UNIVERSITY OF TWENTE.

Faculty of Behavioural, Management and Social Sciences

M.Sc. Thesis – Business Administration

Do institutional investors drive the Corporate Social Responsibility for firms positively?

Evidence from the U.S. companies during the period of 2010-2019.

Word count: 22,098

Submitted by: Wujun Quan

First supervisor: Dr. X. Huang

Second supervisor: Dr. P. Khrennikova

Date: 30/09/2024

ABSTRACT

This paper aims to assess whether institutional investors drive the corporate social responsibility (CSR) performance of firms in the U.S over the 2010-2019 period. Across 147 companies among raw materials, manufacturing, and service, these three economic activities, monitor-reluctant institutional investors have a greater negative impact on firm's CSR performance than monitor-intensive institutional investors do in manufacturing sectors and full sample sector. Empirical analyses indicate that institutional investors who are more inclined to monitor firms do create fewer impediments to CSR performance. However, by being targeted by large-scale institutional investors, the chances of firm facing downside risks to its CSR strategy are also higher, which rationally explains that, regardless of the type of investor, their behavior will not have a positive impact on the firm's CSR.

Keywords: *Corporate governance; institutional investor; corporate social responsibility; environmental social governance; stakeholder theory; principal-agent theory; sustainability; management*

Proposition: "What is generally called a "shareholder" today – whose rights are to be protected by corporate governance codes – has actually become a "*share turner*". Although even a temporary holder of shares is an *owner* formally and by law, he is not an owner with an entrepreneurial interest, nor even a true interest in the company or business. He is not interested in the prosperity of "his" company, the business he shows shares in (Malik, 2012, p. 44)."

- Fredmund Malik

Table of contents

List of tables

Table of figures

List of abbreviations

Abbreviation	Definition
AUD	Alcohol Use Disorder
AUM	Asset Under Management
BICS	Bloomberg Industry Classification Standard
CHS	Cenex Harvest States
CNBC	Consumer News and Business Channel
COVID	Coronavirus Disease
CSR	Corporate Social Responsibility
D/E	Debt to Equity Ratio
EM	Expectation Maximisation
ESG	Environmental Social Governance
FCA	Financial Conduct Authority
GICS	Global Industry Classification Standard
H	Hypothesis
HEC	Hautes Etudes Commercials
HP	Hewlett Packard Enterprise
ISIC	International Standard Industrial Classification of All Economic Activities
KLD	Kinder, Lydenberg, and Domini database
M&A	Mergers and Acquisitions
MI	Monitor Intensive
MR	Monitor Reluctant
NGO	Non-governmental Organization
NYSE	New York Stock Exchange
PG&E	Pacific Gas and Electric Company
P-P Plot	Probability-Probability Plot
P-Value	Probability-Value
R&D	Coefficient of Determination
S&P 500	Standard and Poor's 500
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for the Social Sciences
SRI	Socially Responsible Investment
STM	Search Term Matrix
T-Test	Hypothesis Testing in Statistics
US	United States
USA	United States of America
VIF	Variance Inflation Factor

1. Introduction

1.1 Motivation

The latest wave of stock market enthusiasm has led to a growing number of investors entering the market. According to a report by CNBC, capital inflows into equities in the first months of 2021 reached $568 billion, exceeding the combined inflows of the previous 12 years ($452 billion) (CNBC, 2021). From the firm's perspective, this trend represents an ideal scenario. With increased capital, companies can improve the quality of their operations, covering current expenses and investing additional capital in research and development (R&D) (Bushee, 1998). Meanwhile, from the financier's perspective, institutional investors, as one of those main financiers, not only provide capital injection but also exert significant influence on corporate governance during this period of investment boom (Heidrick & Struggles, 2011).

The ownership of larger and more concentrated equity shares by institutional investors has resulted in a greater influence on decision-making in public companies (Solomon & Solomon, 2006). Institutional investors can advocate for good corporate governance (Srivardhan, 2009) which would be an assurance of optimising the whole operation of the company to some extent. As their influence grows, so do their responsibilities. However, the confidence of investors has been shaking at the beginning of the 21st century due to the rise in corporate scandals. For example, the failures of Enron (2001) and WorldCom (2002), which were overshadowed by allegations of poor corporate governance, have had a profound impact. These incidents have led to a gradual decline in trust in companies, managers, and institutional investors, who are supposed to represent a principal corporate governance mechanism (Solomon & Solomon, 2006). Hence, people start to question whether institutional investors are truly committed to contributing to companies' success or if they solely take advantage of such investment opportunities.

Nevertheless, given these concerns, there is a growing expectation that institutional investors are better to take responsibility for fostering sustainability and the development of sustainable practices initiatively. Among these sustainable goals, the most representative concept is Corporate Social Responsibility (CSR). In the case of ongoing events that have a huge impact on the fate of all mankind, such as global warming, it is time for companies to prioritise sustainable development initiatives and then take practical measures to achieve CSR-related goals. Regarding investors, retail investors and institutional investors are the two main types of investors that can have an impact on a company's CSR strategy in many listed companies. For example, in China's stock market, which is dominated by retail investors forming over 80% of trading activities (Liu & Liu, 2014), there is a such relationship between CSR information disclosures and firm's idiosyncratic risks (He et al., 2023). The higher the CSR quality is, the greater the decline in idiosyncratic risk. Here, retail investors' attention plays a mediating role to some extent; more specifically, retail investors' attention accelerates the dissemination of information

in financial markets. In other words, retail investors can better promote corporate CSR in a positive direction. In a similar way, to realise this value of CSR, it is imperative for institutional investors to play a role in promoting environmental impacts through their investment decisions and the promotion of responsible corporate behaviour too.

However, previous research has primarily focused on the economic impact of institutional investors on companies (Bushee, 1998; Bushee, 2001; Li & Wang, 2010; Lakonishok et al., 1992). For instance, studies have examined how institutional investors influence R&D expenses through their influence on board member's decision-making process (Bushee, 1998); how institutional investment from hedge funds and pension funds, affect the stock price (Li & Wang, 2010); how variations in the frequency of institutional investment disturb stock returns (Dimitrov & Gatchev, 2010); and so on. Despite the popularity of these topics, there has been little research conducted on whether the behaviour of institutional investors effectively influences the CSR practices of companies (Fernández-Feijoo et al., 2014).

Therefore, this study will examine how the investment behaviour of institutional investors affects CSR practices. Considering that institutional investors are not a homogeneous group due to their different monitoring motives, conflicts of interest, and business relationships (Brickley et al., 1988), this paper will follow the previous literature's approach of classifying institutions using the pressure criterion (Almazán et al., 2005). With this classification, institutional investors will be divided into two categories: monitor-intensive investors (such as insurance companies, banks, and trusts) and monitor-reluctant investors (such as pension funds, mutual funds, and hedge funds). Since monitor-intensive investors are primarily concerned with the long-term performance of the company, it is expected that they are more likely to outperform monitor-reluctant investors in CSR practices. Additionally, monitor-intensive investors' interests in CSR practices are likely to be higher for both institutions and companies, thereby minimising conflicts of interest between principals and agents.

