 0.01$ ) in the High COLL subsample. However, the difference in the CORR coefficients is not statistically significant, as the p-value = 1.1115. The split sample results suggest that CORR has a positive effect on EM, regardless of the level of COLL.

**Table 6.14 Difference in the effect of CORR - Low COLL versus High COLL Subsamples**

The table presents the comparison of the estimation results of equation (7) performed on the 2 subsamples (Low COLL and High COLL). Column (1) presents the difference in the regression coefficients, between the two subsamples, while Columns (2) and (3) show the standard error and the p-value respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). CORR is the CORR pervasiveness in a country, measured by reverse-scoring the 'control of CORR' measure from World Bank's WGI database

	(1)	(2)	(3)
	EM (coefficient)	Std error	p-value
CORR (High COLL – Low COLL)	-0.0923	0.0591	1.1115

The results regarding the interaction of CORR with the CSR dimensions (as shown earlier in Table 6.13) show some differences across the two subsamples. The interaction variables ENV x CORR and GOV x CORR do not have statistically significant relationships with EM in either of the two subsamples. However, the interaction variable SOC x CORR has a positive and significant relationship with EM in the High COLL subsample, but no significant relationship in the Low COLL subsample. Thus, the results show that as COLL increases, the relationship between SOC x CORR and EM changes. Consistent with the original findings, the result suggests that COLL and CORR *jointly* have a moderating (strengthening) effect on the relationship between SOC and EM. In countries with high institutional COLL and high CORR pervasiveness, managers involved in SOC initiatives are more likely to manage earnings.

The country level variable, INVPRO, is also different across the two subsamples (as shown earlier in Table 6.13). INVPRO has a negative and significant effect on EM in the Low COLL subsample, but no significant effect in the High COLL subsample. The result suggests that while INVPRO constrains EM in low COLL countries, this is different in high COLL countries. In countries with high institutional COLL, INVPRO may no longer be effective in constraining EM.

The results regarding the interaction of INVPRO with the CSR dimensions also show some difference across the two subsamples (as shown earlier in Table 6.13). The interaction variables ENV x INVPRO and GOV x INVPRO do not have statistically significant relationships with EM in either of the two subsamples. However, SOC x INVPRO has a negative effect on EM in the low COLL subsample, but no significant effect in the high COLL subsample. This suggests that while INVPRO has a moderating effect on the relationship between SOC and EM in low COLL countries, INVPRO loses its effectiveness, and no longer moderates the relationship between SOC and EM in high COLL countries. This is consistent to the original findings.

#### **6.8.8 Sensitivity test – Split sample result of HLM estimation of equation (8)**

Table 6.15 shows the results of the sensitivity tests by estimating equation (8), using alternate measures of the key variables. The alternate measures of EM, ENV, SOC, GOV, COLL, CORR and INVPRO are EM\_DD, ENV\_DUM, SOC\_DUM, GOV\_DUM, CORR\_TRI and INVPRO\_FF respectively. Equation (8) is a re-estimation of equation (7), with the main dependent, independent and moderating variables replaced with their alternate measures, as specified above. Thus, the process adopted for the sensitivity analysis is consistent to the process discussed in Section 6.8.7.

The sensitivity test is performed by estimating equation (8), using the HLM method, performed individually on each of the 2 subsamples – Low COLL\_H and High COLL\_H subsamples. The COLL\_H score is the reverse score of IDV, based on Hofstede's IDV-COLL cultural dimension, obtained from Hofstede Insights (2021). As discussed earlier in Section 6.7.7, the subsamples are formed by splitting the full sample at the mean COLL\_H score. The Low COLL\_H subsample comprises of all countries with a COLL\_H score that is lower than the

mean COLL\_H. The High COLL\_H subsample comprises of all countries with a COLL\_H score that is higher than the mean COLL\_H. The two subsamples have uneven number of countries and observations. The Low COLL\_H subsample involves four countries (namely, Brazil, India, Russia and South Africa), with 1,369 firm-year observations (39.43% of the full sample). The High COLL\_H subsample involves six countries (namely, China, Indonesia, Malaysia, South Korea, Taiwan and Thailand), with 2,103 firm-year observations (60.57% of the full sample).

**Table 6.15 HLM Estimation Output of Equation (8)**

The table presents the estimation results of equation (8) estimated using HLM, performed on the 2 subsamples (Low COLL\_H and High COLL\_H subsamples). COLL\_H is the reverse-score of Hofstede's IDV cultural dimension. Column (1) presents the regression coefficients, while columns (2) and (3) present the standard errors and p-values respectively, for the Low COLL subsample. respectively. Column (4) presents the regression coefficients, while columns (5) and (6) present the standard errors and p-values respectively, for the High COLL subsample. EM\_DD refers to alternate earnings management specification, proxied by accruals quality model by Dechow & Dichev (2002). ENV\_DUM, SOC\_DUM and GOV\_DUM are the alternate measures of the CSR dimensions, measured as a dummy variable which equals 1 if the score on the dimension is greater than the median score of that dimension for each year and industry, and 0 otherwise. CORR\_TRI and INVPRO\_FF are the alternate measures of the moderating variables. CORR\_TRI is the reverse-score of the 'corruption perception index' from Transparency International. INVPRO\_FF is the investor protection score from the Financial Freedom Index. The firm-level control variables include SIZE, LEV, ROA, RD and MB, and dummy variable to capture industry effects (based on Fama-French 12 industry classification). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ROA is measured as the income before extraordinary items, scaled by lagged total assets. RD refers to R&D intensity, measured as R&D expenses divided by net sales. MB is the market to book ratio. All firm level independent and control variables are centered using group mean centering. The country-level control variables include PD and FO, that represent the GLOBE measures of the cultural dimensions of power distance and future orientation respectively. All country level variables are centered using grand mean centering method.

Variables	Low COLL_H subsample			High COLL_H subsample		
	(1) EM_DD (coefficient)	(2) Std error	(3) p-value	(4) EM_DD (coefficient)	(5) Std error	(6) p-value
CONSTANT	0.0583	0.0164	0.0000	0.0900	0.0059	0.0000
<i>Firm level – independent variables</i>						
ENV_DUM	-0.0011	0.0049	0.8200	-0.0154	0.0044	0.0000
SOC_DUM	-0.0206	0.0050	0.0000	0.0056	0.0047	0.2330
GOV_DUM	0.0045	0.0041	0.2780	0.0053	0.0038	0.1680
<i>Country level – independent variables</i>						
CORR_TRI	-0.0541	0.1420	0.7030	0.0816	0.0293	0.0050
INVPRO_FF	-0.2327	0.1367	0.0890	0.0555	0.0294	0.0590
<i>Interactions</i>						
ENV_DUM x CORR_TRI	0.0002	0.0978	0.9990	0.0008	0.0386	0.9830
SOC_DUM x CORR_TRI	0.0117	0.0401	0.7710	0.1805	0.0983	0.0660
GOV_DUM x CORR_TRI	-0.0522	0.0831	0.5300	-0.0278	0.0327	0.3960
ENV_DUM x INVPRO_FF	-0.0018	0.0338	0.9570	0.0296	0.0288	0.3040
SOC_DUM x INVPRO_FF	-0.0765	0.0300	0.0110	0.0746	0.0357	0.0360
GOV_DUM x INVPRO_FF	0.0147	0.0291	0.6130	0.0061	0.0254	0.8100
<i>Firm level – control variables</i>						
SIZE	-0.0041	0.0016	0.0090	-0.0113	0.0020	0.0000
LEV	-0.0548	0.0110	0.0000	-0.0317	0.0132	0.0170
ROA	-0.0144	0.0102	0.1580	0.0355	0.0160	0.0270
RD	0.4940	0.2222	0.0260	0.1524	0.0493	0.0020
MB	0.0001	0.0005	0.8680	-0.0014	0.0006	0.0220
Industry effects	Yes			Yes		
<i>Country level – control variables</i>						
FO	0.2242	0.1519	0.1400	0.0299	0.0695	0.6680
PD	-0.0389	0.1772	0.8260	0.0512	0.0595	0.3900
Wald $\chi^2$	212.16			236.22		
N	1,061			1,588		

### **Results in the Low COLL\_H subsample**

Table 6.15 Columns (1), (2) and (3) show the regression coefficient, standard error, and p-value from estimating equation (8) on the Low COLL\_H subsample. The estimation involves 1,061 observations, owing to missing variables. The Wald chi-square is 212.16.

In the Low COLL\_H subsample, the CSR dimensions ENV\_DUM ( $\alpha_1 = -0.0011$ ) and GOV\_DUM ( $\alpha_3 = 0.0045$ ) do not have statistically significant relationships with EM\_DD. SOC\_DUM ( $\alpha_2 = -0.0206$ ,  $p < 0.01$ ) has a negative relationship with EM\_DD at the 1% level of significance, suggesting that in countries with low collectivism culture, managers, engaged in SOC initiatives, are less likely to manage earnings.

The country level independent variable CORR\_TRI ( $\alpha_4 = -0.0541$ ) does not have a statistically significant relationship with EM\_DD in the Low COLL\_H subsample. INVPRO\_FF ( $\alpha_5 = -0.2327$ ,  $p < 0.10$ ) has a negative effect on EM\_DD at the 10% level of significance. This suggests that low COLL\_H and high INVPRO\_FF *jointly* constrains EM\_DD.

The interaction variables ENV\_DUM x CORR\_TRI, SOC\_DUM x CORR\_TRI and GOV\_DUM x CORR\_TRI do not have statistically significant relationships with EM\_DD, suggesting that CORR\_TRI does not have a moderating effect on the relationship between the CSR dimensions and EM\_DD within the Low COLL\_H subsample. The INVPRO\_FF interaction variables ENV\_DUM x INVPRO\_FF and GOV\_DUM x INVPRO\_FF also do not have statistically significant relationships with EM\_DD. However, SOC\_DUM x INVPRO\_FF ( $\alpha_{10} = -0.0765$ ,  $p < 0.05$ ) has a negative effect on EM\_DD at the 5% level of significance. Consistent to the original findings, this suggests that the interaction of INVPRO\_FF has a weakening effect on the positive relationship between SOC\_DUM x EM\_DD in low COLL\_H countries.

The firm-level control variables SIZE ( $\alpha_{12} = -0.0041$ ,  $p < 0.01$ ) and LEV ( $\alpha_{13} = -0.0548$ ,  $p < 0.01$ ) have negative relationships with EM\_DD at the 1% level of significance, while RD ( $\alpha_{15} = 0.4940$ ,  $p < 0.05$ ) has a positive effect on EM\_DD at the 5% level of significance. ROA and MB do not have statistically significant relationships with EM\_DD in the Low COLL\_H subsample.

The country-level control variables FO ( $\alpha_{17} = 0.2242$ ) and PD ( $\alpha_{18} = -0.0389$ ) also do not have statistically significant relationships with EM\_DD in the Low COLL\_H subsample.

### ***Results in the High COLL\_H subsample***

Table 6.15 Columns (4), (5) and (6) show the regression coefficient, standard error, and p-value from estimating equation (8) on the High COLL\_H subsample. The estimation involves 1,588 observations, owing to missing variables. The Wald chi-square is 236.22.

In the High COLL\_H subsample ENV\_DUM ( $\alpha_1 = -0.0154$ ;  $p < 0.01$ ) has a negative relationship with EM\_DD at the 1% level of significance. SOC\_DUM ( $\alpha_2 = 0.0056$ ) and GOV\_DUM ( $\alpha_3 = 0.0053$ ) do not have statistically significant relationship with EM\_DD. The results suggest that in countries with higher COLL\_H, firms with higher ENV\_DUM initiatives are less likely to manage earnings.

The country level moderating variable, CORR\_TRI ( $\alpha_4 = 0.0816$ ;  $p < 0.01$ ) has a positive relationship with EM\_DD at the 1% level of significance. The result suggests that in countries with *joint* high COLL\_H and CORR\_TRI, EM\_DD is more prevalent. INVPRO\_FF ( $\alpha_5 = 0.0555$ ;  $p < 0.10$ ) has a positive relationship with EM\_DD, at the 10% level of significance, in the high COLL\_H subsample. The result suggests that in high COLL\_H countries, INVPRO\_FF no longer constrains EM\_DD, but rather EM\_DD increases despite the level in INVPRO\_FF.

The CORR\_TRI interaction variables ENV\_DUM x CORR\_TRI and GOV\_DUM x CORR\_TRI do not have statistically significant relationships with EM\_DD, but SOC\_DUM x CORR\_TRI ( $\alpha_7 = 0.1805$ ,  $p < 0.10$ ) has a positive relationship with EM\_DD at the 10% level of significance. This suggests that in countries with high COLL\_H, the interaction of CORR\_TRI and SOC\_DUM increases EM\_DD.

The INVPRO\_FF interaction variables ENV\_DUM x INVPRO\_FF and GOV\_DUM x INVPRO\_FF do not have statistically significant relationships with EM\_DD. However, SOC\_DUM x INVPRO\_FF ( $\alpha_{10} = 0.0746$ ,  $p < 0.05$ ) has a positive relationship with EM\_DD at the 5% level of significance. This suggests that in countries with high COLL\_H, INVPRO\_FF loses its

effectiveness in weakening the positive relationship between SOC\_DUM and EM\_DD. In high COLL countries, the interaction of INVPRO\_FF and SOC\_DUM increases EM.

The results regarding the firm-level control variables show that SIZE ( $\alpha_{12} = -0.0113$ ,  $p < 0.01$ ) has a negative relationship with EM\_DD at the 1% level of significance, while LEV ( $\alpha_{13} = -0.0317$ ,  $p < 0.05$ ) and MB ( $\alpha_{16} = -0.0014$ ,  $p < 0.05$ ) have negative relationships with EM\_DD at the 5% level of significance. ROA ( $\alpha_{14} = 0.0355$ ,  $p < 0.05$ ) has a positive relationship with EM\_DD at the 5% level of significance, while RD ( $\alpha_{15} = 0.1524$ ,  $p < 0.01$ ) has a positive relationship with EM\_DD at the 1% level of significance. The country level control variable FO ( $\alpha_{17} = 0.0299$ ) and PD ( $\alpha_{18} = 0.0512$ ) do not have a statistically significant relationships with EM\_DD in the high COLL\_H subsample.

#### ***Comparison of results in the Low versus High COLL\_H subsamples***

In this section, I compare the results between the two subsamples to examine whether the results vary between countries with low levels of COLL\_H and high levels of COLL\_H.

The results show that there is a negative and significant relationship between ENV\_DUM and EM\_DD in the High COLL\_H subsample, but no significant relationship in the LOW COLL\_H subsample. Consistent to the findings discussed before, the result suggests that COLL\_H changes the relationship between ENV\_DUM and EM\_DD. In countries with higher COLL\_H, managers undertaking more ENV\_DUM environmental initiatives are less likely to manage earnings. The relationship between SOC\_DUM and EM\_DD is also different between the two subsamples. While there is a negative and significant relationship between SOC\_DUM and EM\_DD in the Low COLL\_H subsample, there is no significant relationship between SOC\_DUM and EM\_DD in the High COLL\_H subsample. Although this result is different to my original results, the interpretation is still consistent, as the result suggests that COLL\_H changes the relationship between SOC and EM. As high COLL\_H societies, managers, engaged in social initiatives, are less likely to constrain EM. The relationship between GOV\_DUM and EM\_DD remain statistically insignificant in both subsamples, suggesting that in emerging market countries GOV\_DUM does not affect EM\_DD, regardless of the level of COLL\_H.