Considering the activities of institutional investors and the CSR of companies, one country stands out in this regard: the United States. The U.S. provides an interesting backdrop for analysing the impact of institutional investors for three main reasons. First, according to the U.S. Securities and Exchange Commission (2013), the growth in assets managed by institutional investors has experienced a remarkable increase of about 1600% in the NYSE[1], from 162 million shares in 1990 to 2.6 billion shares after 23 years. Consequently, institutional investor ownership plays an even more significant role in the largest corporations in this country. Second, 85% of the large companies in the S&P 500 Index published sustainability or CSR reports in 2017 (University of Houston Energy Fellows, 2019). However, there is no formal law in the United States that requires companies to allocate a specific portion of their revenue

[1] The New York Stock Exchange.

to CSR. Therefore, in such a market economy filled with spontaneous behaviours, the importance of institutional investors for companies' development is better reflected. Third, nowadays, as the topic of CSR is increasingly recognised by both firms and institutions in the U.S., the country represents a unique opportunity to examine whether the behaviours of institutional investors impact a firm's CSR performance. To ensure that the sample of companies includes a wider range of industries and representative leading companies from each industry, the Fortune 500, which ranks the biggest 500 U.S. companies by revenue, will be used as the dataset for sampling companies. Meanwhile, a 10 years' time span will be selected as the paper's timeline, covering the period between the 2008 financial crisis and COVID-19 pandemic, a decade marked by economic rebirth. To fulfil the objective of the study, the central research question is defined as follows:

RQ: ***"Do institutional investors drive the Corporate Social Responsibility for firms positively? Evidence from the U.S. publicity companies from 2010 to 2019".***

This study contributes to previous research from two perspectives. First, in the U.S., where there is no official CSR law framework, new evidence demonstrates that frequent investment behaviours from institutional investors can negatively impact CSR performance indicated by Environmental, Social, Governance (ESG) scores. Second, the findings confirm that in the secondary industry sector (manufacturing) and overall industries, after making their investment decisions, monitor-intensive investors commonly do not let ESG scores decrease as much as monitor-resistant investors do..

This structure of the following paper is structured as follows: first, the main variables and theoretical framework will be introduced; second, a brief review of previous empirical findings and hypotheses will be provided; third, the data, variable definitions, and methodology will be described. After that, the results from the multiple regression model will be displayed and explained. Finally, the discussion and conclusion of this study will be presented and illustrated.

1.2 Literature collection

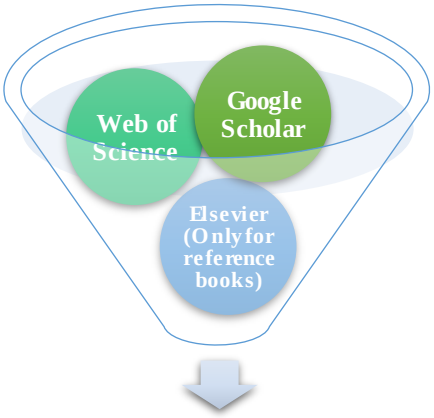
To ensure the collection of logically consistent and relative papers aligned with theories and concepts, this research will utilise the Search Term Matrix (STM) method. Drawing from numerous applications of STM in academic and applied research, it is evident that this approach has proven successful, as it facilitates the attainment of meaningful outcomes to address research inquiries (Groenland, 2014).

This screening model can collaboratively select sufficient research literatures with high-quality standards from the appointed scientific database by user. Through the narrowing down method of filtration, in this paper, the STM showed in table 1, consists of three main separated blocks which are further divided by block 1 and 2. Three main blocks in the left side of table 1, they are synonyms, related terms, and broader and more detailed topics regarding institutional investors and CSR. Additionally, block 1 is collected by synonyms names of characteristics which are listed in table 1; block 2 is about synonyms words of relationship, for example, influence, relate, monitor, and so on. When researcher starts to input these keywords in the search box, keywords within each block are interconnected using the Boolean operator "*OR*", while between blocks, keywords are combined using the Boolean operator "*AND*", to create a unified search string.

Table 1. Search term matrix method

Search term matrix (STM)	Block 1	Block 2
Synonyms (Narrower terms)	☑ Institutional ☑ Investor ☑ Institutional investor ☑ Corporate social responsibility ☑ CSR ☑ Environment social governance ☑ ESG	☑ Affect ☑ Effect ☑ Influence ☑ Impact ☑ Relate ☑ Relationship ☑ Positive ☑ Negative
Related terms	☑ Pension fund ☑ Insurance company ☑ Mutual fund ☑ Bank ☑ Governance ☑ Management	☑ Monitor ☑ Free ride ☑ Invest ☑ Short term ☑ Long term ☑ Incentive ☑ Intensive ☑ Reluctant
Topic (Broader terms)	☑ Sustainability ☑ Sustainable ☑ Performance ☑ Corporate governance ☑ Stakeholder theory ☑ Principal-agent theory	☑ Cooperate ☑ Cooperation ☑ Transparent ☑ Finance ☑ Regulation ☑ Interest

Figure 1. Screening model



33+ screened papers and books

The described utilisation process is illustrated in Table 1 and Figure 1. In the Table 1, keywords are grouped from topic to keywords to improve the relevance of search results. Regarding to the reasons why two theories selected as relevant to the topic of CSR, the reason is that stakeholder theory addresses morals and values in managing and organization, for example CSR, which is consistent with the main idea of this thesis; and the link between corporate management (agent) and shareholders (principal) is the most representative relationship in principal-agent problem. Hence, these two theories will provide theoretical support for this thesis. In Figure 1, three main databases are shown with the overall number of outcomes.

For the literature search, mainstream scholarly journals such as Google Scholar, Web of Science, and Elsevier will be utilised. Following the application of the STM method, first, the search on Google Scholar yielded a total of 2,390 results, further refinement to identify relevant articles is needed; second,

the search on Web of Science returned a total of 26,922,755 results; third, on Elsevier, primarily books related to the topic were found. Therefore, the results from Elsevier are primarily utilised for reference purposes.

After checking the output of literature in the first round, further screening is required as the amount of literature available for reading references is still too overwhelming. Hence, in the second round of screening process, further filtering will be done with the following criteria: research related to institutional investors and CSR, only published in English, and being peer-reviewed articles. This results in a total of 84 selected results from Google Scholar and 1,124,388 filtered publications from the Web of Science.

The considerable number of journals in Google Scholar has been sufficient thus far, however, for the Web of Science, due to the large volume of literature output, the third round of refined selection process will be applied. These screening criteria include the most popular papers, open-access papers, top highly cited papers in the field of economics research, and being published in Elsevier, Wiley, and Springer Nature, these three main academic magazines. In the end, 88 papers are ultimately yielded.

In this way, within a perfectly acceptable amount of literature, by selecting papers published within the last 30 years, and further reading of the article abstracts to select a better match of research papers, a total of 33 publications (after eliminating recurring papers) were identified both from Google Scholar and Web of Science.

The rationale for choosing this 30-year range of literature is that the theories and objects of study applied in this thesis are true to this period and have been richly supplemented, refined, and further developed during this 30-year period. Hence, it is evident from the reference list that many of them are useful and significantly related to the topic. Focusing on this timeframe for further research is also reasonable. At last, the reason that the final reference list for this paper will be much more than the initial 33 screened papers is that the remaining additional literature and reference books were found using scientific snowballing.

2. Literature review

2.1 Conceptual framework

Against the backdrop of a growing calls for sustainable investment, two key players in this proposal have gradually come to the forefront of public opinion: the institutional investors with significant amounts of capital and majority stakes in companies across a wide range of industries, and the business self-regulation, Corporate Social Responsibility (CSR) – as proposed by the UN Global Compact (UN, 2010). As distinct institutional investors often have similar or different interests, strategies, or preferences, this section requires further research. CSR which has been more actively paid attention recently is likely to play a greater role between principal and agency.

2.1.1 Institutional investors

2.1.1.1 The introduction of institutional investors

1) The definition of institutional investor

An institutional investor is a legal entity representing various groups, whether they are private investors or other forms of funding groups (Celik & Isaksson, 2013). Its primary object is to generate profits through investing in various financial instruments. According to managerialist rhetoric, institutional investors are currently facing significant challenges (Gilson & Kraakman, 1991). These institutions are also considered behemoths, implying that they are perceived as greedy and thoughtless (Gilson & Kraakman, 1991). However, they are more often treated as the "real" shareholders due to their strong influence on decision-making during the board meeting and their voice in the business industry (Dasgupta et al., 2021).