Overall, the results regarding the relationship between the CSR dimensions and EM\_DD suggest that COLL\_H has moderating effects on the relationships between ENV\_DUM and EM\_DD and between SOC\_DUM and EM\_DD.

The results regarding the effect of the country-level moderating variable, CORR\_TRI, are also different across the two subsamples. CORR\_TRI has a positive and significant effect in the Low High COLL\_H subsample, but no significant effect in the Low COLL\_H subsample. Consistent with my original findings, the result suggests that COLL\_H and CORR\_TRI *jointly* increase EM\_DD. The interaction variables ENV\_DUM x CORR\_TRI, SOC\_DUM x CORR\_TRI and GOV\_DUM x CORR\_TRI do not have statistically significant relationships with EM\_DD in either of the two subsamples, suggesting that CORR\_TRI does not affect the relationship between the CSR dimensions and EM\_DD in emerging market countries.

There are also differences between the two subsamples on the results regarding INVPRO\_FF. INVPRO\_FF has a negative and significant effect on EM\_DD in the Low COLL\_H subsample, but a positive and significant effect in the High COLL\_H subsample. The interaction variables ENV\_DUM x INVPRO\_FF and GOV\_DUM x INVPRO\_FF do not have statistically significant relationships with EM\_DD in either of the two subsamples. However, SOC\_DUM x INVPRO\_FF has a negative effect on EM\_DD in the low COLL\_H subsample, but a positive effect in the high COLL\_H subsample. Overall, the results regarding INVPRO\_FF show that the effects of INVPRO\_FF and SOC\_DUM x INVPRO\_FF on EM are different across the two subsamples, as evidenced by the coefficients being different and statistically significant in both subsamples. Consequently, to confirm the moderating effect of COLL\_H, I test the statistical significance of the difference in these coefficients, as reported in Table 6.16.

The results shown in Table 6.16 confirm that the differences in the effects of INVPRO\_FF and SOC\_DUM x INVPRO\_FF on EM\_DD, between the Low COLL\_H and High COLL\_H subsamples, are statistically significant.

**Table 6.16 Differences in the effect of INVPRO\_FF - Low COLL\_H versus High COLL\_H Subsamples**

The table presents the difference in the coefficients of INVPRO\_FF and SOC\_DUM x INVPRO\_FF between the Low COLL\_H and High COLL\_H subsamples, from estimating equation (8) on each of the two subsamples. Column (1) presents the difference in the regression coefficients, between the two subsamples, while Columns (2) and (3) show the standard error and the p-value respectively. EM\_DD refers to earnings management, proxied by the accruals quality model by Dechow & Dichev (2002). INVPRO\_FF is the investor protection score from the Financial Freedom Index. SOC\_DUM is measured as a dummy variable which equals 1 if the score on the SOC dimension is greater than the median SOC score for each year and industry, and 0 otherwise.

	(1)	(2)	(3)
	EM_DD (coefficient)	Std error	p-value
INVPRO_FF (High COLL_H – Low COLL_H)	0.2882	0.1398	0.0390
SOC_DUM x INVPRO_FF (High COLL_H – Low COLL_H)	0.1511	0.0466	0.0012

As shown in Table 6.16, the difference in the size of the coefficient of INVPRO\_FF between the Low COLL\_H ( $\alpha_{5\text{ Low COLL}_H} = -0.2327$ ) and High COLL\_H ( $\alpha_{5\text{ High COLL}_H} = 0.0555$ ) subsamples is 0.2882 ( $p < 0.05$ ). The result suggests that the relationship between INVPRO\_FF and EM\_DD significantly changes with the level of COLL\_H. The positive coefficient suggests that INVPRO\_FF has a positive effect on EM\_DD in High COLL\_H countries. While this is a new finding compared with my original findings, the interpretation of this finding remains consistent with my original findings. The results suggest that INVPRO\_FF constrains EM\_DD in low COLL\_H countries. However, in countries with high COLL\_H, INVPRO\_FF may no longer be effective in constraining EM\_DD.

Table 6.16 also shows the difference in the size of the coefficient of SOC\_DUM x INVPRO\_FF between the Low COLL\_H ( $\alpha_{10\text{ Low COLL}_H} = -0.0765$ ) and High COLL\_H subsamples ( $\alpha_{10\text{ High COLL}_H} = 0.0746$ ). As shown in the table, the difference in the SOC\_DUM x INVPRO\_FF coefficient is 0.1511 ( $p < 0.01$ ). The result suggests that the interaction effect of SOC\_DUM x INVPRO\_FF on EM\_DD significantly changes with the level of COLL\_H. The positive coefficient suggests that SOC\_DUM x INVPRO\_FF has a positive effect on EM\_DD in High COLL\_H countries. As discussed above, this is also a new finding compared with my original findings. However, the interpretation of this finding remains consistent with my original findings. The results suggest that INVPRO\_FF constrains the positive relationship between SOC\_DUM and EM\_DD in low COLL\_H countries. However, in countries with high COLL\_H, INVPRO\_FF may lose its effectiveness, as it no longer constrains the positive relationship between SOC\_DUM and

EM\_DD.

Together, the results regarding INVPRO\_FF suggest that the effectiveness of INVPRO\_FF reduces in COLL culture. As discussed earlier, COLL creates more incentives and opportunities for EM. These greater incentives and opportunities may subdue the effectiveness of INVPRO. Thus, consistent to the original findings, the sensitivity test results also suggest that culture plays a more important role, than institutional factors, in determining the relationship between the CSR dimensions and EM.

#### ***6.8.9 Accounting for endogeneity – 2SLS estimation results of equations (5) and (6)***

To address endogeneity issues, I re-estimate the main model equations (5) and (6) as 2SLS models with instrument variables. Consistent to my first two studies, as reported in Chapters 4 and 5, I measure the instruments as the median of the endogenous independent variable based on Fama-French 48 industry classification. Thus, I measure ENV\_M, SOC\_M, and GOV\_M as instruments for the 3 CSR dimensions ENV, SOC and GOV respectively. ENV\_M, SOC\_M, and GOV\_M are measured as the median of ENV, SOC and GOV for each industry, based on Fama-French 48 industry classification.

#### ***2SLS estimation results of equation (5)***

Table 6.17 shows the results of the 2SLS estimation of equation (5). Column (1) shows the regression coefficients, while columns (2) and (3) show the standard errors and p-values respectively.

**Table 6.17 2SLS estimation output of equation (5)**

The table presents the 2SLS estimation results of equation (5). The model uses the instruments ENV\_M, SOC\_M and GOV\_M, measured as the median ENV, SOC and GOV respectively, based on Fama-French 48 industry classification. Column (1) presents the regression coefficients, while columns (2) and (3) present the standard errors and p-values respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). ENV, SOC and GOV are the firm-level scores on the environmental, social and governance dimensions of ESG, obtained from Thomson Reuters. COLL and CORR are the country-level moderator variables. COLL is the country-level moderator variable, representing the GLOBE measure of institutional COLL cultural dimension. CORR represents the level of CORR pervasiveness, measured as the reverse-score of control of CORR index from World Bank WGI database. The firm level control variables include SIZE, LEV, ROA, RD and MB, and dummy variable to capture industry effects (based on Fama-French 12 industry classification). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ROA is measured as the income before extraordinary items, scaled by lagged total assets. RD refers to R&D intensity, measured as R&D expenses divided by net sales. MB is the market to book ratio. All firm level independent and control variables are centered using group mean centering. The country level control variables include PD and FO, that represent the GLOBE measures of the cultural dimensions of power distance and future orientation respectively. All country level variables are centered using grand mean centering method.

Variables	(1)	(2)	(3)
	EM (coefficient)	Std error	p-value
CONSTANT	0.0822	0.0024	0.0822
<b><i>Firm level – independent variables</i></b>			
ENV	-0.2050	0.0453	0.0000
SOC	0.1892	0.0440	0.0000
GOV	-0.0240	0.0367	0.5130
<b><i>Country level – independent variables</i></b>			
COLL	0.1013	0.0446	0.0230
CORR	0.0310	0.0127	0.0150
<b><i>Interactions</i></b>			
ENV x COLL	-1.5415	0.8594	0.0730
SOC x COLL	2.5478	0.8575	0.0030
GOV x COLL	-1.1288	0.7654	0.1400
ENV x CORR	-0.0640	0.2325	0.7830
SOC x CORR	0.0588	0.2189	0.7880
GOV x CORR	0.0171	0.1871	0.9270
COLL x CORR	1.2519	0.3190	0.0000
ENV x COLL x CORR	-9.3762	5.4132	0.0830
SOC x COLL x CORR	14.2636	5.2232	0.0060
GOV x COLL x CORR	-8.6119	4.4994	0.1560
<b><i>Firm level – control variables</i></b>			
SIZE	-0.0022	0.0023	0.3250
LEV	-0.0407	0.0147	0.0060
ROA	0.0533	0.0168	0.0020
RD	0.0240	0.0216	0.2660
MB	0.0000	0.0007	0.9890
Industry effects	Yes		
<b><i>Country level – control variables</i></b>			
FO	0.1733	0.0486	0.0000
PD	0.2181	0.0413	0.0000
1-stage F-stat	14.49		
N	3,286		
Adjusted R <sup>2</sup>	0.0333		

The results show a negative relationship between ENV ( $\alpha_1 = -0.2050$ ;  $p < 0.01$ ) and EM at the 1% level of significance, and a positive relationship between SOC ( $\alpha_2 = 0.1892$ ;  $p < 0.01$ ) and EM at the 1% level of significance. The results do not show a statistically significant relationship between GOV ( $\alpha_3 = -0.0240$ ) and EM. Thus, consistent with the original results, the 2SLS estimation results also suggest that managers, engaged in ENV initiatives are less likely to manage earnings, but those engaged in SOC initiatives are more likely to manage earnings.

COLL ( $\alpha_5 = 0.1013$ ;  $p < 0.05$ ) has a positive relationship with EM at the 5% level of significance. Consistent with the original findings, the 2SLS estimation result also suggests that EM is more prevalent in countries with high institutional COLL. The results regarding the interaction effects of COLL and the CSR dimensions on EM are also consistent to the original findings. ENV x COLL ( $\alpha_9 = -1.5415$ ,  $p < 0.10$ ), has a negative effect on EM at the 10% level of significance, suggesting that COLL has a moderating (strengthening) effect on the negative relationship between ENV and EM. SOC x COLL ( $\alpha_{10} = 2.5478$ ,  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance, suggesting that COLL has a moderating (strengthening) effect on the positive relationship between SOC and EM. However, GOV x COLL ( $\alpha_{11} = -1.1288$ ) does not have a statistically significant relationship with EM.

The country level variable CORR ( $\alpha_4 = 0.0310$ ;  $p < 0.05$ ) has a positive relationship with EM at the 5% level of significance. Consistent to the original findings, this suggests that that EM is more prevalent in countries with higher CORR pervasiveness. The CORR interaction variables, that is, ENV x CORR, SOC x CORR and GOV x CORR do not have statistically significant relationships with EM. Consistent to the original findings, the results suggest that CORR *individually* does not have a significant moderating effect on the relationship between the CSR dimensions and EM.

The interaction term COLL x CORR ( $\alpha_{12} = 1.2519$ ,  $p < 0.01$ ) has a positive and significant relationship on EM at the 1% level of significance. Consistent to the original results, the 2SLS estimation results also suggest that CORR pervasiveness and institutional COLL *jointly* escalate EM. The results concerning the joint effect of institutional COLL and CORR, on the relationship between the CSR dimensions and EM, also remain consistent to the original results. ENV x COLL x CORR ( $\alpha_{13} = -9.3762$ ,  $p < 0.10$ ) has a negative relationship with EM at the 10% level of

significance, suggesting that CORR and COLL *jointly* has a moderating effect on the relationship between ENV and EM. SOC x COLL x CORR ( $\alpha_{14} = 14.2636$ ,  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance, suggesting that COLL and CORR has a *joint* moderating effect on the relationship between SOC and ENV. However, GOV x COLL x CORR ( $\alpha_{15} = -8.6119$ ) does not have a statistically significant relationship with EM.

Consistent to the original results, the firm-level control variable, LEV ( $\alpha_{17} = -0.0407$ ;  $p < 0.01$ ) has a negative relationship with EM at the 1% level of significance, while ROA ( $\alpha_{18} = 0.0533$ ;  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance. The other firm-level control variables (SIZE, RD, MB) have no significant relationship with EM. The country-level control variables, FO ( $\alpha_{21} = 0.1733$ ;  $p < 0.01$ ) and PD ( $\alpha_{22} = 0.2181$ ;  $p < 0.01$ ), both have positive relationships with EM at the 1% level of significance.

Similar to the approach followed for my first two research studies, as reported in Chapters 4 and 5, I perform a test for weak instrument to ascertain the validity of the instruments used for the 2SLS estimation. As reported in Table 6.17, the first stage F-statistic for equation (5) is 14.49. Following the general rule of thumb, it can be established that the instruments are not weak instruments, since the first stage F-statistic is greater than 10.

### ***2SLS estimation results of equation (5)***

Table 6.18 shows the results of the 2SLS estimation of equation (6). Column (1) shows the regression coefficients, while columns (2) and (3) show the standard errors and p-values respectively.

**Table 6.18 2SLS estimation output of equation (6)**

The table presents the 2SLS estimation results of equation (5). The model uses the instruments ENV\_M, SOC\_M and GOV\_M, measured as the median ENV, SOC and GOV respectively, based on Fama-French 48 industry classification. Column (1) presents the regression coefficients, while columns (2) and (3) present the standard errors and p-values respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). ENV, SOC and GOV are the firm-level scores on the environmental, social and governance dimensions of ESG, obtained from Thomson Reuters. COLL and INVPRO are the country-level moderating variables. COLL is the GLOBE measure of institutional collectivism. INVPRO is the strength of INVPRO index for a country from WEF's GCI Historical Data. The firm-level control variables include SIZE, LEV, ROA, RD and MB, and dummy variable to capture industry effects (based on Fama-French 12 industry classification). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ROA is measured as the income before extraordinary items, scaled by lagged total assets. RD refers to R&D intensity, measured as R&D expenses divided by net sales. MB is the market to book ratio. All firm level independent and control variables are centered using group mean centering. The country level control variables include PD and FO, that represent the GLOBE measures of the cultural dimensions of power distance and future orientation respectively. All country level variables are centered using grand mean centering method.

Variables	(1)	(2)	(3)
	EM (coefficient)	Std error	p-value
CONSTANT			
<b><i>Firm level – independent variables</i></b>			
ENV	-0.1660	0.0401	0.0000
SOC	0.1289	0.0384	0.0010
GOV	0.0032	0.0332	0.9230
<b><i>Country level – independent variables</i></b>			
COLL	0.0939	0.0391	0.0160
INVPRO	-0.1026	0.0263	0.0000
<b><i>Interactions</i></b>			
ENV x COLL	-0.6775	0.7626	0.3740
SOC x COLL	1.1533	0.7224	0.1100
GOV x COLL	-0.2126	0.6632	0.7490
ENV x INVPRO	0.5608	0.4031	0.1640
SOC x INVPRO	-0.6900	0.3952	0.0810
GOV x INVPRO	0.0077	0.3400	0.9820
COLL x INVPRO	1.3811	0.5149	0.1070
ENV x COLL x INVPRO	-3.7349	10.1038	0.7120
SOC x COLL x INVPRO	-4.6177	9.6218	0.6310
GOV x COLL x INVPRO	-1.5108	8.6495	0.8610
<b><i>Firm level – control variables</i></b>			
SIZE	-0.0027	0.0023	0.2420
LEV	-0.0437	0.0147	0.0030
ROA	0.0554	0.0168	0.0010
RD	0.0262	0.0215	0.2230
MB	0.0002	0.0007	0.7520
Industry effects	Yes		
<b><i>Country level – control variables</i></b>			
FO	0.2672	0.0578	0.0000
PD	0.1648	0.0360	0.0000
1-stage F-stat	18.65		
N	3,286		
Adjusted R <sup>2</sup>	0.0332		

The results from the 2SLS estimation of equation (6) are largely consistent to the original results. ENV ( $\alpha_1 = -0.1660$ ;  $p < 0.01$ ) has a negative relationship with EM at the 1% level of significance; SOC ( $\alpha_2 = 0.1289$ ;  $p < 0.01$ ) has a positive relationship with EM at the 1% level of significance; GOV ( $\alpha_3 = 0.0032$ ) does not have a statistically significant relationship with EM.

COLL ( $\alpha_4 = 0.0939$ ;  $p < 0.05$ ) has a positive relationship with EM at the 5% level of significance. However, the interaction COLL and the CSR dimensions (that is, ENV x COLL, SOC x COLL and GOV x COLL) do not have statistically significant effects on EM.

INVPRO ( $\alpha_4 = -0.1026$ ;  $p < 0.01$ ) has a negative relationship with EM at the 1% level of significance. Consistent to the original results, the 2SLS estimation results also suggest that INVPRO *individually* has a constraining effect on EM. The results concerning the interaction effects of INVPRO also remain consistent to the original findings. ENV x INVPRO and GOV x INVPRO do not have statistically significant relationships with EM. However, SOC x INVPRO ( $\alpha_7 = -0.6900$ ;  $p < 0.10$ ) has a negative relationship with EM at the 10% level of significance, suggesting that INVPRO *individually* moderates (weakens) the positive relationship between SOC and EM.

Consistent to the original results, the 2SLS estimation results also do not show a statistically significant relationship between COLL x INVPRO ( $\alpha_{12} = 1.3811$ ) and EM. The *joint* interaction of INVPRO and COLL with the CSR dimensions (that is, ENV x COLL x INVPRO, SOC x COLL x INVPRO and GOV x COLL x INVPRO) also do not have a statistically significant effects on EM. Consistent to the original results, the 2SLS estimation results also suggest that COLL and INVPRO *jointly* do not have a statistically significant moderating effect on the relationship between the CSR dimensions and EM.

As discussed earlier, I perform a test for weak instrument to ascertain the validity of the instruments used for the 2SLS estimation of equation (6). As shown in Table 6.18, the first stage F-statistic for equation (6) is 18.65. The first stage F-statistic, being greater than 10, suggests that the instruments used for equation (6) are not weak instruments.

## 6.9 Discussion of Findings

The literature on CSR and EM not only provides inconclusive results on the relationship between overall CSR and EM, but there is also some debate in the literature on the relationship between the CSR dimensions (ENV, SOC and GOV) and EM. To address this issue, the present study examines the relationship between the CSR dimensions and EM in an emerging market context. To capture the effects of the unique social, political and legal challenges that emerging markets experience, the present study examines the CSR-EM relationship in the context of COLL, CORR and INVPRO. This chapter addresses research objective 3, which is to investigate *when* CSR affects EM, by examining the contexts of COLL culture, CORR and INVPRO, in emerging market countries. Research objective 3 is addressed by answering the following three research questions:

*Research Question 3.1:* Does CSR have a significant effect on EM in emerging market countries?

*Research Question 3.2:* Do COLL and CORR, *individually* and *jointly*, have significant effects on the CSR-EM relationship in emerging market countries?

*Research Question 3.3:* Do COLL and INVPRO, *individually* and *jointly*, have significant effects on the CSR-EM relationship in emerging market countries?

Using a sample of 3,472 firm-year observations, the results find support for most of the hypotheses. Regarding research question 3.1, the study finds that the ENV and SOC dimensions of CSR have significant effects on EM, but the overall CSR and GOV dimension do not have a significant effect on EM in emerging market countries. Regarding research question 3.2, the findings suggest that COLL *individually* and *jointly* have significant strengthening effects on the relationship between the CSR dimensions (specifically ENV and SOC), but CORR *individually* does not have a statistically significant effect on the CSR-EM relationship in emerging market countries. Regarding research question 3.3, the study finds that INVPRO *individually* has a weakening effect on the SOC dimension of CSR and EM, but COLL and INVPRO *jointly* do not have an effect on the CSR-EM relationship in emerging market countries. This is the outline of the discussion entailed in the rest of this section. Table 6.19 shows a summary of the research questions, hypotheses and findings.

**Table 6.19 Summary of Research Questions, Hypotheses and Results**

Research Question	Hypothesis	Theory	Expected sign	Results	Conclusion
3.1. Does CSR have a significant effect on EM in emerging market countries?	H3.1a: Consistent with the managerial myopia hypothesis, there is a positive and significant relationship between CSR and EM.	Managerial myopia hypothesis	$\beta_1 = +$ (Equation 4a) $\alpha_1, \alpha_2, \alpha_3 = +$ (Equation 4b)	SOC ( $\alpha_2 = +$ ) has a positive and significant effect on EM	Overall CSR does not have a significant effect on EM, but the ENV and SOC dimensions have contrasting effects on EM
	H3.1b: Consistent with the myopia avoidance hypothesis, there is a negative and significant relationship between CSR and EM.	Myopia avoidance hypothesis	$\beta_1 = -$ (Equation 4a) $\alpha_1, \alpha_2, \alpha_3 = -$ (Equation 4b)	ENV ( $\alpha_1 = -$ ) has a negative and significant effect on EM	
3.2. Do COLL and CORR, <i>individually</i> and <i>jointly</i> , have significant effects on the CSR-EM relationship in emerging market countries?	H3.2: Consistent with the informal institutions perspective, there is a positive and significant relationship between COLL and EM.	Informal institutions perspective	$\alpha_4 = +$ (Equation 5)	COLL ( $\alpha_4 = +$ ) has a positive and significant effect on EM	COLL <i>individually</i> has a strengthening effect on the CSR-EM relationship; CORR <i>individually</i> does not have a significant effect on the CSR-EM relationship; COLL and CORR <i>jointly</i> have a strengthening effect on the CSR-EM relationship
	H3.3: COLL has a significant moderating effect on the relationship between CSR and EM.	Managerial myopia hypothesis / Myopia avoidance hypothesis (stronger/weaker)	$\alpha_6, \alpha_7, \alpha_8 = +/-$ (Equation 5)	COLL has a strengthening effect on the negative relationship between ENV and EM ( $\alpha_6 = -$ ), and the positive relationship between SOC and EM ( $\alpha_7 = +$ )	
	H3.4: Consistent with the informal institutions perspective, there is a positive and significant relationship between CORR and EM.	Informal institutions perspective	$\alpha_5 = +$ (Equation 5)	COLL ( $\alpha_5 = +$ ) has a positive and significant effect on EM	
	H3.5: CORR has a significant moderating effect on the relationship between CSR and EM.	Managerial myopia hypothesis / Myopia avoidance hypothesis (stronger/weaker)	$\alpha_9, \alpha_{10}, \alpha_{11} = +/-$ (Equation 5)	CORR does not have a significant moderating effect on the relationship between the CSR dimensions and EM	
	H3.6: Consistent with the informal institutions perspective, the interaction of COLL and CORR has a positive effect on EM.	Informal institutions perspective	$\alpha_{12} = +$ (Equation 5)	The interaction of COLL and CORR has a positive and significant effect on EM ( $\alpha_{12} = +$ )	
	H3.7: The interaction of COLL and CORR has a significant moderating effect on the relationship between CSR and EM.	Managerial myopia hypothesis / Myopia avoidance hypothesis (stronger/weaker)	$\alpha_{13}, \alpha_{14}, \alpha_{15} = +/-$ (Equation 5)	The interaction of COLL and CORR has a strengthening effect on the negative relationship between ENV and EM ( $\alpha_{13} = -$ ), and the positive relationship between SOC and EM ( $\alpha_{14} = +$ )	

3.3. Do COLL and INVPRO, <i>individually</i> and <i>jointly</i> , have significant effects on the CSR-EM relationship in emerging market countries?	H3.8: Consistent with the formal institutions perspective, there is a negative and significant relationship between INVPRO and EM.	Formal institutions perspective	$\alpha_5 = -$ (Equation 6)	INVPRO ( $\alpha_5 = -$ ) has a negative and significant effect on EM	INVPRO <i>individually</i> has a weakening effect on the CSR-EM relationship; COLL and CORR <i>jointly</i> do not have an effect on the CSR-EM relationship
	H3.9: INVPRO has a significant moderating effect on the relationship between CSR and EM.	Managerial myopia hypothesis / Myopia avoidance hypothesis (stronger/weaker)	$\alpha_9, \alpha_{10}, \alpha_{11} = +/-$ (Equation 6)	INVPRO has a weakening effect on the negative relationship between the positive relationship between SOC and EM ( $\alpha_7 = -$ )	
	H3.10: Consistent with the formal and informal institutions perspectives, the interaction of COLL and INVPRO has a significant effect on EM.	Institutional theory	$\alpha_{12} = +/-$ (Equation 6)	The interaction of COLL and INVPRO does not have a significant effect on EM	
	H3.11: The interaction of COLL and INVPRO has a significant moderating effect on the relationship between CSR and EM.	Managerial myopia hypothesis / Myopia avoidance hypothesis (stronger/weaker)	$\alpha_{13}, \alpha_{14}, \alpha_{15} = +/-$ (Equation 6)	The interaction of COLL and INVPRO does not have a significant effect on relationship between the CSR dimensions and EM	

To address research question 3.1, I test two opposing hypotheses, the managerial myopia hypothesis (suggesting a positive CSR-EM relationship), and the myopia avoidance hypothesis (suggesting a negative CSR-EM relationship). To test the CSR-EM relationship, I use overall CSR as well as the individual CSR dimensions (ENV, SOC and GOV). The results show mixed findings suggesting that the CSR-EM relationship is contextual based on the CSR dimension used. The results suggest that overall CSR and the GOV dimension have no statistically significant relationship with EM. However, the ENV and SOC dimensions have contrasting effects on EM. The results show that the ENV dimension has a negative relationship with EM, but the SOC dimension has a positive relationship with EM. This presents a particularly interesting insight, suggesting that while managers have intrinsic motives behind their engagement in ENV initiatives, they may have more ulterior motives behind their engagement in SOC initiatives.

The negative relationship between ENV and EM is consistent with prior studies (for example, see Amar & Chakroun, 2018; Gerged et al., 2020; Gerged et al., 2021; Heltzer, 2011; Litt et al., 2013; Patten & Trompeter, 2003; Velte, 2021). Consistent with the myopia avoidance hypothesis, the result suggests that managers engaged in ENV initiatives are long-term oriented. This indicates that managers engage in ENV initiatives with genuine intrinsic motives. Managers' myopic avoidance behaviour may result from two motives or drivers. First, consistent to the relationship-driven myopia avoidance perspective, managers engaged in ENV initiatives may avoid EM due to their genuine concern for maintaining relationships with stakeholders. Patten & Trompeter (2003) and Litt et al. (2013) suggest the firms with active involvement in ENV initiatives may experience greater regulatory risks and increased scrutiny report. This may make EM riskier as the risks of exposure is higher. As such, managers engaged in ENV initiatives may avoid EM to avoid risks of potential negative consequences arising from discovery of their EM activities by stakeholders, which in turn may cause irreversible damage to their relationships with stakeholders (for example, see Gerged et al., 2020; Gerged et al., 2021; Litt et al., 2013). Second, consistent to the value-driven myopia avoidance perspective, managers engaged in ENV initiatives may avoid EM due to their intrinsic moral and ethical values. This perspective suggests genuine intrinsic values and concern for the environment motivate managers to engage in ENV initiatives. These same values lead them to avoid engaging in unethical acts like EM.

The positive relationship between SOC and EM is consistent with Gargouri et al. (2010). Consistent with the managerial myopia hypothesis, the result suggests that managers engaged in SOC initiatives are more short-term oriented. This implies that managers may engage in SOC initiatives

with ulterior motives, to make themselves appear good to stakeholders. Managers' myopic behaviour may result from two underlying motives or drivers. First, consistent to the incentive-driven myopia perspective, managers engaged in SOC initiatives have greater incentives to manage earnings to meet short-term targets and please multiple stakeholders, as well as to uphold their reputation. Second, consistent to the opportunity-driven myopia perspective, managers engaged in SOC initiatives may have greater opportunities to manage earnings as their SOC initiatives may create a positive image for them and lower scrutiny over them. Furthermore, as Gargouri et al. (2010) suggest, since SOC initiatives involve a number of employee related aspects, these initiatives may create better relationships between employees and managers. This in turn can result in collusion among managers and employees, creating more opportunities for EM, and reducing chances of whistleblowing by employees to expose managers' involvement in EM (Gargouri et al., 2010).

Overall, in response to research question 3.1, the findings suggest that the CSR dimensions have significant (contrasting) effects on EM in emerging market countries.

Research question 3.2 is addressed by testing 6 hypotheses (H3.2 to H3.7). First, I examine the effect of COLL on EM. The results show that COLL has a positive and significant effect on EM. The result is consistent with prior studies (for example, see Callen et al., 2011; Desender et al., 2011; Douppnik, 2008; Nabar & Boonlert-U-Thai, 2007; Riahi & Omri, 2013; Viana Jr et al., 2021; Zhang et al., 2013) and with the informal institutions perspective, suggesting that in COLL societies, social relations among corporate insiders may give rise to nepotism and collusion, reducing the efficiency of internal control systems and creating more opportunities for corporate insiders to collectively engage in EM for their in-group benefits (for example, see Callen et al., 2011; Lyu et al., 2016; Zhang et al., 2013).

Next, I examine the *individual* effect of COLL on the relationship between the CSR dimensions and EM. The findings show that COLL strengthens the negative relationship between ENV and EM, and the positive relationship between SOC and EM. The findings provide a useful insight, suggesting that culture has an important role in shaping corporate behaviour. In COLL societies, group norms are prioritized over individual beliefs and preferences. In COLL societies, managerial practices are likely to be reciprocated within the organization, as other employees adopt similar practices to maintain group harmony. Thus, COLL creates an informal institution of similar behaviour, beliefs and practices.