Indeed, just a few decades ago, top managers neither knew nor cared who their major shareholders were. However, recently, board executives and managers not only ensure regular contact with shareholders but also prepare to take any affordable actions to meet shareholders' demands.

According to the Securities Industry Association Fact Book (2002), institutional investors hold approximately 61% of public equities in the U.S. Over the past two decades, there has been an emerging trend in the significant investors' holdings, driven by an increased number of activist institutional fund managers (Eccles & Klimenko, 2019). Due to their concentrated and increasing power, institutional investors hold dominant positions on company boards. They are expected to serve as essential corporate governance mechanisms for influencing social, ethical, and environmental aspects positively (Solomon & Solomon, 2006). However, the reality is different.

There has been a debate arguing whether institutional investors prefer short-term value or long-term value to the company's future for decades. Many believe that institutional investors, being myopic

investors, prioritise maximising short-term profits (Bushee, 2001) and may sacrifice environmental and social costs in the long run (Calza et al., 2016). They value desirable margins more than the corporation's development (Gilson & Kraakman, 1991). However, some still believe that institutional investors build up their long-term values to foster positive development (Hillman & Keim, 2001) and promote their CSR performance (Preston et al., 1975).

2) The function of institutional investors

Prior research has, directly and indirectly, confirmed that institutional investors possess superior information-gathering and processing abilities (Walther, 1997). Baldwin & Rice (1997) found that institutional resources do have a significant impact on analysts' sources of information and channels of communication, which directly or indirectly positively influence some of the analysts' outcomes, but retail investors are not able to have the same impact. Moreover, institutional investors wield influence over management both through direct participation in board meetings via their ownership stakes and indirectly through actions such as trading shares to provide capital for operational enhancement or divesting shares to express pessimism about the company's prospects, both within and outside the market (Gillan & Starks, 2003). Additionally, institutional investors enjoyed numerous advantages over retail investors. Hence, they were expected to demonstrate proper corporate governance principles and market knowledge. To further illustrate how institutions leveraged their influence internally and externally within a company, three kinds of roles of institutional investors are assessed, following one of the most cited papers (Gillan & Starks, 2003)[2] about institutional investors, in Table 2.

Table 2. Three roles played by institutions and their approaches

Roles played by institutions	Approach	Citation
As monitor	Purchasing blocks of shares	Bethel et al. (1998)
	Providing solutions to free-rider problem	Grossman & Hart (1980)
	Increased management turnover	Kaplan & Minton (1994)
	The attribute of being a bank	Chirinko & Elston (2006)
As lender	Dual positions	Pucheta-Martínez & García-Meca (2014)
As information transmitter	Having stable positions in board table	Gillan & Starks (2003)
	Relationship investing between institutions and managers	Chidambaran and John (2000); Shleifer and Vishny (1986)

Table 2 summarises three roles of institutions as identified in academic literature. Each cited paper discusses the roles of institutions and the approaches they employ.

[2] The information obtained from this working paper I based on the latest updates.

A. The institutional investors as monitors

Through a variety of ways, institutional investors can influence a firm's financial decisions (Chung & Wang, 2014). For example, mergers and acquisitions (M&A) (Ferreira et al., 2010), executive compensation (Hartzell & Starks, 2003), risk-taking behaviour (Chan et al., 2013), and more. In these different types of transactions, the monitoring function performed by institutional investors is expected to play a important and effective role.

Large shareholders are more likely to have incentives to monitor corporate management due to their potential to address the free-rider problem inherent in diffusely owned companies (Grossman & Hart, 1980). However, this can also lead to large shareholders prioritising gains for their own shares, resulting in a diminished monitoring role (Shleifer & Vishny, 1986). If ownership is sufficiently diffuse, there may be no incentives for any owners or large shareholders to engage in monitoring, leaving individual investors to bear all monitoring costs, such as agency cost and free riding cost harming the free market system, while on the other side, institutional investors gain the benefits alone (Gillan & Starks, 2003).

Based on research showing a positive connection between overall company performance and the behaviour of purchasing blocks of shares by activist investors (Bethel et al., 1998), it is reasonable to focus on the frequency of equity transactions by institutional investors as an indicator of their monitoring efficiency. However, due to the complex classification of institutional investors, their influence may vary depending on their characteristics. For instance, institutions such as banks and financial institutions normally have a dual relationship with the firm (Chirinko & Elston, 2006). Additionally, through influencing the firm's capital structure, institutional investors could also play a role in monitoring firm's principal-agent problems. Jensen and Meckling (1976) argue that debt helps reduce the agency cost of free cash flow. Hence, debt stimulates managers to make distorted investment decisions. And as a "fireman", institutional investors can substitute debt as majority shareholders to reduce agency costs. In the end, due to the trade-off theory, under such effective monitoring, firm value could be enhanced under such target leverage.

Furthermore, besides acting as monitors, when they serve as lenders on the board, they also face severe conflicts of interest in the activities of their investing firms (Hopt & Leyens, 2004).

B. The institutional investors (bank) as lenders

A different perspective arises when institutional investors also play the role of lending institutions. The presence of lender representatives entails conflicting interests: on the one hand, safeguarding the interests of the lender institution they represent, and on the other hand, fulfilling their responsibilities to a broader group of shareholders (Dewatripont & Tirole, 1994; Jensen &

Meckling, 1976). The divergence becomes even more interesting when some of these lenders are also shareholders in the firms (Pucheta-Martínez & García-Meca, 2014).

There is an argument that institutional investors, such as banks, possess a comparative advantage in lending to corporations (Ghosh, 2016). This is because banks, with lender representatives, could offer several advantages to firms. For example, they have access to inside information as regulators and monitor corporations at the same time (Kroszner & Strahan, 2001), providing positive market signalling (Byrd & Mizruchi, 2005; Kroszner & Strahan, 2001), and lowering the overall costs of external finance for strategic investments (Fama, 1985; James, 1987; Kracaw & Zenner, 1998). Precisely because of these irreplaceable advantages, bank lenders could also reduce the potential agency costs of debt financing (Fama, 1985). However, despite being an undisputed fact in corporate governance, empirical evidence confirms that in some countries, lending institutions are restricted from trading. For example, during the twentieth century, legislation in the U.S. prohibited banks from holding shares in a firm (Gillan & Starks, 2003). In Japanese equity market, a bank-dominated institutional environment, institutional investors play a significant role, with multiple relations between lenders and the firm (Panicker et al., 2021). Conflict interests are the most common barrier among lenders ensuring steady repayment and firms seeking for potentially fast growth. To protect their interests as the lenders to the firm, board lenders are less inclined to investigate companies in high-risk and high-return investment environment (such as internationalization). Therefore, under this scenario, lenders could bring less opportunities but restrictions for development to companies.

C. The institutional investors as information transmitters

Large institutional investors transmit private information obtained from management to other shareholders. For this oversight to be reliable, large shareholders need to maintain a stable position at the board table to play this role (Gillan & Starks, 2003) continuously and uninterruptedly. Through such information transmission, Shleifer and Vishny (1986) stated that large shareholders are willing to positively control the firm with more incentives.

Despite the various roles that institutional investors can fulfil, they seem to have an unchanging image in society, especially after every financial scandal or even crisis (Park, 2018). Due to their significant influence, their actions on portfolio management have constantly been highly visible. To investigate the various institutional investors further, it is better to classify them into several specific groups based on reasonable principles.

2.1.1.2 The classification of institutional investors

As institutional investors are organised as legal entities, such legal form varies. Hence, many studies have already proposed different methods categorising currently existed institutional investors (Johnson et al., 2010; Plastun, 2012; Bushee et al., 2014). These methods are dependent on factors like the identities of institutional investors, time of shareholdings, preferred investment interests, or their investment strategies (Aguilera & Jackson, 2003).