The above discussion suggests that when the managerial norm is long-term oriented (myopia

avoidant) and ethical, this is likely to be reflected more prominently within the organization, as employees adopt similar practices forming an informal institution of myopia avoidance behaviour with the firm. Consistent with this interpretation, the present study shows that the negative relationship between ENV and EM becomes stronger in COLL societies. The negative relationship between ENV and EM is consistent to the myopia avoidance (long-term orientation) hypothesis, suggesting that managers engaged in ENV initiatives are likely to avoid EM as they are relationship-driven and/or value-driven. COLL culture makes the myopia avoidance behaviour stronger by making it a corporate norm within the inside network of the firm, encouraging other insiders to adopt similar approaches, and in-turn encouraging managers to continue avoiding myopia.

In contrast when managerial norm is short-term oriented (myopic) and opportunistic, similar practices and attitudes will to be adopted within the corporate insiders, forming an informal institution of myopia, making myopic behaviour more prominent. The results of the present study show that the positive relationship between SOC and EM becomes stronger in COLL societies. The positive relationship between SOC and EM is consistent to the managerial myopia (short-term orientation) hypothesis, suggesting that managers engaged in SOC initiatives are more likely to engage in EM because they are incentive-driven and/or opportunity-driven. COLL culture makes the myopia behaviour stronger, by making myopic behaviour a corporate norm, making it more prominent as other insiders adopt similar practices. Furthermore, collusion and nepotism, within firms in COLL societies, may create further opportunities for EM.

The findings suggest that when managers engage in CSR initiatives with genuine intentions, the informal institutions created by COLL culture strengthens these genuine intentions. In contrast, when managers engage in CSR initiatives with ulterior motives, the informal institutions created by COLL culture makes these ulterior motives worse.

Next, I examine the *individual* effect of CORR on EM and on the CSR-EM relationship. The findings suggest that CORR has a positive effect on EM. Consistent with the literature (for example, see Lewellyn & Bao, 2017; Liu, 2016; Lourenço et al., 2018; Riahi-Belkaoui, 2004; Riahi-Belkaoui & AlNajjar, 2006; Xu et al., 2019) and with the informal institutions perspective, the findings suggest that CORR in the society may make EM practices more prominent. This is because CORR pervasiveness creates an overall unethical atmosphere within business practices, making EM seem more legitimate. As managers engage in rent-seeking behaviour and actions, they may have more incentives to manage earnings to conceal their rent-seeking behaviour (Riahi-Belkaoui, 2004).

However, the results do find sufficient evidence to suggest that CORR *individually* affects the CSR-EM relationship.

Next, I examine the *joint* effect of COLL and CORR on EM, and on the CSR-EM relationship. I find that the interaction of COLL and CORR has a positive effect on EM. First, the result suggests that CORR creates more EM incentives as managers may manage earnings to conceal their rent seeking actions. Second, COLL may provide more EM opportunities as social ties within the corporate insiders may result in collusion among insiders, making it easier to engage in EM for in-group benefits. Thus, consistent with the informal institutions perspective, the findings suggest that COLL and CORR jointly create more EM opportunities and incentives.

The result regarding the *joint* moderating effect suggests that COLL and CORR, *jointly*, strengthen the negative relationship between ENV dimension and EM, and the positive relationship between SOC dimension and EM. This is yet another insightful finding, as it highlights that COLL has a stronger role than CORR in determining managerial behaviour. The results show that while CORR, on its own (i.e., *individually*) does not affect the CSR-EM relationship, CORR, *jointly* with COLL, strengthens the CSR-EM relationship.

Overall, in response to research question 3.2, the results suggest that COLL, *individually*, has a strengthening effect on the CSR-EM relationship, while CORR does not have a significant *individual* effect. COLL and CORR, *jointly*, have a strengthening effect on the CSR-EM relationship.

Research question 3.3 is addressed by testing 4 hypotheses (H3.8 to H3.11). First, I examine, the *individual* effect of INVPRO on EM, and on the CSR-EM relationship. The results suggest that INVPRO *individually* has a negative effect on EM, and a weakening effect on the relationship between the SOC dimension and EM. The result is consistent with prior literature (for example, see Burgstahler et al., 2006; Chih et al., 2008; Haw et al., 2011; Houqe et al., 2012; Leuz et al., 2003; Martínez-Ferrero et al., 2015; Persakis & Iatridis, 2016; Shen & Chih, 2005) and with the formal institutions perspective, suggesting that legal institutions, specifically INVPRO, create corporate norms and practices of transparency, thereby reducing incentives and opportunities for EM. As discussed earlier, the positive relationship between SOC and EM suggest that managers engage in SOC initiatives with ulterior motives. Managers engaged in SOC initiatives are more likely to be myopic (short-term oriented). While SOC initiatives may create more incentives and opportunities for EM, INVPRO reduces incentives for EM and weakens the positive relationship between SOC and EM. INVPRO restricts the ability of corporate insiders (specifically managers and controlling shareholders

in this scenario) to extract private benefits of control. Such restrictions mean that managers have less to hide, thereby reducing incentives to manage earnings (Leuz et al., 2003). This suggests that while SOC initiatives may increase incentive-driven and opportunity-driven myopia, INVPRO creates a formal institution, weakening incentive-driven myopia.

Next, I examine the *joint* effect of COLL and INVPRO on EM and on the CSR-EM relationship. However, the results show that there is no statistically significant *joint* effect. Despite this, the results provide a useful insight, suggesting that COLL has a stronger role than INVPRO on the CSR-EM relationship. While INVPRO, on its own (individually) weakens the positive relationship between SOC and EM (reducing managerial myopia), INVPRO appears to lose its effectiveness in COLL cultures. The effect of COLL cultures, supersedes the effect of INVPRO on changing the relationship between the CSR dimensions and EM.

Overall, in response to research question 3.3, the findings suggest that INVPRO *individually* has a weakening effect on the CSR-EM relationship. However, COLL and INVPRO *jointly* do not have a significant effect on the CSR-EM relationship.

By answering the three research questions discussed above, I address the third and final research objective of this thesis, which is to investigate *when* CSR affects EM, by examining the contexts COLL culture, CORR and INVPRO, in emerging market countries. The findings suggest that there is a negative and significant relationship between the ENV dimension and EM, and a positive and significant relationship between the SOC dimension and EM. By examining the contexts, COLL, CORR and INVPRO, I address the question *when* CSR affects EM in emerging market countries. The findings suggest that COLL, *individually and jointly* with CORR, has a strengthening effect on the relationships between ENV dimensions and EM, and between the SOC dimension and EM. Additionally, the findings also suggest that INVPRO *individually* has a weakening effect on the relationship between the SOC dimension and EM. Thus, in response to the question '*when* does CSR affects EM', the findings suggest that, in emerging market countries, the ENV dimension of CSR has a negative effect on EM - 1) *when* the country has COLL culture; and 2) *when* the country has *joint* COLL culture and CORR. The findings also suggest that, in emerging market countries, the SOC dimension of CSR has a positive effect on EM – 1) *when* the country has COLL culture, 2) *when* the country has *joint* COLL culture and CORR, and 3) *when* the country has low INVPRO. The findings highlight that cultural background (specifically COLL) has a stronger role, in contrast to the political and institutional framework (CORR and INVPRO), in determining managerial behaviour and the CSR-EM relationship.

## 6.10 Chapter Summary

This study addresses research objective 3, by investigating *when* CSR affects EM in the contexts of COLL culture, CORR and INVPRO, in emerging market countries. Using a sample of 3,472 firm-year observations from firms from 10 emerging market countries for the period 2012 to 2016, the study finds evidence of a negative relationship between the ENV dimension and EM, but a positive relationship between the SOC dimension and EM. The result highlights two opposing managerial behaviour perspectives, suggesting that managers, engaged in ENV are long-term oriented (consistent with the myopia avoidance hypothesis), while managers, engaged in SOC initiatives are short-term oriented (consistent with the managerial myopia hypothesis). The results also suggest that COLL culture, individually and jointly with CORR, intensifies the relationships between ENV and EM, and between SOC and EM, while INVPRO weakens the relationship between SOC and EM. Using HLM technique for the multi-level variables, I find support for most of my hypotheses. The study links two institutional theory (to managerial behavioural perspectives, particularly the managerial myopia and the myopia avoidance perspective).

## CHAPTER 7 DISCUSSION AND SUMMARY

### 7.1 Introduction

This study provides an in-depth analysis of the relationship between Corporate Social Responsibility (CSR) and Earnings Management (EM), a widely debated issue in the literature. Prior studies provide inconclusive opinion on the effect of CSR on EM. The present study contributes to the debate, by addressing the questions *why*, *how*, and *when* CSR affects EM, by examining various firm-level and country-level factors that may explain this relationship. The main purpose of this study is to address three main research objectives, by undertaking three research studies – 1) the first study, based on a sample of firms from USA, examines the direct relationship between CSR and EM, and the indirect relationship between CSR and EM via Organization Capital (OC); 2) the second study, also based on a sample of firms from USA, examines the effect of Financial Distress (FD), on the direct CSR-EM relationship and the indirect CSR-EM relationship via OC; 3) the third study examines the CSR-EM relationship in a broader context, using a sample of firms from 10 emerging market countries, and examining the individual and joint effects of Collectivism culture (COLL), Corruption Pervasiveness (CORR) and Investor Protection (INVPRO) on the CSR-EM relationship.

This chapter re-visits the research questions, linking them with the findings obtained from the three research studies, and providing a summary of the main findings. The rest of this chapter is organized as follows: Section 7.2 outlines the research objectives and questions; Section 7.3 comprises a summary of the findings; Sections 7.4 and 7.5 discuss the implications and the limitations of the research respectively, followed by a discussion on some future research directions in Section 7.6. The chapter ends with a summary of the thesis in section 7.7.

### 7.2 Research Objectives and Questions

The main purpose of this study is to examine the relationship between CSR and EM, by addressing *why*, *how*, and *when* CSR affects EM. The research has three main research objectives, addressed by seven research questions.

Research Objective 1 is addressed by undertaking the first research study (reported in Chapter 4), involving a sample of 46,816 firm-year observations from firms in USA, between 2002 and 2017 inclusive. Research Objective 1 is addressed by two research questions as presented below.

**Research Objective 1:** To investigate *why* and *how* CSR affects EM, by examining the direct CSR-EM relationship and indirect CSR-EM relationship via OC.

**Research Question 1.1:** Does CSR have a significant *direct* effect on EM?

**Research Question 1.2:** Does CSR have a significant *indirect* effect on EM via OC?

Research Objective 2 is addressed by undertaking the second research study (reported in Chapter 5), involving a sample of 36,811 firm-year observations from firms in USA, between 2002 and 2017 inclusive. Research Objective 2 is, addressed by two research questions, as presented below.

**Research Objective 2:** To investigate *when* CSR has a direct effect on EM, and *when* CSR has an indirect effect on EM via OC, by examining the context FD.

**Research Question 2.1:** Does FD have a significant effect on the *direct* CSR-EM relationship?

**Research Question 2.2:** Does FD have a significant effect on the *indirect* CSR-EM relationship via OC?

Research Objective 3 is addressed by undertaking the third research study (reported in Chapter 6), involving a sample of 3,472 observations from firms in 10 emerging market countries,<sup>39</sup> between 2012 and 2016 inclusive. Research Objective 3 is addressed by three research questions, as presented below.

**Research Objective 3:** To investigate *when* CSR affects EM, by examining the contexts COLL, CORR and INVPRO in emerging market countries.

**Research Question 3.1:** Does CSR have a significant effect on EM in emerging market countries?

**Research Question 3.2:** Do COLL and CORR, *individually and jointly*, have significant effects on the CSR-EM relationship in emerging market countries?

**Research Question 3.3:** Do COLL and INVPRO, *individually and jointly*, have significant effects on the CSR-EM relationship in emerging market countries?

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<sup>39</sup> The 10 emerging market countries include Brazil, China, India, Indonesia, Malaysia, Russia, South Africa, South Korea, Taiwan and Thailand.

### **7.3 Summary of the Findings**

The present study examines various firm-level and country-level factors to address the questions *why*, *how* and *when* CSR effects EM, and thereby address the existing debate on the CSR-EM relationship. By examining the CSR-EM relationship from a managerial behaviour perspective, the findings of the study make some important contributions to literature and theory. The study has three research objectives, addressed by undertaking three research studies, as outlined in the previous section. This section discusses the summary of the findings. Table 7.1 presents a summary of the research objectives, the research questions, the hypotheses and the findings.

#### **7.3.1 Findings on Research Objective 1**

Research objective 1 is addressed in the first research study that examines whether CSR has a direct relationship with EM, and an indirect relationship with EM via OC. This section discusses the findings on research objective 1, addressed by answering research questions 1.1 and 1.2.

##### *Findings on research question 1.1*

To address research question 1.1, I test two contrasting hypotheses (H1.1a and H1.1b). The results provide support for hypothesis H1.1b, suggesting that CSR has a negative and significant *direct* effect on EM. This is consistent with the majority of the literature that also suggests a negative relationship between CSR and EM (for example, see Almahrog et al., 2018; Bozzolan et al., 2015; Calegari et al., 2010; Chen & Hung, 2021; Cho & Chun, 2015; Chun & Cho, 2017; Faisal et al., 2018; Gao & Zhang, 2015; García-Sánchez et al., 2020; Gerged et al., 2020; Gerged et al., 2021; Gras-Gil et al., 2016; Hong & Andersen, 2011; Kim et al., 2012; Kumala & Siregar, 2020; Li & Xia, 2018; Litt et al., 2013; Martínez-Ferrero et al., 2015; Palacios-Manzano et al., 2019; Patten & Trompeter, 2003; Scholtens & Kang, 2013; Sial et al., 2019; Wang et al., 2018). The negative direct relationship between CSR and EM is consistent with the myopia avoidance hypothesis, suggesting that managers engaged in CSR activities are more long-term oriented and are likely to avoid short termism or myopic actions, such as EM. The negative direct CSR-EM relationship may be – 1) relationship-driven, and/or 2) value-driven.

##### *Findings on research question 1.2*

To address research question 1.2, I examine the indirect relationship between CSR and EM using OC as a mediator. OC is defined as a set of firm-specific and non-transferable intangible resources that include an integration of organizational design, processes, practices, management quality,

knowledge, and culture (for example, see Attig & Cleary, 2014; Carlin et al., 2012; Lev, 2004; Lev & Radhakrishnan, 2005). Before testing the indirect relationship between CSR and EM via OC, I test the individual indirect paths involved in this relationship – 1) the relationship between CSR and OC (H1.2), and 2) the relationship between OC and EM (H1.3).

The findings regarding the indirect paths show that CSR has a positive effect on OC (finding support for H1.2), and OC in turn, has a positive effect on EM (finding support for H1.3). The former is consistent with the resource-based view (RBV) theory and the latter is consistent with the managerial myopia hypothesis. Next, I examine the indirect CSR-EM relationship via OC by using two contrasting hypotheses, based on contrasting views on managerial behaviour, as discussed earlier (that is, managerial myopia hypothesis (H1.4a) and myopia avoidance hypothesis (H1.4b)). The result provides support for hypothesis H1.4a, suggesting that CSR has a positive and significant indirect effect on EM, via the mediator OC. Consistent with the managerial myopia hypothesis, the result suggests that managers engaged in CSR may manage earnings for short-term benefits, by taking advantage of the additional opportunities from OC (such as, superior knowledge, abilities, processes, techniques and design). The positive indirect relationship may be – 1) incentive-driven, and/or 2) opportunity-driven.

### ***Overall findings on research objective 1***

In response to research objective 1, the findings suggest that CSR has a negative direct effect on EM but a positive indirect effect on EM via OC. The study contributes to the existing literature on CSR, EM and OC, by linking these concepts together. To the best of my knowledge, the present study is the first to disintegrate the CSR-EM relationship and individually examine the direct and indirect relationships between CSR and EM. The negative direct relationship between CSR and EM adds to the existing CSR-EM literature by explaining this relationship from a managerial behaviour perspective. The study suggests that managers engaged in CSR are less likely to manage earnings (directly) because of their myopia avoidant behaviour (long-term orientation). The study further explains two underlying motives (drivers) behind managers myopia avoidance behaviour, suggesting that managers engaged in CSR are less likely to manage earnings because – 1) their genuine concerns about maintaining long-term relationships with stakeholders lead them to reduce agency costs, such as EM (relationship-driven myopia avoidance); and/or 2) their strong ethical and moral values lead them to avoid unethical acts, such as EM (value-driven myopia avoidance).

The study finds that when firms have high OC, the relationship between CSR and EM can completely

change. Specifically, the results suggest a positive indirect relationship between CSR and EM via OC. This shows that managerial behaviour and underlying motives vary with OC. In general, CSR has a *direct* constraining role (negative effect) on EM, as managers tend to be myopia avoidant (long-term oriented). However, in firms with high OC, managers tend to be more myopic (short-term oriented), as they may engage in CSR with ulterior motives, managing more earnings indirectly by using the additional opportunities from high OC. The managerial myopia hypothesis posits a contrasting perspective on the CSR-EM relationship, suggesting that managers engaged in CSR may manage earnings more as they are myopic (short-term oriented). Managerial myopia may be explained by two underlying motives (drivers) created by – 1) greater incentives to manage earnings to meet short term targets and please stakeholders, as well as uphold managerial reputation (incentive-driven myopia), and/or 2) greater opportunities to manage earnings from lower scrutiny resulting from CSR performance creating a positive image (opportunity-driven myopia). High OC may add to these incentives and opportunities. Managers in firms with high OC may experience greater pressures and higher expectations from stakeholders due to their firms' unique abilities. Failure to meet these expectations may tarnish managers' reputation, and thus, managers have incentives to manage earnings and report favourable financial information. Furthermore, the unique abilities of the firms (such as, superior, techniques, processes, designs, managerial practices and knowledge, that is, high OC) provide more EM opportunities. Managers in firms with high OC have better knowledge and understanding of the firms' internal control systems, and thus manage earnings using more sophisticated techniques. Thus, the results suggest that in firms with high OC, managers engaged in CSR opportunistically use their firms' unique abilities (that is, OC) to manage more earnings.

The findings on the indirect relationship between CSR and EM via OC, provide new insights into the CSR-EM literature, explaining *why and how* CSR affects EM. In response to *why* CSR affects EM, the findings suggest that managers engaged in CSR are more likely to (indirectly) manage earnings because they may be driven by short-term incentives (incentive-driven myopia), such as meeting quarterly earnings targets and upholding their reputation to please multiple stakeholders. In response to *how* CSR affects EM, the findings suggest that managers engaged in CSR may take advantage of additional opportunities that come with high OC, to (indirectly) manage more earnings (opportunity-driven myopia).

### **7.3.2 Findings on Research Objective 2**

Research objective 2, addressed in the second research study, examines whether the direct CSR-EM relationship and the indirect CSR-EM relationship change during Financial Distress (FD). FD

represents situations when firms have insufficient assets to fulfill their outstanding debts (Baldwin & Mason, 1983). FD is a relevant issue in recent times, as businesses continue to struggle financially as a result of the Covid-19 outbreak since early 2020 (for example, see Sundaram, 2020). This section discusses the findings on research objective 2, addressed by answering research questions 2.1 and 2.2.

### ***Findings on research question 2.1***

To address research question 2.1, I test two hypotheses – H2.1 (testing the effect of FD on EM) and H2.2 (testing the effect of FD on the direct CSR-EM relationship). The results do not provide support for either of the two hypotheses, that is, the findings do not provide sufficient evidence to suggest that FD has a significant effect on EM, or on the direct relationship between CSR and EM.

### ***Findings on research question 2.2***

To address research question 2.2, I examine the effect of FD on the indirect relationship between CSR and EM via the mediator OC. Before testing the effect of FD on the indirect relationship between CSR and EM via OC, I test the effect of FD on the individual indirect paths involved, that is, the effect of FD on – 1) the relationship between CSR and OC (H2.4), and 2) the relationship between OC and EM (H2.5). Prior to testing H2.4 and H2.5, I examine the effect of FD on OC, using two contrasting hypotheses - H2.3a (the RBV theory) and H2.3b (the slack resources theory). The results find support for hypothesis H2.3a, suggesting that FD has a positive effect on OC, consistent with the RBV.

The findings related to the two indirect paths show that FD has significant moderating (weakening) effects on – 1) the relationship between CSR and OC (first-stage moderation), consistent with the slack resources theory and providing support to H2.4, and 2) the relationship between OC and EM (second-stage moderation), consistent with the managerial myopia hypothesis and providing support for H2.5. Next, I examine the effect of FD on the indirect relationship between CSR and EM via OC (moderated mediation, tested by hypothesis H2.6). The results provide support for H2.6, suggesting that FD has a significant moderating (weakening) effect on the positive indirect CSR-EM relationship via OC, that is, FD weakens managerial myopic behaviour (weaker short-term orientation). This suggests that during FD, managerial behaviour and underlying motives change, due to changes in priorities. In firms with high OC, managers are likely to have greater ability and knowledge to more effectively manage their limited funds in ways that will assist their firm's recovery. Thus, spending on CSR activities opportunistically to manage more earnings may not be a

priority when firms are in distress.

### ***Overall findings on research objective 2***

In response to research objective 2, the findings suggest that FD weakens the positive indirect relationship between CSR and EM via OC but does not change the negative direct relationship between CSR and EM. By linking FD to the key issues – CSR, EM and OC, the study contributes to the existing literature on all four areas – CSR, EM, OC and FD. To the best of my knowledge, this is the first study to examine the moderating effect of FD on the direct CSR-EM relationship and the moderated mediating effect of FD on the indirect CSR-EM relationship. The findings provide insights into changes in managerial behaviour during crisis situations, by showing that the positive indirect CSR-EM relationship via OC weakens during FD. This indicates that during FD, managers' incentive-driven myopia behaviour becomes less prominent (less short-term oriented). FD leads to a change in priorities, in turn changing managerial motives and incentives. The result is in contrast to the general assumption that managers' opportunistic behaviour typically increases during FD. The results particularly highlight an important role of OC in shaping managerial behaviour during crisis. The findings suggest that during FD managers engaged in CSR are less likely to use their firms' unique abilities to manage earnings. In high OC firms, managers have better knowledge and understanding of the potential damaging consequences to manage earnings during FD. Thus, during FD, managers engaged in CSR may take advantage of their firm's unique abilities and limited resources to aid the firm's recovery. This suggests that managers' underlying motives and incentives change during FD, that is incentive-driven myopia weakens.

By addressing research objective 2, the findings provide insights into the questions – 1) *when* CSR affects EM directly, and 2) *when* CSR affects EM indirectly via OC. In response to the first question (*when* CSR affects EM directly), the findings suggest that FD does not change managerial long-term orientation (myopia avoidant behaviour). According to this view, managers engaged in CSR are less likely to manage earnings, regardless of the firm's financial state. They may have greater concern for their stakeholders (relationship-driven), and/or stronger ethical and moral values (value-driven). In response to the second question (*when* CSR affects EM indirectly), the findings suggest that managers engaged in CSR may opportunistically use the additional benefits of OC to manage earnings *when* their firm is financially stable. However, *when* their firm is in distress, they are less likely to use CSR opportunistically to manage earnings via OC. This suggests that while managers may be more myopic (short-term oriented) when their firm is financially stable, their myopic

behaviour and actions become less prominent when their firm is financially distressed.

### **7.3.3 Findings on Research Objective 3**

Research objective 3, addressed in the third research study, aims to – 1) examine the CSR-EM relationship in a broader context, using 10 emerging market countries, and 2) to examine whether the CSR-EM relationship changes with the unique cultural, political and legal challenges in emerging markets. To this end, I examine the moderating effects of COLL (to capture the cultural challenges), CORR (to capture the political challenges) and INVPRO (to capture the legal and policymaking challenges) on the CSR-EM relationship. Additionally, I examine the *joint* effects of COLL and CORR, and of COLL and INVPRO on the CSR-EM relationship. This section discusses the findings on research objective 3, addressed by answering research questions 3.1, 3.2 and 3.3.

#### **Findings on research question 3.1**

To address research question 3.1, I test two contrasting hypotheses - H3.1a (managerial myopia hypothesis) and H3.1b (myopia avoidance hypothesis). The results provide partial support for both hypotheses. In particular, the result suggests that the individual CSR dimensions have contrasting effects on EM, while overall CSR does not have a statistically significant effect on EM in emerging markets. The environmental (ENV) dimension has a negative effect on EM, providing support for H3.1b. This result suggests that managers with ENV initiatives are more long-term oriented and less likely to manage earnings for short-term objectives, consistent with the myopia avoidance hypothesis. Managers engaged in ENV may be more relationship-driven and/or value-driven, as discussed earlier. In contrast, the social (SOC) dimension has a positive effect on EM, suggesting that managers engaged in SOC initiatives are more short-term focussed, consistent with the managerial myopia hypothesis and providing partial support to H3.1a. This suggests that managers' engagement in SOC initiatives may be incentive-driven and/or opportunity-driven, as discussed earlier. The results highlight that managers have different underlying motives behind their engagement in ENV and SOC initiatives.

#### **Findings on research question 3.2**

Research question 3.2 is addressed using hypotheses H3.2 to H3.7. Hypotheses H3.2 and H3.3 test the effects of COLL on EM and on the CSR-EM relationship respectively. The results do not provide support for H3.2 but provide partial support for H3.3. The result shows evidence that COLL strengthens the negative relationship between ENV and EM and the positive relationship between

SOC and EM. This suggests that in COLL societies, as group norms are valued more than individual interests, top level management behaviour becomes a norm that is reciprocated within the inside network of the firm, forming an informal institution of similar practices. This is applicable to both ethical and unethical behaviour. When managers have myopia avoidant behaviour (long-term orientation), COLL culture creates an informal institution where corporate insiders adopt similar behaviour and practices, making myopia avoidance more prominent. Consistent to this interpretation, the findings of the present study indicate that the negative relationship between ENV and EM becomes stronger in COLL societies. The result suggests that while managers engaged in EM manage less earnings due to relationship-driven myopia avoidance and/or value-driven myopia avoidance, COLL strengthens relationship-driven myopia avoidance, by creating informal institutions where group norms and harmony within groups are prioritized.

In contrast, when managers have myopic behaviour (short-term orientation), COLL culture creates an informal institution with myopic behaviour and opportunistic practices being more prevalent. Furthermore, there may be more nepotism and collusion within firms in COLL societies, that may reduce the effectiveness of internal control systems, thus creating more opportunities for EM. Consistent with this interpretation, the findings of this study show that the positive relationship between SOC and EM is stronger in COLL societies. The result suggests that while managers engaged in SOC initiatives are more likely to manage earnings due to incentive-driven myopia and/or opportunity-driven myopia, COLL strengthens both incentive-driven myopia and/or opportunity-driven myopia. By creating informal institutions where managers may have higher incentives to engage in EM for collective benefits of the corporate insiders, COLL strengthens incentive-driven myopia. By creating informal institutions where collusion among insiders may be more common, COLL strengthens opportunity-driven myopia.

Hypotheses H3.4 and H3.5 test the effects of CORR on EM and on the CSR-EM relationship respectively. The findings provide support for H3.4, but no support for H3.5. Consistent with the informal institutions perspective, this suggests that CORR increases the likelihood of EM, as managers may manage earnings to mask their rent-seeking actions. However, the relationship between the CSR dimensions and EM do not change with the level of CORR.

Hypotheses H3.6 and H3.7 test the joint effects of COLL and CORR on EM and on the CSR-EM relationship respectively. The findings provide support for H3.6 and partial support for H3.7. The results suggest that in countries with joint COLL and CORR characteristics, EM is more prevalent.

The joint effect of COLL and CORR also strengthens the relationship between the CSR dimensions (ENV and SOC) and EM. Since CORR does not have an individual effect, but has a joint effect with COLL on the CSR-EM relationship, this suggests that COLL has a stronger role in determining managerial behaviour than CORR.

### ***Findings on research question 3.3***

Research question 3.3 is addressed by testing hypotheses H3.8 to H3.11. Hypotheses H3.8 and H3.9 test the effects of INVPRO on EM and on the CSR-EM relationship respectively. The findings provide support for H3.8, and partial support for H3.9. The findings suggest that INVPRO lowers the opportunities for EM, consistent with the social norm theory. Additionally, the results also suggest that INVPRO weakens the positive relationship between SOC and EM, suggesting that with stronger institutional factors, managements' opportunities to use SOC initiative opportunistically to manage earnings is significantly reduced. Thus, INVPRO weakens opportunity-driven managerial myopic behaviour.

Hypotheses H3.10 (a and b) and H3.11 test the joint effects of COLL and INVPRO on EM and on the CSR-EM relationship respectively. The findings do not provide support for any of these hypotheses, that is, the result does not provide sufficient evidence to suggest that the joint effect of COLL and INVPRO changes the CSR-EM relationship. This, once again, highlights that COLL has a stronger role in determining managerial behaviour and the CSR-EM relationship. While INVPRO, on its own, effectively weakens the positive relationship between SOC initiatives and EM, INVPRO loses its effectiveness in COLL societies.

### ***Overall findings on research objective 3***

In response to research objective 3, the findings suggest that in emerging market countries, there is a negative relationship between the ENV dimension and EM and a positive relationship between SOC and EM. COLL, *individually* and *jointly* with CORR, has a strengthening effect on the relationship between the CSR dimensions (ENV and SOC) and EM, while INVPRO *individually* has a weakening effect on the relationship between the SOC dimension and EM. The findings of the present study add to the literature examining international differences on the CSR-EM relationship by examining this issue using a sample of firms from 10 emerging market countries.

The findings suggest that in emerging market countries, managers may have different underlying

motives behind engaging in different CSR initiatives. The findings suggest that managers engaged in ENV initiatives are likely to be myopia avoidant (long-term oriented), managing less earnings. However, managers engaged in SOC initiatives are likely to be more myopic (short-term oriented), managing more earnings.