For example, the growing size and diversified identities of institutional investors has been validated from a development perspective[3], leading to the classification of institutional investors into three categories. They are "traditional" institutional investors (pension funds, investments funds, and insurance companies), "alternative" institutional investors (hedge funds, private equity, exchange-traded funds, and sovereign wealth funds), and asset management companies. The addition of third category of institutional investors is due to the rapid growth of business outsourced asset management companies, which were included in the definition of institutional investors in the 2012 UK Stewardship Code (FRC, 2012). That is why this categorisation has changed over time. Or regarding to the investment strategies, an early study done by Gilson & Kraakman (1991) demonstrated that mutual funds and investment banks frequently engage in stock trading, whereas almost half of pension funds are more likely to hold stocks in a specific company for a decade or even longer. Thus, due to this investing feature, classifying investors as either long-term investors or short-term investors is also resealable. However, simply grouping institutional investors based on their holding time or frequency of transactions may overlook other potential relationships, such as fund type and size of ownership stake mentioned above (Bushee, 1998). Moreover, this approach is somewhat outdated (Bushee, 1998).

Bushee (1998) mentioned that characterising pension funds as having a long-term time horizon is only partially correct, and the same applies to mutual funds. The findings show that more than half of pension funds, typically recognised as long-term investors, have a short-term time horizon. Similarly, fewer than 58% of mutual funds, usually regarded as short-term holders, have a long-term time horizon. Furthermore, long-term institutional investors have increasingly been labelled as "short-sighted interest seekers", contributing to the price bubbles with a herd mentality, similar to the situation faced by short-term investors in the past (Della Croce et al., 2011). These concepts of investors, which previously appeared static to the world, are now quietly changing. Therefore, classifying institutions based solely on inferred investor preferences has been criticised by many scholars in different papers (Bushee, 1998; Bushee, 2001; Della Croce et al., 2011).

[3] In the last 50 years, the massive reduction (from 84% to only 40%) in the size of physical investors has been accompanied by an ever-increasing number of institutional investors (Çelik & Isaksson, 2013).

There is no doubt that under such circumstances, institutions with different stock holding periods would influence their incentives to monitor management due to the principal-agent problems. For example, efforts made by long-term institutional shareholders enhance long-run value maximization (Kim et al., 2019). Even evidence shows that long-term-oriented investors tend to hold more cash and invest in projects to enhance corporate innovation. In contrast, short-term institutional investors are likely to regard CSR activities as costs rather than investments.

In terms of the monitoring function, institutions have a strong incentive to collect information to monitor management, as they can more easily receive benefits compared to non-block holders within the organisation (Shleifer & Vishny, 1986, 1997). Similarly, Monks & Minow (1995) mentioned that sophisticated institutional investors with large shareholdings also tend to monitor and attempt to discipline managers to ensure that the company's investment strategy aligns to maximise long-term value for all stakeholders, rather than being exploited by short-term investors for immediate profits. Additionally, large stakes are harder to sell due to the significant transaction fees involved (Kochhar and David, 1996). Hence, large stockholders are more likely to have an incentive to monitor management due to both the substantial benefits from monitoring and the associated cost (Dharwadkar et al., 2008).

Rather than classifying each type of institutional investor solely based on their legal status, a more appropriate approach seems to be dividing them into further sub-groups based on the intensity of monitoring. Table 3 lists the different methods of classifying institutional investors, along with their respective advantages and disadvantages as documented in the academic literature in the field of corporate finance. Additionally, each category listed in the table is accompanied by a corresponding paper citation.

Table 3. Methods of classifying institutional investors and their respective pros & cons

Methods of classifying institutions	Citation	Pros (+) & Cons (-)	Citation
Fund types/Legal status	García-Sánchez et al. (2021)	(-) Cloud the relationship between fund type, time horizon, and size of ownership.	Bushee (1998)
		(-) Pension funds partially invest in a long-term horizon.	Bushee (1998)
		(-) Part of mutual funds also have a long-time horizon.	Bushee (2001)
		(-) Different incentives & Conflicts of interests	Brickley et al. (1988)
Monitoring view of institutional investors	Monks & Minow (1995); Shleifer & Vishny, (1986, 1997); Almazán et al. (2005); Brickley et al. (1988)	(+) Focusing on the most influential role of institutions is also matchable to this paper.	David et al. (2001); Hoskisson et al. (2002); Cullinan et al. (2017)
		(+) Empirical evidence supports this classification of institutions.	Brickley et al. (1988)

Table 3 shows two methods of distinguishing institutional investors.

The resulting varying degrees of monitoring are thus evident. Drawing on the idea proposed by Brickley et al. (1988) classifying institutional investors in terms of their monitoring preferences, insurance companies, banks, and trusts are more likely to support and monitor management than another group of institutions such as pension funds, hedge funds, and mutual funds. Furthermore, both types of institutions have current or potential business links with their portfolio companies or have proposed regulations requiring the management to develop such monitoring standards (Brickley et al., 1988). Hence, using Brickley et al. (1998) grouping criteria as a starting point becomes even more justifiable and informative. Based on differences in monitoring, this paper will also classify institutional investors into two groups: *monitor-intensive* and *monitor-reluctant* investors.

Grouping institutional investors according to their monitoring preferences is more in line with the reality of decision-making in board meetings than traditional methods of categorising institutional investors based on their investment horizons, institutional status, or assets under management (Brickley et al., 1988). Institutional investors are likely to face different incentives or conflicts when voting on management-initiated proposals due to their own different preferences. In addition, some institutional managers have testified that corporate managers have threatened to sever business relationships with their organisations if their proposals are not supported. In this way, institutional investors try to avoid

similar conflicts, and preferences in favour of monitoring may be offset by voting in favour of management, thus making uncommitted monitoring behaviour commonplace. Finally, based on the results of the regression analyses in this paper, it is also possible to assess the plausibility of this approach (if the monitoring effect can be reflected by the turnover rate of institutional ownerships).

2.1.1.3 The turnover rate of institutional ownership

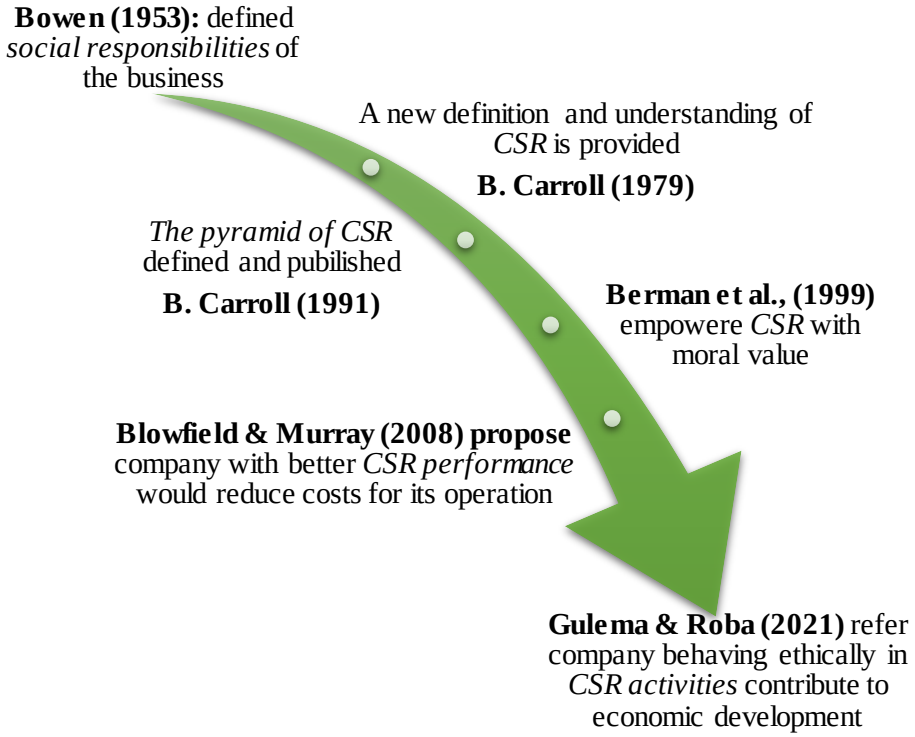
Currently, there is no direct measurement to assess the effect of monitoring. However, Chen et al., (2007) mentioned that institutions engaged in long-term investment prefer to monitor corporate management and improve the development of the company, rather than trading off. Hence, an alternative to active monitoring via board meetings is shareholding adjustments.

Considering the two different degrees of monitoring functions used to classify institutions in the previous section, the turnover rate indeed aligns with the research objectives, indicating its suitability as the measurement for institutions. The turnover rate of institutional investors provides an estimate of the percentage of institutional holdings that were bought and sold during a specific period, typically a year. This metric indicates how often a given institution replaces existing stock holdings with new ones. For example, a turnover rate of 10% implies that a pension fund buys and sells 10% of its holdings annually, suggesting an average holding period of each stock of about 10 years. Therefore, the more frequently institutions trade, the higher transaction costs would occur. Additionally, the turnover rate of institutional ownership could be used as a proxy for institutional investor underreaction to the company and information integration to the market as well (Cremers & Pareek, 2014).

Ruder (1989) mentioned that it seems inevitable for these institutions to gradually assume ownership responsibility. However, Fernández-Feijoo et al., (2014) found that only limited literature has been conducted on whether institutional investors are effective in influencing strategic decision-making related to corporate and social responsibility. At the same, institutions will always need to fulfil corporate social responsibility (CSR) regardless of changes in ownership (Coffey & Fryxell, 1991).

2.1.2 Corporate Social Responsibility (CSR)

Figure 2. The development of CSR



This image was developed by the researcher based on the literature review. Note: the size of the circle does not correlate with the level of influence on CSR. Not all significant events affecting CSR are covered in this six-step chart.

The primary responsibility of providing financial returns to shareholders becomes quickly apparent to everyone (Wallace, 2003). However, Berman et al., (1999) point out that in addition to maximising profits for the company, there is a component of corporate responsibility referred to as ethical responsibility to society, which goes beyond the goal of solely generating profits for owners and shareholders. Until the early 1970s, the consensus that shareholders' interests were paramount began to fade away, and an increasing number of organisations started to prioritise social responsibility (Friedman, 2007). As well, to highlight the incentives to pursue better CSR commitments, independent institutional investors must weigh financial returns against the desire to promote their social norms to CSR (Dyck et al., 2019).

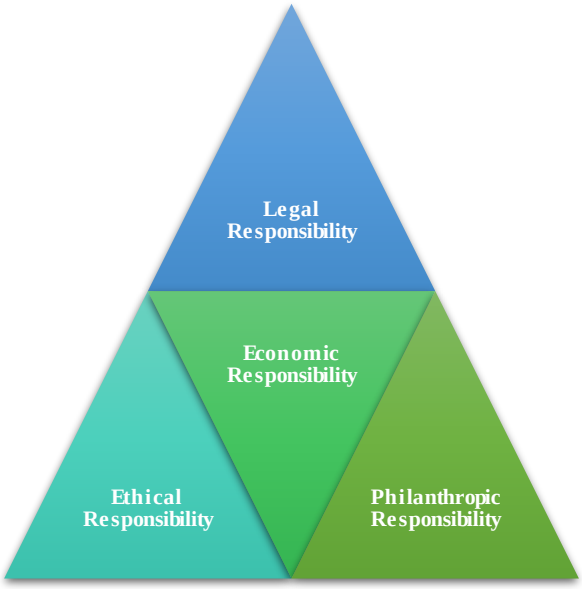
Since then, corporate social responsibility (CSR) has started to dominate in both literature and the business world, marking a milestone (Carroll, 1979; Wood, 1991). Bowen (1953), an early contributor to the field, referred to CSR as "the obligations of a businessman to pursue policies, make decisions, and follow lines of actions which are desirable in terms of the objectives and values of society". This concept of social responsibility – once known as "noblesse obliges" – has experienced a vigorous

resurgence since the 1950s (Mintzberg, 1983), and is now widespread across nearly every facet of business. Following the guidance of CSR, company can achieve several benefits, including reducing operating costs, enhancing corporate image and reputation, increasing customer loyalty, and expanding the market share, even amidst high competition (Blowfield & Murray, 2008).

2.1.2.1 The pyramid of CSR

Despite numerous newly emerging CSR concepts (Geva, 2008), Carroll's pyramid model remains the best-known model (Ma et al., 2012). Carroll (1979) defined CSR as covering economic, legal, ethical, and discretionary expectations. He presents these responsibilities in a pyramid, ranking them by importance: economic, legal, ethical, and philanthropic responsibilities (Baden, 2016). This pyramid can be seen in Figure 3.

Figure 3. The pyramid of CSR



This figure was replicated based on the work of Carroll (1991).

As one of the earliest, most cited, and most influential models of CSR (Schwartz & Carroll, 2003), this prioritisation of economic responsibility has been disseminated in subsequent literature and discussions surrounding the theme of CSR. Unlike Friedman (1970), who asserted that 'the social responsibility of business is to make profits', Carroll (1991) provided a moral justification for CSR based on economic responsibility. This pyramid of CSR may have facilitated the acceptance and even embracement of it by the business community on a wider scale (Brooks, 2010). According to Carroll (1991), four types of social responsibility make up the whole CSR: economic, legal, ethical, and philanthropic.

1) The economic responsibility

The main point of this theory is for CSR to be considered legitimate; it must address the most fundamental issue – the economic function (Davis, 1960). In simple terms, a company is an economic entity that provides products and services to society (Lipton et al., 2020). The company's main driver is profiting motivation (Carroll, 1991). Ultimately, all other responsibilities must be underpinned by economic responsibility; without it, there is no justification for considering other responsibilities (Carroll, 1991; Baden, 2016). Moreover, the importance of economic responsibility was confirmed by a study of African American-owned businesses or minority-owned businesses in the US, which found that economic responsibilities were considered the most significant (Edmondson & Carroll, 1999). Like the mechanisms described by Adam Smith in the "invisible hand" concept (1776) which posits:

"*Every individual neither intends to promote the public interest nor knows how much he is promoting it… By directing [his] industry in such a manner as its produce may be of greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was not part of his intention. Nor is it always the worse for society more effectually than when he really intends to promote it*".

This presents the optimal solution for both business profitability and society without violating legal and ethical norms. Without laws and regulations, even basic economic goals cannot be achieved (Kang & Wood, 1995).

2) The legal responsibility

Businesses are also expected to comply with the laws and regulations (Carroll, 1991). Society expects corporations to operate within the framework of laws and regulations established by federal, states, and local governments (Carroll, 1991). Every corporation needs to pursue its economic objectives within a legal framework. From a certain point of view, legal and economic responsibility are intertwined and mutually reinforcing. Moreover, legislators have introduced these basic principles to ensure the fair functioning of companies (Carroll, 1991).

3) The ethical responsibility

Ethical issues should have been the driving force behind the development of laws and regulations (Baden, 2016). However, while legal responsibility explicitly addresses fairness and justice within the scope of corporation activities, ethical responsibility extends to practices that are not only supposed to be accomplished but also expected to be realised, going beyond the written law. Ethical responsibility can be seen as setting a higher standard of performance than that required by the law (Carroll, 1991).