The study also adds to the literature on COLL, CORR and INVPRO by linking them to CSR and EM. To the best of my knowledge, this is the first study to examine the effect of COLL and CORR, individually and jointly, on EM. The study also links INVPRO individually and jointly with COLL to the CSR-EM relationship. The findings provide interesting insights, suggesting that culture has a stronger role than CORR or institutional framework in determining managerial behaviour and motives. The findings highlight that the unique challenges in emerging markets (specifically COLL, CORR and INVPRO) can change the relationship between the CSR dimensions and EM. This addresses the question *when* CSR affects EM in a broader context (emerging market countries). The SOC dimension of CSR increases EM, *when* the country is characterised by – 1) high COLL culture, and 2) high COLL and high CORR jointly, and 3) low INVPRO. The ENV dimension of CSR decreases EM, *when* the country is characterised by high COLL and high CORR at the same time.

**Table 7.1 Summary of Research Questions, Hypotheses and Findings**

Research Objectives	Research Questions	Hypothesis	Hypothesis Supported/Not supported	Findings
1. To investigate <i>why</i> and <i>how</i> CSR affects EM, by examining the direct CSR-EM relationship and indirect CSR-EM relationship via OC.	1.1. Does CSR have a significant <i>direct</i> effect on EM?	H1.1a: Consistent with the managerial myopia hypothesis, there is a positive and significant <i>direct</i> relationship between CSR and EM.	Not supported	Consistent with the myopia avoidance hypothesis, CSR has a <b>negative</b> and significant <b>direct effect</b> on EM
		H1.1b: Consistent with the myopia avoidance hypothesis, there is a negative and significant <i>direct</i> relationship between CSR and EM.	Supported	
	1.2. Does CSR have a significant <i>indirect</i> effect on EM via OC?	H1.2: Consistent with the RBV theory, there is a positive and significant relationship between CSR and OC.	Supported	Consistent with the RBV theory, CSR has <b>positive</b> and significant <b>effect</b> on OC
		H1.3: Consistent with the managerial myopia hypothesis, there is a positive and significant relationship between OC and EM.	Supported	Consistent to the managerial myopia hypothesis, OC has <b>positive</b> and significant <b>effect</b> on EM
		H1.4a: Consistent with the managerial myopia hypothesis, there is a positive and significant <i>indirect</i> relationship between CSR and EM, via the mediator OC.	Supported	Consistent with the managerial myopia hypothesis, CSR has <b>positive</b> and significant <b>indirect effect</b> on EM
		H1.4b: Consistent with the myopia avoidance hypothesis, there is a negative and significant <i>indirect</i> relationship between CSR and EM, via the mediator OC.	Not supported	
2. To investigate <i>when</i> CSR has a direct effect on EM, and <i>when</i> CSR has an indirect effect on EM via OC, by examining the context FD.	2.1. Does FD have a significant effect on the <i>direct</i> CSR-EM relationship?	H2.1: Consistent with the managerial myopia hypothesis, there is a positive and significant relationship between FD and EM.	Not supported	FD does not have a statistically significant effect on EM
		H2.2: FD has a significant moderating effect on the <i>direct</i> relationship between CSR and EM.	Supported	FD does not have a statistically significant moderating effect on the <i>direct relationship</i> between CSR and EM
	2.2. Does FD have a significant effect on the <i>indirect</i> CSR-EM relationship via OC?	H2.3a: Consistent with the RBV theory, there is a positive and significant relationship between FD and OC.	Supported	Consistent with the RBV theory, FD has a <b>positive</b> and significant <b>effect</b> on OC
		H2.3b: Consistent with the slack resource theory, there is a negative and significant relationship between FD and OC.	Not supported	
		H2.4: FD has a significant moderating effect on the relationship between CSR and OC.	Supported	FD has a moderating ( <b>weakening</b> ) effect on the <b>positive relationship</b> between CSR and OC
		H2.5: FD has a significant moderating effect on the relationship between OC and EM.	Supported	FD has a moderating ( <b>weakening</b> ) effect on the <b>positive relationship</b> between OC and EM
		H2.6: FD has a significant moderating effect on the <i>indirect</i> relationship between CSR and EM, via the mediator OC.	Supported	FD has a moderating ( <b>weakening</b> ) effect on the <b>positive indirect relationship</b> between CSR and EM via OC.

Research Objectives	Research Questions	Hypothesis	Hypothesis Supported/Not supported	Findings
3. To investigate <i>when</i> CSR affects EM, by examining the contexts COLL, CORR and INVPRO in emerging market countries.	3.1. Does CSR have a significant effect on EM in emerging market countries?	H3.1a: Consistent with the managerial myopia hypothesis, there is a positive and significant relationship between CSR and EM.	Partially supported	Consistent with the managerial myopia hypothesis, SOC has <b>positive</b> and significant effect on EM
		H3.1b: Consistent with the myopia avoidance hypothesis, there is a negative and significant relationship between CSR and EM.	Partially supported	Consistent with the myopia avoidance hypothesis, ENV has a <b>negative</b> and significant effect on EM
	3.2. Do COLL and CORR, <i>individually and jointly</i> , have significant effects on the CSR-EM relationship in emerging market countries?	H3.2: Consistent with the informal institutions perspective, there is a positive and significant relationship between COLL and EM.	Supported	COLL has a statistically <b>positive</b> and significant effect on EM
		H3.3: COLL has a significant moderating effect on the relationship between CSR and EM.	Partially supported	Consistent with the informal institutions perspective, COLL has a moderating ( <b>strengthening</b> ) effect on the negative relationship between ENV and EM, and on the positive relationship between SOC and EM
		H3.4: Consistent with the informal institutions perspective, there is a positive and significant relationship between CORR and EM.	Supported	Consistent with the informal institutions perspective, CORR has a <b>positive</b> and significant <b>effect</b> on EM
		H3.5: CORR has a significant moderating effect on the relationship between CSR and EM.	Not supported	CORR does not have a statistically significant moderating effect on the relationship between CSR and EM
		H3.6: Consistent with the informal institutions perspective, the interaction of COLL and CORR has a positive effect on EM.	Supported	The interaction of COLL and CORR has a <b>positive</b> and significant <b>effect</b> on EM
	3.3 Do COLL and INVPRO, <i>individually and jointly</i> , have significant effects on the CSR-EM relationship in emerging market countries?	H3.7: The interaction of COLL and CORR has a significant moderating effect on the relationship between CSR and EM.	Partially supported	The interaction of COLL and CORR has a moderating ( <b>strengthening</b> ) effect on the negative relationship between ENV and EM, and the positive relationship between SOC and EM
		H3.8: Consistent with the formal institutions perspective, there is a negative and significant relationship between INVPRO and EM.	Supported	Consistent with the formal institutions perspective, INVPRO has a <b>negative</b> and significant <b>effect</b> on EM
		H3.9: INVPRO has a significant moderating effect on the relationship between CSR and EM.	Partially supported	Consistent with the formal institutions perspective, INVPRO <b>weakens</b> the <b>positive relationship</b> between SOC and EM
		H3.10: Consistent with the institutional theory, the interaction of COLL and INVPRO has a significant effect on EM.	Not supported	The interaction of COLL and INVPRO does not have a statistically significant effect on EM
H3.11: The interaction of COLL and INVPRO has a significant moderating effect on the relationship between CSR and EM.		Not supported	The interaction of COLL and INVPRO does not have a statistically significant moderating effect on the relationship between CSR and EM	

## **7.4 Implications of the Findings**

The findings of this study have several important implications to theory and practice. This section discusses the theoretical and practical implications.

### **7.4.1 Theoretical Implications**

There is no defined theoretical framework explaining the CSR-EM relationship. Several studies have explained the CSR-EM relationship from the perspectives of traditional accounting theories, such as, stakeholder theory and agency theory. The present study looks at managerial behaviour perspectives, and thus, adds to the stakeholder and agency theories by focussing more on specific managerial behaviour, driven by motives. The study does not dismiss the ideas of the stakeholder theory and the agency theory, but rather adds to them using managerial behaviour perspectives and underlying motives. The findings enrich the CSR-EM literature by explaining the CSR-EM relationship from the perspective of a consistent theoretical framework, based on managerial behaviour. I posit that while prior studies have looked at various managerial motives, it is important to understand managerial behaviour which is driven by the various motives. Thus, I examine the CSR-EM relationship from two opposing perspectives of managerial behaviour – namely, 1) managerial myopia hypothesis (suggesting that managerial behaviour is short-term oriented), and 2) myopia avoidance hypothesis (suggesting that managerial behaviour is long-term oriented). Furthermore, I explain each of these managerial behaviour or orientation as driven by various motives. First, managerial myopia (short-term orientation) may be – 1) incentive-driven, and/or 2) opportunity-driven. Second, myopia avoidance (long-term orientation) may be – 1) relationship-driven, and/or 2) value-driven.

The findings suggest that managerial behaviour and underlying motives change in various contexts. I find a negative direct relationship between CSR and EM among firms in USA. Consistent with the managerial myopia hypothesis, this suggests that in general, managers engaged in CSR, are long-term oriented (myopia avoidant). However, I find that managerial behaviour and underlying motives change when the firm has high OC, thus making the CSR-EM relationship contextual in nature. The findings suggest a positive indirect relationship between CSR and EM via OC, consistent with the managerial myopia hypothesis. The results suggest that managers become myopic (or engage in short termism behaviour) in firms with high OC. They may leverage on their firms' unique abilities (that is OC) and use CSR to indirectly manage earnings more. The study also enriches the managerial

behaviour perspectives (myopia and myopia avoidance) by suggesting that crisis situations, specifically FD, weaken managerial myopia (that is, weaken short-term orientation). Specifically, the study finds FD weakens the positive indirect relationship between CSR and EM via OC.

Next, the present study also finds that managerial behaviour may vary with the CSR dimensions in emerging market countries. The findings show that managers, engaged in ENV initiatives are myopia avoidant (long-term oriented) and less likely to manage earnings. However, managers engaged in SOC initiatives are myopic (short-term oriented) and more likely to manage earnings. Furthermore, the study links the institutional theory to managerial behaviour (that is, myopia versus myopia avoidance) and explains how different country-level contexts may change managerial behaviour. The study finds that in emerging market countries, COLL culture, *individually* and *jointly* with CORR, creates informal institutions that strengthen the relationships the CSR dimensions and EM. In contrast INVPRO creates formal institutions, weakening managerial myopia behaviour.

#### **7.4.2 Practical implications**

The findings of this study have important practical implications for investors and other stakeholders, policymakers, regulators, auditors, and academics.

Investors and other stakeholders (such as, creditors) are considered to be the main users of financial statements. They often view managers' engagement in CSR as a reflection of management's ethics and transparency of the financial information that managers present. Thus, CSR is often used as a basis to build trust when evaluating the relevance and faithful representation of financial information. However, the findings of this study show evidence that high CSR does not always constrain managers' engagement in EM. On the contrary, managerial behaviour is driven by their underlying motives in different situations. Thus, investors should assess CSR practices with caution and not evaluate the reliability and faithful representation of financial information solely based on CSR disclosures and practices. In order to reduce their investment risk and potential losses, investors and creditors should not take it for granted that CSR is an indicator of management's ethical disposition; they should rather dig deep to understand the underlying managerial motives in light of the firm's unique circumstances, including the specific internal ability, knowledge, organizational design and culture of firms, unusual circumstances, such as FD, and broader macro-level characteristics, such as culture, corruption levels and institutional framework of the country.

The findings also have important implications for policymakers and regulators. The CSR-EM

relationship is contextual on the underlying managerial motives and opportunities. Thus, simply implementing stricter policies is not sufficient, as policymakers and regulators need to assess the firms' situations on a case-by case basis. The findings suggest that when it comes to regulations and policies towards constraining EM, a one-size-fits-all approach may not be effective due to situational motives (Kyaw et al., 2017). This is evidenced by, for example, the Sarbanes Oxley Act (2002) in USA that was implemented to inhibit EM opportunities, yet firms continue managing earnings (Zhang et al., 2013). Furthermore, the global convergence to uniform accounting practices was led by the adoption of the International Financial Reporting Standards (IFRS) by firms across the globe. However, the IFRS, in itself, may not be sufficient to improve financial reporting quality, as EM may still result from a wide range of managerial motives (Han et al., 2010; Paredes & Wheatley, 2017). These pieces of evidence, combined with the findings of the present study, suggest that it is important to customise the policies to fit the unique context. This study identifies some unique contexts that may affect managerial behaviour and the CSR-EM relationship. In developed countries (specifically USA) managerial motives and opportunities may vary based on organizational contexts such as, the firm's unique abilities and financial situation, while in emerging market countries managerial motives and opportunities largely vary based on the institutional environment, culture, and pervasiveness of corruptive practices in the society. Stricter policies and greater scrutiny by regulators are required in these specific contexts. Changing a country's legal system or institutional framework is not easy. Therefore, the present study suggests that it is essential, and less costly to understand managerial behaviour and the underlying motives in determining policies on CSR and EM. The findings also provide specific insights on the role of individual CSR dimensions, specifically ENV and SOC, in determining EM in emerging market countries. The findings suggest that different CSR initiatives may be undertaken with different agendas. In particular, the findings indicate that it may be beneficial for policymakers to encourage ENV initiatives in emerging market countries, as it has a negative effect on EM, despite high COLL and CORR levels. On the other hand, additional criteria may be required for firms engaged in social initiatives in emerging market countries, as SOC is positively related to EM. Regulators may wish to exert more scrutiny on firms with SOC initiatives.

The findings also have important implications for auditors, as they present a framework with varying situational influences on managerial motives for EM engagement. In order to reduce audit risk, auditors may wish to undertake more substantive audit procedures for firms with high EM motives and opportunities, particularly firms with high OC and firms operating in countries with COLL and high CORR.

Finally, the findings of the present study may be useful for academics and researchers interested in understanding the CSR-EM relationship from a managerial behaviour perspective. The present study provides an initial framework for disintegrating the CSR-EM relationship into direct and indirect relationships, and also for the situational factors influencing the CSR and EM relationship both in developed and emerging market countries. This initial framework may provide a foundation for future research and discussion. Section 7.6 discusses several future research ideas.

## **7.5 Limitations of the Study**

Like any research, the present study is subject to some limitations. The first limitation is a limitation on the sample. Since the samples include only publicly listed firms (from USA and emerging market countries listed on the Datastream database) with CSR information, this restricts the sample to mostly large firms. This also limits my sample size and sample period. For the first two research studies, the sample period begins from 2002, since CSR information is not available prior to 2002 for USA firms in the Datastream database. For the third research study, based on an emerging market sample, the sample size is restricted 3,472 observations from 10 countries due to the unavailability of CSR information for a large number of firms in emerging market countries. The sample period for the third study is subject to further restriction due to the country-level variables. Since CORR data (from Transparency International) is only available from 2012, and INVPRO data (from World Economic Forum's Global Competitiveness Index Historical data) is only available until 2016, this limits the period of observation to include 2012 to 2016 for my third research study.