As the core of CSR is primarily an ethical concept, it intends to emphasise the ethical responsibility of enterprises to avoid harm to society and the environment, or to contribute more proactively to the

well-being of society and its stakeholders (Sachs & Ruehle, 2009). Considering empirical research on Carroll's four responsibilities of business, one recent study that tested Carroll's pyramid of CSR was conducted by Pedersen (2010). Based on a survey of over 1000 business managers from international firms across various sectors and countries, the study suggests that ethical responsibilities are primary among the others.

4) The philanthropic responsibility

Philanthropic responsibility, unlike ethical responsibility, does not regulate the behaviour of the company in an ethical or moral sense. Essentially, philanthropy is a key aspect of social responsibility, but companies are not bound by specific guidelines in this regard. Specifically, philanthropic activities may include improvements to physical infrastructure, such as fitness equipment, transportation facilities, and landscaping, as well as investments in organisational infrastructure, such as updating management systems and allocating staff time effectively (Carroll, 1991).

The CSR pyramid provides a framework for understanding the four aspects of firms' performance. While CSR activities vary significantly across different business sectors, CSR remains the ideal context for sustainability agendas and promoting a corporate responsibility culture (*ESG vs. CSR: Key Distinctions & What Businesses Need to Know*, 2021).

2.1.2.2 Environmental, Social, and Governance (ESG)

A decade ago, CSR was the buzzword for sustainable business practices. Today, Environmental, Social, and Governance (ESG) seems to be on everyone's lips. Many see ESG as a strategy to raise CSR to a measurable level and create transparency and accountability for a company's environmental and social impact. CSR is a sustainability framework adopted by organizations, while ESG measures the level of sustainability of an organization. So far, ESG is the most representative measure of CSR performance today, although the two are not 100% aligned. Hence, to measure the effectiveness of companies' CSR impacts, environmental, social, and governance (ESG) performance scores are chosen as indicators of CSR performance, as broadly implied in the literature (Usman et al., 2020; Ioannou & Serafeim, 2012; Cheng et al., 2013). ESG performance scores are derived from the evaluations of publicly available CSR reports. CSR ranking institutions utilise voluntary disclosure information from databases such as Thomson Reuters ASSET4, Bloomberg, KLD, and others released by companies to evaluate their ESG impacts.

2.2 Theoretical framework

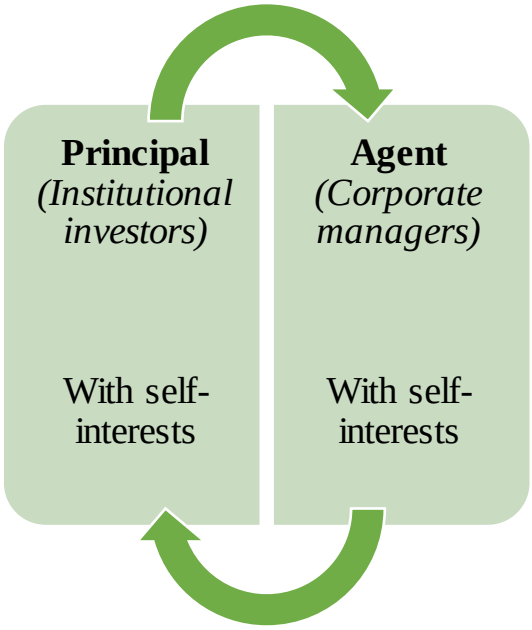
After thoroughly examining institutional investors and CSR individually, the next step is to explore the connection between these two variables and discern their potential relationship based on the findings of previous research.

2.2.1 The principal-agency theory

Stakeholder relationships have long been at the core of corporate governance discussions, as highlighted by Jensen and Meckling (1976). The specific interplay between institutional investors and corporate managers has increasingly become a focal point in academic discourse (Hendry et al., 2006). With institutional investors steadily accumulating a larger share of ownership over time, the relationship between these institutional investors and corporate managers has undergone significant change. As institutional investors delegate authority to corporate managers, the behaviour of this relationship finds an explanation through the principal-agent theory.

Based on economic principles, the principal-agent theory explains the strategic interactions between two parties engaged in resource exchange through a contractual relationship: the principal and the agent (Wei & Liu, 2003). Hence, when examining the relationship between institutional investors and corporate managers, it becomes apparent that the institutional investor takes on the role of the principal, whereas the corporate manager serves as the agent. Within this framework, the institutional investor, as the principal, delegates tasks to the corporate manager, who acts as the agent, to carry them out on their behalf (Bergen et al., 1992; Jensen & Meckling, 1976). However, information asymmetry can exist in a principal-agent relationship where managers could make decisions that do not maximise shareholder value due to either self-interest or fulfilling their stewardship responsibly (Elfenbein et al., 2012). The principal-agent relationship is illustrated in Chart 4.

Figure 4. The relationship within principal-agent theory



The image was created by the researcher based on the findings from literature reviews.

To explore the intricate dynamics of the principal-agent relationship, it is essential to examine factors such as hidden characteristics, hidden action, hidden information, and hidden intention (Bebchuk et al., 2017) as these variables can influence the interaction between corporate managers and institutional investors.

Hidden characteristics: In Brickley et al.'s (1988) research, the authors noted that institutional investors who are reluctant to monitor tend to show a preference for short-term investment horizons and are more likely to conceal or disregard their further engagement with CSR initiatives related to their target companies. In such scenarios, institutions may overlook the value of CSR, especially if they engage in frequent trading and heavily rely on earnings news (Graves & Waddock, 1990; Porter, 1992; Cella et al., 2011). Specifically, institutional investors such as index funds may display weak motivation to participate in stewardship activities aimed at improving governance and enhancing value (Bebchuk et al., 2017). Consequently, the agent may find it challenging to meet expectations due to the limited time and resources from the principals' side. *Hidden action:* The agent may engage in speculative activities and use their resources to manipulate management for their own benefit. *Hidden information:* Even when the principal can observe the actions, evaluating the quality of performance is challenging, due to hidden information. *Hidden intentions:* The principal cannot assess the willingness of their partner to perform. The intentions of the former agent remain unknown to them (Bebchuk et al., 2017).

Therefore, in the context of institutional investors and corporate managers, principal-agent theory examines the relationship between institutional investors (as principals) and corporate managers (as agents), emphasising the potential conflicts of interest arising from divergent goals and information asymmetry.

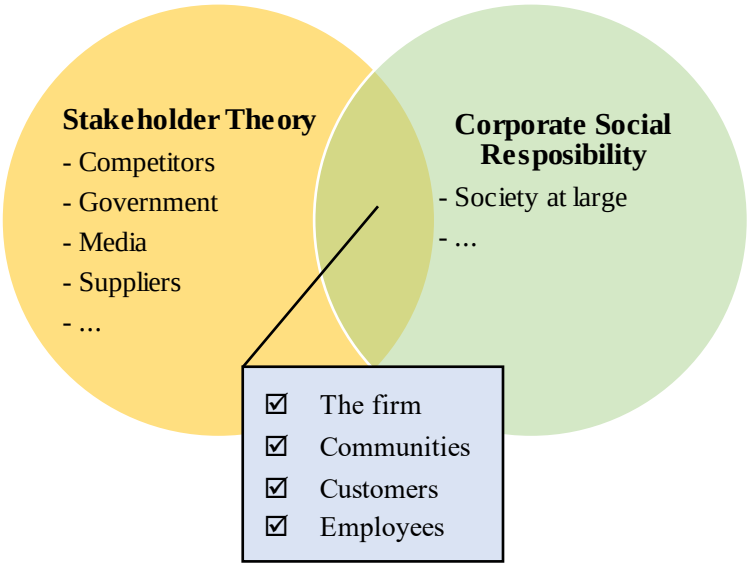
2.2.2 The stakeholder theory

While principal-agent theory offers valuable insights into the dynamics between institutional investors and corporate managers, particularly with extensions focusing on reciprocity and fairness (Jensen, 2002; Bosse & Phillips, 2016), it represents only one aspect of corporate governance. To address broader ethical considerations, such as those encompassed by corporate social responsibility (CSR), a complementary approach through stakeholder theory becomes essential.

Stakeholder theory provides a comprehensive framework for understanding corporate behaviour and decision-making by emphasising the importance of considering the interests of all stakeholders affected by a corporation's actions (Freeman et al., 2021). Furthermore, stakeholder theory closely aligns with the goals of CSR, as both frameworks emphasise the importance of responsible business practices that balance economic, social, and environmental considerations (Freeman & Dmytriyev, 2017).

According to Clarkson (1995), stakeholders encompass a diverse array of groups crucial for the corporation's success. These groups span a wide range of industries, from capital suppliers and resource providers to customers, employees, and even community residents (Starik, 1995). To realise the common good for these various stakeholders, the overall performance of the company depends on keeping the balance between stakeholders under good management instead of pursuing the maximum interests of the shareholders of the organisation (Simpson & Taylor, 2013). In this area, stakeholder theory and CSR have shared the major common theoretical frameworks (Dmytriyev et al., 2021) from different perspectives (Freeman & Dmytriyev, 2017), and aimed to fix the issues between financial profitability and social benefits.

Figure 5. Overlaps between stakeholder theory and corporate social responsibility



The image was created by the research based on the findings from the literature.

Stakeholder theory and CSR are depicted as distinct yet interconnected concepts, as seen in Figure 5. While both aim to align social interests with business operations (Freeman & Dmytriyev, 2017), they differ in their primary focus. Stakeholder theory, as articulated by Freeman (1984), assets that firms have a fundamental responsibility to safeguard the interests of all stakeholders. CSR, as an extension of stakeholder theory, serves to connect these responsibilities with the wider community and society at large. Moreover, CSR acts as an ideal metric, highlighting areas within a company that excel or need improvement in addressing social aspects. Combining CSR with stakeholder theory, Freeman & Dmytriyev (2017) propose three components to elucidate their co-existence: purpose, value creation, and stakeholder interdependence.

A. **Purpose:** Protected by this ethically based purpose, companies are highly likely to avoid business scandals and misguided management leadership. Conflicts between the economy and society, business ethics, stakeholder interests, and societal interests are coming under scrutiny and are recognised as goals for businesses to achieve win-win, healthy, and sustainable growth for all stakeholders under the right governance. If a company's efforts in CSR become more visible, then the company's reputation will grow, providing better avenues for the advantages and benefits of stakeholders and shareholders (Haley, 1991).
B. **Value creation:** Stakeholder theory states that a company should create value for all stakeholders. Behind this purposeful incentive for organisations to wisely embrace their customers, employees, and communities lies the essence of doing CSR right. Whether the approach to CSR is residual or holistic, Freeman (2010) demonstrates that the goal of CSR is

both to create wealth for shareholders and ultimately to contribute to society in terms of social and environmental factors. Lastly, this value creation can also be stimulated by the virtuous cycle that emerges from the interaction between stakeholders and business operations (Deng et al., 2013).

C. **Stakeholder independence:** The independence of stakeholders may also enhance the situation when shareholders receive lower returns, as the company decides to support the community. Since a positive domino effect is likely to occur when independent stakeholders begin to create value for other relevant or irrelevant stakeholders, the more motivated and productive stakeholders are, the better performance of CSR becomes.

In summary, stakeholder theory serves as a framework for examining the linkages between stakeholder management practices and the achievement of various CSR objectives (Donaldson & Preston, 1995). Therefore, creating value for employees (CSR) does not put pressure on shareholders (stakeholders) to make profits. With a comprehensive understanding acquired through an exploration of principal-agent theory and stakeholder theory about institutional investors and CSR, the focus now shifts to examining the core aspect of this study - the relationship between these two variables.

3. Hypothesis development

3.1 Empirical findings

Over the past decades, the behaviour of institutional investors has become a prominent topic in CSR research. To formulate hypotheses regarding how institutional investors influence CSR among invested firms, institutions are categorised based on Brickley et al. (1988) research into monitor-intensive investors (those holding stocks for extended periods and trading infrequently) and monitor-reluctant investors (those holding stock for shorter periods and trading infrequently). Their behaviours are measured by the turnover rate of institutional holdings[4]. Furthermore, CSR will be further subdivided in greater detail to facilitate testing and justification using quantitative methods. This categorisation facilitates quantitative analysis and justification. A common explanation suggests that investment decisions and active involvement in monitoring activities made by institutional investors may influence the firms' CSR performance.

Empirical findings regarding the relationship between institutional investors and CSR have been the subject of extensive research. Previous research on this topic has yielded contradictory results (Coffey & Fryxell, 1991; Johnson & Greening, 1999). However, a distinct pattern of influence can be identified: positive, negative, and neutral. These findings shed light on the nuanced dynamics at play in how institutional investors impact CSR practices within companies.

1) **Positive:** Neubaum & Zahra (2006) concluded that long-term ownership, evidenced by pension fund ownership, is conductive to CSR.
2) **Negative:** Short-term investors, due to their shorter holding period, may not be in a position to be as prominent or as myopic in monitoring a company's CSR performance as managers (David et al., 2001), because of their comparatively shorter holding time.
3) **Neutral:** However, in the research by Johnson & Greening (1999), their results showed that the effect of institutional holdings on CSR is not related to investment strategies. Therefore, each of the three scenarios will be analysed individually.

1) Institutions enhance CSR (positive influence)

Monks & Minow (1991) highlight that as a regulated investment practice, changes in U.S. securities law have emphasised the fiduciary duties of institutional investors. Any purchase of specific investments, like pensions and listed company shares, firms need to get authorised by Financial Conduct Authority (FCA). Under such supervision, both interests of shareholders and rest stakeholders, and more prudent investment initiatives from institutions' side could be secured and concerned to a large extend.

[4] This quantitative measurement will be used in the regression analysis section, with detailed explanation provided later.

In addition, such regulated transparency and an effective accountability framework makes the boards responsible for the performance firms and is in line with the interests of institutions. Demonstrating good CSR to stakeholders may also be achieved through increased corporate governance (Blair, 1995). Besides these positive external factors, the growing strength of institutional investors themselves can also contribute to the CSR development of companies (Nofsinger et al., 2019).

For example, institutional investors with large holdings have a significant influence on voting rights and critical organisational decisions (Camara, 2004). Consequently, these growing institutions are not only content to make significant profits from their day-to-day transactions but are now endeavouring to make a positive impact on CSR (Carroll & Shabana, 2010). Moreover, the juxtaposition of sufficient time for a range of projects, such as the start-up, operation, and close-out of various projects, as well as the continuous availability of adequate financing funds from investors, will enhance the company's overall CSR performance (Rangan et al., 2015). Hong & Kacperczyk (2009) concluded that norm-constrained institutional investors, such as pension funds, are less likely to include "sin" stocks in their portfolios. Researchers have further investigated this phenomenon to understand its motivation (Hong & Kacperczyk, 2009). For example, neglecting a certain percentage of equity holdings from alcohol, tobacco, and gambling industries in their portfolio, could have a negative impact on their valuation. By this means, stocks in these irresponsible industries are not recommended for institutional investors to trade (Catford, 2012). The reasons are explained in two parts:

A. **Socially responsible investing (SRI):** Nofsinger et al. (2019) observed that longer-horizon investors within institutional investors show a greater aversion to environmental and social weaknesses companies compared to institutions with shorter investment horizons. These long-term institutions will be primed to avoid downside risks. For example, the tobacco industry is responsible for more than US$ 1 trillion in healthcare expenditure and lost productivity each year; and alcohol dependence, the most serious alcohol use disorder (AUD), affects 2.6% of adults worldwide, or 144 million people, because of alcohol consumption. Eventually, institutional investors will slowly lose interests to companies in these distressed sectors (Grene, 2008).