The second limitation is a limitation on the measurement of variables. The study uses secondary data for all variables. Thus, the results of the study may be subject to measurement errors that may exist in the computation of these variables. The study examines EM based on accruals-based measures (that is, the modified Jones model and the accruals quality model). The study does not consider other types of EM, such as real earnings management (REM), expense misclassifications, inappropriate revenue recognitions, big bath charges and cookie jar reserves. Future studies may consider using other EM measures. Furthermore, CSR lacks a consistent measure (see Kolsi & Attayah, 2018). While ESG data obtained from Thomson Reuters database is believed to be reliable and accurate, it may be subject to measurement errors. However, other methods of CSR, specifically CSR disclosures and/or content analysis procedures could be more problematic due to their subjective nature (for example, see Pratiwi & Siregar, 2019; Velte, 2019). The OC measure in the

present study is largely based on selling, general and administrative (SGA) expenses. This can potentially lead to mechanical correlations. This is because after spending on CSR, firms may have limited resources to spend on other activities, such as SG&A expenses. Additionally, the measurement of FD may be problematic. Since different measures of FD indicate different aspects of financial trouble of firms, the study uses a single measure for FD. This may cause potential issues on the generalizability of the results, using other FD measures.

The third limitation is a limitation in scope. The results of the present study may be subject to limitations in generalisation across other contexts. The results of the first two research studies, examining the direct and indirect CSR-EM relationships via OC and the effect of FD are applicable to USA and other countries with similar institutional contexts. However, the results may not be generalizable to other institutional contexts, such as emerging markets. Likewise, the results of the third research study, based on emerging markets, may be applicable to emerging market countries only and may not be applicable to developed economies. Furthermore, as noted by Kim et al. (2019), CSR is rapidly changing, particularly in emerging markets. Thus, any noteworthy changes in CSR practices may change the validity of my findings. Additionally, CSR is now mandated in many emerging market jurisdictions, such as Indonesia, China and India, for specific firm types. The present study does not specifically look at the role of mandatory CSR

Notwithstanding these limitations, the study provides important insights into the CSR-EM relationship from managerial behaviour perspectives. The limitations encourage several future research directions, as discussed in the next section.

## **7.6 Future Research Directions**

The present study opens up several avenues for future research. Some natural extensions of the present study could be to look at individual CSR dimensions when examining the indirect CSR-EM relationship, or even further breakdown of the CSR dimensions into specific issues, such as, human rights, resource use and emissions. Examination of signed accruals as opposed to absolute discretionary accruals could also be useful. Furthermore, other EM measures can be used, such as REM, expense misclassifications, inappropriate revenue recognitions, big bath charges, and cookie jar reserves.

In addition to the natural extensions discussed above, the present study opens up several other

future research ideas. While the present study provides an initial framework for the indirect CSR-EM relationship via OC, future studies could explore the indirect relationship further by examining other factors that may be an indirect channel in this relationship. For example, future studies may explore other components of intellectual capital (human capital and/or relational capital). Furthermore, the indirect CSR-EM relationship may be explored across different ownership types (such as, concentrated ownership, managerial ownership, and family ownership) and across different industries. Furthermore, consistent to the limited resource argument, firms with CSR may have limited resources that may in turn impact their financial performance. Thus, these firms may have higher incentives to manage earnings upwards. Thus, in line with this view, future studies could explore mediating variables such as cash and financial flexibility.

While the present study explores the moderated mediation effect of FD on the direct and indirect CSR-EM relationship, future studies can look at other more severe aspects of financial trouble such as, bankruptcy filings, or macro-level events, such as economic distress. Furthermore, CSR-EM research post-Covid19 may be an interesting extension to the present study. The present study looks at the effect of FD on the CSR-EM relationship (direct and indirect) using a pre-Covid19 sample. A comparison of ex ante and ex post Covid-19 on managerial behaviour and motives driving the CSR-EM relationship may be a strong contribution for future studies. Social distancing and remote working conditions have become a common practice since the outbreak of the Covid-19 pandemic, making digitalisation essential (Deloitte, 2021). An expected outcome of this is a change in the means of collecting, managing, and sharing data using technology. Integration of blockchain technology within firms is expected to become a mainstream practice (Deloitte, 2021). Future research can examine the effect of such technological innovations, such as the blockchain technology, on the direct and indirect CSR-EM relationship. Furthermore, it would also be interesting to see other exogenous shocks, such as the American Jobs Creation Act of 2004, used as measures of FD.

The present study uses a multi-level analysis to examine the CSR-EM relationship in emerging market countries. Further multi-level research may be useful in emerging market countries. While the present study examines the role of COLL, CORR and INVPRO on the CSR-EM relationship, future studies may examine other macro-level factors, such as country-level accounting standards, economic development, geographical location, language and religion. Future studies can also examine other cultural dimensions, in addition to COLL, such as, Power Distance, Long-term Orientation, Uncertainty Avoidance, and Masculinity versus Femininity. The present study uses an

overall corruption perception index as a proxy for CORR. Future studies can look at specific corruptive practices, such as money laundering and bribery, to gain more understanding of managerial motives. Additionally, future studies examining CORR can also focus on the role of proactive actions, such as lobbyists and political action committees (Patten & Trompeter, 2003).

This study provides an initial framework to understand the direct and indirect relationship between CSR and EM and on the situational influences that affect this relationship, from managerial behaviour perspectives. This initial discussion could be expected to open up more areas of research, discussions and debate on this interesting issue.

## **7.7 Summary of the Thesis**

This thesis examines the relationship between CSR and EM, addressing the questions *why*, *how* and *when* CSR affects EM, using managerial behaviour perspectives. The study has three research questions, addressed by undertaking three research studies. The first research study examines the direct CSR-EM relationship and the CSR-EM indirect relationship via OC. Using a sample of 46,816 observations, between 2002 and 2017, from firms from USA, the study finds a negative direct relationship between CSR and EM, consistent with the myopia avoidance hypothesis. The study also finds a positive indirect relationship between CSR and EM via OC, consistent with the managerial myopia hypothesis. This finding provides important insights, suggesting that managers may take advantage of OC to opportunistically manage earnings, while being active in CSR practices as a shield to hide their EM activities.

The second research study examines the role of FD on the direct CSR-EM relationship and the indirect CSR-EM relationship. Using a sample of 36,811 observations, between 2002 and 2017, the findings suggest that FD weakens the positive indirect CSR-EM relationship via OC, but FD does not change the direct CSR-EM relationship. The findings indicate that as managerial priorities change during crisis situations, managers may become more risk averse and less myopic.

The third research study examines the CSR-EM relationship in 10 emerging market countries and the effect of COLL, CORR and INVPRO on the CSR-EM relationship. Using a sample of 3,472 observations, between 2012 and 2016, the findings suggest that in emerging market countries, managers engaged in ENV initiatives are less likely to manage earnings, while managers engaged in SOC initiatives are more likely to manage earnings. This suggests that there are differences in

managerial motives behind their engagement in the different CSR dimensions. The findings also suggest that cultural background has a stronger role in determining managerial behaviour and the CSR-EM relationship than CORR and institutional frameworks. The results show that COLL, individually and jointly with CORR, strengthens the relationship between SOC and EM. Additionally, in countries with both COLL and CORR the negative relationship between ENV and EM is stronger, suggesting that collective interests in COLL societies are more dominant in determining managerial behaviour and opportunistic intentions created by CORR. Finally, the results show that while INVPRO on its own weakens the positive relationship between SOC and EM, reducing myopic behaviour, INVPRO loses its effectiveness in COLL societies. In COLL countries, INVPRO does not change the relationship between SOC and EM.

Overall, the study provides interesting insights into a widely debated topic – the relationship between CSR and EM. The study uses managerial behaviour perspectives (managerial myopia and myopia avoidance) to explain *why*, *how* and *when* CSR affects EM. The findings highlight several firm level and country level factors that may help to understand underlying managerial motives and behaviour explaining the CSR-EM relationship. The findings provide a useful initial framework that can be utilised in future research.

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## **APPENDIX A1**

Data item	Datastream (Thomson Reuters) Code	Data description
CASH	WC02003	"CASH represents money available for use in the normal operations of the company. It is the most liquid of all of the company's assets" (Thomson Reuters, 2013b, p.401).
COMMON EQUITY	WC03501	"COMMON EQUITY represents common shareholders' investment in a company" (Thomson Reuters, 2013b, p.412).
CONSUMER PRICE INDEX	CPI	CPI includes annual the consumer price index based on urban consumers.
CORPORATE GOVERNANCE PILLAR SCORE		Corporate Governance Pillar Score is calculated as the sum of three category weights = Management (19%) + Shareholders (7%) + CSR Strategy (4.50%) = 30.50% (Thomson Reuters, 2018).
CURRENT ASSETS – TOTAL	WC02201	"CURRENT ASSETS – TOTAL represents cash and other assets that are reasonably expected to be realized in cash, sold or consumed within one year or one operating cycle. Generally, it is the sum of cash and equivalents, receivables, inventories, prepaid expenses and other current assets. For non-U.S. corporations, long term receivables are excluded from current assets even though included in net receivables" (Thomson Reuters, 2013b, p. 424).
CURRENT LIABILITIES – TOTAL	WC03101	"CURRENT LIABILITIES – TOTAL represent debt or other obligations that the company expects to satisfy within one year" ((Thomson Reuters, 2013b, p. 425).
DEPRECIATION/DEPLETION/ AMORT	WC01151	"DEPRECIATION represents the process of allocating the cost of a depreciable asset to the accounting periods covered during its expected useful life to a business. It is a non-cash charge for use and obsolescence of an asset. DEPLETION refers to cost allocation for natural resources such as oil and mineral deposits. AMORTIZATION relates to cost allocation for intangible assets such as patents and leasehold improvements, trademarks, bookplates, tools and film cost. Dry-hole Expense and Abandonments for extractive companies are included in Depreciation, Depletion & Amortization. If exploration expenses include dry-hole costs and impairment of unproved properties then it is included in Cost of Goods Sold" (Thomson Reuters, 2013b, p. 435).
EARNINGS BEFORE INTEREST & TAXES	WC18191	"EARNINGS BEFORE INTEREST AND TAXES (EBIT) represent the earnings of a company before interest expense and income taxes. It is calculated by taking the pre-tax income and adding back interest expense on debt and subtracting interest capitalized" (Thomson Reuters, 2013b, P. 452).
ENVIRONMENTAL PILLAR SCORE		Environmental Pillar Score is calculated as the sum of three category weights = Resource use (11%) + Emissions (12%) + Innovation (11%) = 34% (Thomson Reuters, 2018).
ESG SCORE	TR.TRESGScore	ESG SCORE is the overall ESG score of a company based on their disclosure on environmental, social and corporate governance dimensions of ESG (Thomson Reuters, 2018).
ESG COMBINED SCORE	TR.TRESGScore	ESG COMBINED SCORE the overall ESG score of a company with an ESG Controversies overlay (Thomson Reuters, 2018).
LONG TERM DEBT	WC03251	"LONG TERM DEBT represents all interest-bearing financial obligations, excluding amounts due within one year. It is shown net of premium or discount" (Thomson Reuters, 2013b, p. 537).
NET CASH FLOW OPERATING ACTIVITIES	WC04860	"NET CASH FLOW - OPERATING ACTIVITIES represent the net cash receipts and disbursements resulting from the operations of the company. It is the sum of Funds from Operations, Funds From/Used for Other Operating Activities and Extraordinary Items" (Thomson Reuters, 2013b, p. 554) .
NET INCOME BEFORE EXTRAORDINARY ITEMS/ PREFERRED DIVIDENDS	WC01551	"NET INCOME BEFORE EXTRAORDINARY ITEMS/PREFERRED DIVIDENDS represents income before extraordinary items and preferred and common dividends, but after operating and non-operating income and expense, reserves, income taxes, minority interest and equity in earnings" (Thomson Reuters, 2013b, p. 556)
NET SALES OR REVENUES	WC01001	"NET SALES OR REVENUES represent gross sales and other operating revenue less discounts, returns and allowances" (Thomson Reuters, 2013b, p. 561)
PRICE/BOOK VALUE RATIO –	WC09304	"Market Price-Year End / Book Value Per Share" (Thomson Reuters, 2013b, p. 601).

CLOSE		
PROPERTY, PLANT & EQUIPMENT – GROSS	WC02301	“PROPERTY, PLANT AND EQUIPMENT (GROSS) represents tangible assets with an expected useful life of over one year which are expected to be used to produce goods for sale or for distribution of services” (Thomson Reuters, 2013b, p. 613).
RECEIVABLES – NET	WC02051	“RECEIVABLES (NET) represent the amounts due to the company resulting from the sale of goods and services on credit to customers (after applicable reserves). These assets should reasonably be expected to be collected within a year or within the normal operating cycle of a business” (Thomson Reuters, 2013b, p. 618).
RESEARCH & DEVELOPMENT	WC01201	“RESEARCH AND DEVELOPMENT EXPENSE represents all direct and indirect costs related to the creation and development of new processes, techniques, applications and products with commercial possibilities” (Thomson Reuters, 2013b, p. 623).
SELLING, GENERAL & ADMINISTRAT	WC01101	“SELLING, GENERAL & ADMINISTRATIVE EXPENSES represents expenses not directly attributable to the production process but relating to selling, general and administrative functions” (Thomson Reuters, 2013b, p. 636).
SHORT TERM DEBT & CURRENT PORTION OF LONG TERM DEBT	WC03051	“SHORT TERM DEBT & CURRENT PORTION OF LONG TERM DEBT represents that portion of debt payable within one year including current portion of long term debt and sinking fund requirements of preferred stock or debentures” (Thomson Reuters, 2013b, p. 639).
SIC CODE	WC07021	“SIC CODES were developed by the U.S. government to provide a standard industry classification that covers all the economic activities of the United States. They are derived from the 1987 edition of the Standard Industrial Classification Manual compiled by the Executive Office of the President of the United States, Office of Management and Budget. These SIC codes are assigned to both U.S. and non-U.S. companies according to the type of business in which they are engaged. A company may have up to eight SIC codes assigned to it or as little as one depending on the number of business segments that make up the company's revenue. If a sales breakdown for segments is available SIC Code 1 would represent the business segment which provided the most revenue. SIC Code 8 would represent the segment that provided the least revenue. If a sales breakdown is not available the SIC Code is assigned according to the best judgement of Worldscope” (Thomson Reuters, 2013b, p. 640).
SOCIAL PILLAR SCORE		Social Pillar Score is calculated as the sum of four category weights = Workforce (16%) + Human Rights (4.50%) + Community (8%) + Product Responsibility (7%) = 35.50%. (Thomson Reuters, 2018).
TOTAL ASSETS	WC02999	“TOTAL ASSETS represent the sum of total current assets, long term receivables, investment in unconsolidated subsidiaries, other investments, net property plant and equipment and other assets” (Thomson Reuters, 2013b, p. 652).

## **APPENDIX A2**

### **Further endogeneity test for Chapter 5:**

As an additional method of addressing endogeneity, I re-estimate equations (7) and (8) from Chapter 5 using Generalized Method of Moments (GMM), following Lewbel (2012) approach, performed individually on each of the 2 subsamples, that is, distressed and non-distressed samples. As discussed in Section 5.7.5, the FD classification is based on prior studies (for example, Giroux & Wiggins, 1984; Habib et al., 2013; Hopwood et al., 1994; McKeown et al., 1991; Rosner, 2003; Ward, 1994). The subsamples are obtained by splitting the full sample based on the FD classification. All firm-year observations classified as Financially distressed form the Distressed sample, while all firm-year observations classified as healthy (or non-financially distressed) form the Non-Distressed sample. The two subsamples have uneven number of observations with the distressed sample having 14,199 firm-year observations (38.57% of the full sample), and the non-distressed sample having 22,612 firm-year observations (61.43% of the full sample). Table A2.1 shows the results from the GMM estimation of equations (7) and (8).

**Table A2.1 GMM Estimation Output for Equations (7) and (8) on Distressed and Non-distressed Samples**

The table presents the GMM estimation results of equations (7) and (8) performed on the 2 subsamples (distressed and non-distressed subsamples). Panel A Columns (1) and (2) present the direct effects by individually estimating equations (7) and (8) respectively, for the distressed subsample. Columns (3) and (4) present the direct effects by individually estimating equations (7) and (8) respectively, for the non-distressed subsample. Robust standard errors are presented in parenthesis. Panel B reports the joint results of OC as a channel between the CSR and EM relationship, shown for both distressed and non-distressed subsamples. The standard errors of the indirect relationship in Panel B, are estimated using the delta method. Panel B Column (1) reports the size of the indirect effect; Columns (2) and (3) show the delta method standard errors and p values respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). CSR is the ESG score obtained from Thomson Reuters. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013). SIZE refers to firm size, measured as the natural logarithm of market value of equity. LEV is defined as long-term debts divided by total assets. ADJROA is measured as the income before extraordinary items, scaled by lagged total assets, for each year and two-digit SIC code, subtracted from the focal firm. RD refers to R&D intensity, measured as R&D expenses divided by net sales. PR represents physical resources, measured as total assets minus current assets, scaled by total assets. MB is the market to book ratio. The model includes a set of dummy variables to capture year and industry effects. The model uses CSR\_M, measured as the median CSR based on Fama-French 48 industry classification as an instrument to control for endogeneity of CSR.

<b>Panel A: Direct effect</b>				
<i>Variables</i>	<b>Distressed subsample</b>		<b>Non-distressed subsample</b>	
	(1)	(2)	(3)	(4)
	OC (Equation 7)	EM (Equation 8)	OC (Equation 7)	EM (Equation 8)
CONSTANT	0.3617*** (0.0397)	0.2762*** (0.0415)	0.5904*** (0.1783)	0.1127 (0.1029)
OC		-0.0165* (0.0094)		0.0096** (0.0188)
CSR	0.8460*** (0.1306)	-0.3695*** (0.0788)	1.1026*** (0.3881)	-0.3354** (0.1674)
SIZE	-0.0556*** (0.0075)	0.0125*** (0.0047)	-0.0865*** (0.0290)	0.0213 (0.0136)
LEV	-0.0713*** (0.0203)		-0.1562*** (0.0422)	
ADJROA	0.0121 (0.0271)	-0.1264*** (0.0298)	-0.0281 (0.0297)	0.0648** (0.0267)
RD	-0.0101*** (0.0028)	0.0178*** (0.0050)	0.0141 (0.0640)	0.1419*** (0.0252)
PR	-0.0243 (0.0233)		-0.0062 (0.0407)	
MB		0.0023*** (0.0006)		0.0027** (0.0013)
Year effects	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes
1-stage F-stat	23.39	10.26	61.06	10.17
N	6,464	5,131	12,416	9,730
Adjusted R <sup>2</sup>	0.3409	0.3477	0.3969	0.2343

<b>Panel B: Indirect effect</b>			
	(1)	(2)	(3)
<i>Variables</i>	EM	Delta method Std error	Delta method p-value
CSR (distressed subsample)	-0.0140	0.1305	0.0720
CSR (non-distressed subsample)	0.0106	0.3882	0.0000

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

Table A2.1 Panel A Columns (1) and (2) show the GMM estimation results of equations (7) and (8) respectively on the distressed subsample, while Columns (3) and (4) show the results of equations (7) and (8) respectively on the distressed subsample, testing the relationship between OC and EM, and the direct relationship between CSR and EM, individually on the distressed and non-distressed subsamples respectively.

Column (1) of Panel A presents the estimation output of equation (7) on the distressed subsample, testing the relationship of OC with CSR and the control variables. The results show a positive relationship between CSR and OC at the 5% level of significance ( $\alpha_1 = 0.8460$ ;  $p < 0.01$ ). The control variables SIZE ( $\alpha_2 = -0.0556$ ;  $p < 0.01$ ), LEV ( $\alpha_3 = -0.0713$ ;  $p < 0.01$ ) and RD ( $\alpha_5 = -0.0101$ ;  $p < 0.01$ ) have negative relationships with OC at the 1% level of significance, while ADJROA ( $\alpha_4 = 0.0121$ ;  $p < 0.05$ ) and PR ( $\alpha_6 = -0.0243$ ) do not have a statistically significant association with OC in the distressed subsample.

Column (2) of Panel A presents the estimation output of equation (8) on the distressed subsample, testing the direct relationships of EM with CSR, OC and the control variables. The results indicate a negative relationship between OC and EM at the 1% level of significance ( $\beta_1 = -0.0165$ ;  $p < 0.10$ ). The direct effects result also shows that CSR has a negative direct influence on EM at the 1% level of significance ( $\beta_2 = -0.3695$ ;  $p < 0.01$ ). The control variables SIZE ( $\beta_3 = 0.0035$ ;  $p < 0.01$ ), RD ( $\beta_5 = 0.0178$ ;  $p < 0.01$ ) and MB ( $\beta_6 = 0.0023$ ;  $p < 0.10$ ) are positively related to EM at the 1% level of significance, while ADJROA ( $\beta_4 = -0.1658$ ;  $p < 0.01$ ) is negatively related to EM at 1% level of significance.

Column (3) of Panel A shows the estimation output of equation (7), testing the relationship of OC with CSR and the control variables, on the non-distressed subsample. The results show a positive relationship between CSR and OC at the 1% level of significance ( $\alpha_1 = 1.1026$ ;  $p < 0.01$ ). The control

variables SIZE ( $\alpha_2 = -0.0865$ ;  $p < 0.01$ ) and LEV ( $\alpha_3 = -0.1562$ ;  $p < 0.01$ ) have negative associations with OC at the 1% level of significance. However, ADJROA ( $\alpha_4 = -0.0281$ ), RD ( $\alpha_5 = 0.0141$ ) and PR ( $\alpha_6 = -0.0062$ ) do not have a statistically significant association with OC in the non-distressed subsample.

Column (4) of Panel A presents the estimation output of equation (8), testing the direct relationships of EM with CSR, OC and the control variables, on the non-distressed subsample. The results indicate a positive relationship between OC and EM at the 5% level of significance ( $\beta_1 = 0.0096$ ;  $p < 0.05$ ). The direct effects result also shows that CSR has a negative direct influence on EM at the 1% level of significance ( $\beta_2 = -0.3354$ ;  $p < 0.01$ ). The control variable RD ( $\beta_5 = 0.1419$ ;  $p < 0.01$ ) is positively related to EM at the 1% level of significance, while ADJROA ( $\beta_4 = 0.0648$ ;  $p < 0.05$ ) and MB ( $\beta_6 = 0.0027$ ;  $p < 0.05$ ) are positively related to EM at the 5% level of significance. However, SIZE ( $\beta_3 = 0.0213$ ) do not have a statistically significant relationship with EM in the non-distressed subsample.

Panel B of Table 5.14 shows the indirect effect of CSR on EM via OC as a mediating channel. Column (1) shows the size of the indirect effect for each subsample, calculated as the product of  $\alpha_1$  and  $\beta_1$ , that is, the coefficients of CSR from equation (7) and of OC from equation (8) respectively. As discussed previously, the statistical significance of the indirect effect is determined using the delta method. Panel B Columns (2) and (3) show the standard error and p-values for the indirect effect.

Panel B first reports the indirect effects result within the distressed subsample. As shown in Column (1), the size of the indirect effect, within the distressed subsample, is -0.0140, calculated as the product of  $\alpha_1$  (0.8460) and  $\beta_1$  (-0.0165) from equations (7) and (8) respectively. Based on the delta method p-value, the result suggests a negative indirect relationship between CSR and EM, via the mediator OC, at the 10% level of significance ( $p < 0.10$ ) in the distressed subsample.

In regard to the results concerning the non-distressed subsample, Panel B Column (1) shows the size of the indirect effect to be 0.0106 (that is, the product of  $\alpha_1 = 1.1026$  and  $\beta_1 = 0.0096$  from equations (7) and (8) respectively). Based on the delta method p-value, the result suggests a strong positive indirect relationship between CSR and EM, via the mediator OC, at the 1% level of significance ( $p < 0.01$ ) in the non-distressed subsample.

The preceding paragraphs report the results in each of the two subsamples individually, that is, Distressed and Non-distressed samples. Table A2.2 below shows the results of the differences between the effect sizes within the two subsamples. The table focusses on the difference in the effect sizes for the key relationships, that is:

- 1) the effect of CSR on OC from equation (7) - to test for first stage moderation;
- 2) the effect of OC on EM from equation (8) - to test for second stage moderation;
- 3) the direct effect of CSR on EM from equation (9); and
- 4) the indirect effect of CSR on EM via OC from equations (7) and (8) - to test for moderated mediation.

The difference in each of the effect sizes is measured as the difference between each of the regression coefficients between the Distressed and Non-distressed samples. The statistical significance of the differences in the coefficients are reported using the delta method.

**Table A2.2 Difference in effect Sizes between Distressed and Non-Distressed Samples from GMM Estimation of Equations (7) and (8)**

The table presents the comparison of GMM estimation results of equations (7) and (8) performed on the 2 subsamples (distressed and non-distressed subsamples). Column (1) presents the difference in the regression coefficients, between the two subsamples, from estimating equations (7) and (8). The standard errors for the difference in the effect sizes are estimated using the delta method. Columns (2) and (3) show the delta method standard errors and p values respectively. EM refers to earnings management, proxied by discretionary accruals using the modified Jones model by Dechow et al. (1995). CSR is the ESG score obtained from Thomson Reuters. OC is the stock of organisation capital scaled by total assets. The stock of organisation capital is measured by accumulating the deflated value of SG&A expenses, consistent with Eisfeldt & Papanikolaou (2013).

Variables	(1)	(2)	(3)
	EM	Delta method Std error	Delta method p-value
CSR -> EM (direct effect)	-0.0341	0.1850	0.1178
CSR -> OC (equation 7)	-0.2566	0.4095	0.0859
OC -> EM (equation 8)	-0.0261	0.2158Thanks mate	0.0210
CSR -> OC -> EM (indirect effect)	-0.0246	0.4095	0.0415

As shown earlier in Table A2.1, the direct relationship between CSR and EM is negative and significant in both the Distressed ( $\beta_{2(distressed)} = -0.3695$ ;  $p < 0.01$ ) and Non-Distressed ( $\beta_{2(non-distressed)} = -0.3354$ ;  $p < 0.01$ ) subsamples. The difference in the effect size, shown in Table A2.2, calculated as  $\beta_{2(distressed)} - \beta_{2(non-distressed)}$  (that is,  $-0.3695 - (-0.3354)$ ), is  $-0.0341$ . However, the difference in the direct effect between the distressed and non-distressed subsamples is not statistically significant ( $p > 0.10$ ). This is consistent to the original findings suggesting that FD does not affect the direct

relationship between CSR and EM. CSR has a negative and significant effect on EM, irrespective of whether the firm is financially distressed or not.

The relationship between CSR and OC (as shown earlier in Table A2.1) is positive and significant in both the distressed ( $\alpha_{1(\text{distressed})} = 0.8460$ ;  $p < 0.01$ ) and non-distressed ( $\alpha_{1(\text{non-distressed})} = 1.1026$ ;  $p < 0.01$ ) subsamples. The difference in the effect size, shown in Table A2.2, calculated as  $\alpha_{1(\text{distressed})} - \alpha_{1(\text{non-distressed})}$  (that is,  $0.8460 - 1.1026$ ), is  $-0.2566$  ( $p < 0.10$ ) at the 10% level of significance. The negative and significant coefficient on the difference in the effect size of CSR on OC suggests that the relationship between CSR and OC is weaker within financially distressed firms. This is consistent to the original findings, suggesting that FD has a moderating (weakening) effect on the relationship between CSR and OC.

The relationship between OC and EM (as shown earlier in Table A2.1) is negative and significant, at the 10% level of significance, in the distressed ( $\beta_{1(\text{distressed})} = -0.0165$ ;  $p < 0.10$ ) subsample, but positive and significant, at the 5% level of significance, in the non-distressed ( $\beta_{1(\text{non-distressed})} = 0.0096$ ;  $p < 0.05$ ) subsample. The difference in the effect size is  $-0.0261$ , shown in Table A2.2, and calculated as  $(\beta_{1(\text{distressed})} - \beta_{1(\text{non-distressed})})$  (that is,  $-0.0165 - 0.0096$ ). The difference in the effect size of OC on EM is statistically significant, at the 5% level of significance. Although the negative relationship between OC and EM in the distressed subsample is different from my original findings that suggest a positive relationship between OC and EM in both subsamples, the overall results, concerning the moderating effect of FD, are consistent to the original findings. Overall, the result suggest that when firms are non-distressed, managers are more likely to manage earnings in firms with high OC firms. However, when firms with high OC experience FD, managers' priorities change, and they are less likely to manage earnings. The negative and significant effect size ( $\beta_{1(\text{distressed})} - \beta_{1(\text{non-distressed})} = -0.0261$ ) confirm this, and suggest that FD weakens the positive relationship between OC and EM. Thus, the findings are consistent with my original findings, supporting the findings that FD weakens managerial myopia.

As shown earlier in Panel B of Table A2.1, the indirect effects result shows that CSR has a negative and significant indirect effect on EM via OC in the Distressed ( $\alpha_1\beta_{1(\text{distressed})} = -0.0140$ ;  $p < 0.10$ ) subsample, but a positive and significant indirect effect on EM via OC in the Non-Distressed ( $\alpha_1\beta_{1(\text{non-distressed})} = 0.0106$ ;  $p < 0.01$ ) subsample. Table A2.2 shows that the difference in the effect size is  $-0.0246$  ( $p < 0.05$ ), calculated as  $\alpha_1\beta_{1(\text{distressed})} - \alpha_1\beta_{1(\text{non-distressed})}$  (that is,  $-0.0140 - 0.0106$ ), at the 5% level of significance. Consistent to the original results, the GMM estimation result also suggest that

FD has a moderating (weakening) effect on the indirect relationship between CSR and EM via OC, supporting the notion that FD weakens managerial myopia.

Thus, the further endogeneity test using GMM estimation support the original findings. In particular, the results suggest that FD does not change the direct effect of CSR on EM, but weakens the indirect effect of CSR on EM via OC. The results regarding first stage and second stage moderation are also consistent to the original findings. The results suggest that FD weakens the positive relationship between CSR and OC (first stage moderation) and FD also weakens the positive relationship between OC and EM (second stage moderation).