   Moreover, an increasing trend in exclusive socially responsible investment (SRI) and environmentally sensitive lending from institutions can also make firms view CSR as a default risk (Knoll, 2002). Under such passive influence from institutions, firms are more likely to optimise decision-making related CSR to have a positive effect for their own growth (Chava, 2014; Knoll, 2002).

B. **Shareholder value maximising:** Shareholder primacy theory indicates that, companies prioritise maximising shareholder value as their foremost objective, pursuing it irrespective of costs or the operational status of their business. For example, Villarón-Peramato et al. (2018) mention that to

meet the expectations of institutions, firms would rather to bear the pressure from excessive greenhouse gas emissions, these pressures include higher cost of equity which is the good news for shareholders and the high debt capital which bring the problem of interests' payback to the company and lenders. Hence, both investors and lenders have reason to carefully consider environmental indicators from the firm's perspective.

Castaldi & Wortman (1984) also stress that monitoring is a key factor in how institution's behaviour affects CSR within a company. Pathan (2009) mentions that directors appointed by institutions are willing to ensure compliance with regulations regarding CSR performance. They may strengthen the company's internal controls and may disclose more information to avoid information asymmetry in this area (Frias-Aceituno et al., 2013).

2) Institutions misguide CSR (negative influence)

Hypotheses proposed by Benabou & Tirole (2010) suggest that CSR could be viewed as a matter of corporate executives and board members prioritising their own generosity over creating benefits for common shareholders. Therefore, when it comes to such companies, institutional investors will act in their own interests rather than actively pursuing the company's CSR policy. While institutional investors may have benefits, it can also be costly (Young et al., 2008), leading institutional investors to be less likely to own shares of firms with improved environmental or social responsibility (Gillan et al., 2010). This reluctance extends to selling shares of firms with higher environmental, social, and governance dimensions.

Principal-agency theory, as discussed by Renders & Gaeremynk (2012), suggests that institutional investors acting as directors may exploit the wealth of minority shareholders due to divergences such as, different preferences, incentives, and asymmetric information advantages. To move in circles, the company's shareholders may begin to lose confidence and patience with the firm. Under such a scenario, institutions might be not able to produce further incentives to monitor corporate managers. Moreover, if the external capital environment continues to exert pressure on this group of investors, intense competition among institutional investors may gradually lead some of them to chase profitable short-term investment performance (Graves & Waddock, 1990). Nevertheless, responsible firms may benefit from a reputational premium that discourages negative behaviour from institutions, as they tend to prefer investing in firms with social expenditures (Baron, 2008). However, there is also a potential downside, as companies that breach their CSR commitments may experience lower profits (Besley et al., 2007).

Short-sighted institutions prioritise stock trading over positively influencing the CSR model of companies (García-Meca & Pucheta-Martínez, 2017). These institutions are less likely to be involved in the formulation of a company's CSR policy, particularly concerning indicators such as financial

performance or investment (Wahba, 2010). Described as monitor-reluctant investors by Brickley et al. (1988), they are characterised by high portfolio turnover and prioritise short-term trading profits (Porter, 1992) with minimal concern for CSR activities.

Short-sighted institutions are more inclined to trade stocks than to try to positively influence the CSR model of companies (García-Meca & Pucheta-Martínez, 2017). Meanwhile, short-term performance may lead investors to adopt more aggressive trading strategies (Lowenstein, 1988). Institutional investors are less likely to be involved in the formulation of a company's CSR policy in terms of indicators such as financial performance or investment (Wahba, 2010). This type of investor, described as monitor-reluctant investor Brickley et al., (1988), is characterised by a high portfolio turnover rate and a preference for short-term trading profits (Porter, 1992) with fewer concerns about CSR activities.

3) Institutions are irrelevant with CSR (no influence)

The relationship between these two variables is not straightforward, as compliance with social norms can sometimes conflict with existing economic incentives (Nofsinger et al., 2019). Fernando et al., (2010) showed that the number of shares held by institutional investors in a company, whether long-term or short-term shareholders, does not reveal whether they use good or bad CSR as an investment criterion, for example those institutions holding shares like Boeing's or Shell's which frequently occur catastrophic events being detrimental to the interests of society and the environment. The relationship between ownership structure and CSR is non-monotonic (Fernando et al., 2010). Margolis & Elfenbein (2008) explain this phenomenon as follows: corporate misbehaviour can be costly for the company if discovered. Recent scandals have underscored the serious direct impact of wrongdoing on companies and the indirect impact on investors. Some positive CSR activities involve a cost-benefit trade-off, and these benefits might also incur significant costs (Servaes & Tamayo, 2013; Lins et al., 2017). Lins et al., (2017) provide the rare finding that in the aftermath of a historic global crisis, such as the 2008 financial crisis, there is no difference between the performance of high and low CSR firms in the recovery period. Although there is an increase in social capital from institutions working significantly in periods of reduced trust in the company. However, Lins et al., (2017) also mentioned that during the normal mild periods of growth for firms, any benefits from social capital would be reflected in the firm's share price. Hence, it is difficult to measure whether institutional investors have significantly helped a company's CSR efforts.

3.2 Hypothesis

Overall, a growing number of scholars have been examining the relationship between institutional investors with various characteristics and CSR. In Table 4, three categories, extracting various institution's characteristics, three estimated directions of impacts, and corresponding citations are listed below. Intense competition (Graves & Waddock, 1990), the sample period after a crisis (Lins et al., 2017), the cost of social capital (Servaes & Tamayo, 2013), and other institutional properties (Chava, 2014) are established influencing factors that can continuously impact the relationship between institutional investors and CSR, either positively, negatively, or neutrally.

Table 4. Institutional investors' characteristics and CSR

Primary independent variable	Sign	Citation
Investment trend concerning CSR	+	Neubaum & Zahra (2006)
Coexistence of time and capital	+	Rangan et al. (2015)
Intensive competition among institutions	-	Graves & Waddock (1990)
Short-term profit chasing	-	Lowenstein (1988)
Long-term ownership	+	Neubaum & Zahra (2006); Nofsinger et al. (2019)
Short-term institutions	-	David et al. (2001)
Institutional holdings	×	Johnson & Greening (1999)
Force from the law	+	Blair (1995)
The preference to screen "sin" stock	+	Hong & Kacperczyk (2009)
Firms with climate change concerns	+	Chava (2014)
Reputation of the directors	+	Castaldi & Wortman (1984); Pathan (2009); Frias-Aceituno et al. (2013)
Free-riding behaviour	-	Young et al. (2008)
Financial performance/Investment Opportunities	-	Wahba (2010)
The recovery period after crisis	×	Lins et al. (2017)

This table summarises the characteristics of institutional investors proposed to be related to CSR in the academic literature within the corporate finance area. Moreover, for each cited paper, there is also a variable of interest as well as the sign of the relation with CSR, where × indicates that no significant relation was found.

From the results, it is evident that the sign of the relationship between market characteristics and CSR is more inclined to be positive. In other words, institutional investors who demonstrate a proactive approach to corporate governance, who have a longer-term relationship with the company, who are more willing to invest their time and money, and who are more willing to pay attention to responsibility issues will contribute to the improvement of a company's CSR performance. Additionally, the empirical findings from Callen & Fang (2013) indicate significant benefits will be realised by the stable

institutional investing in firms. Considering the above argument and following the theories, this paper hypothesises that:

Null hypothesis: Monitor-intensive investors enhance the firms' CSR performance.

Hypothesis 1: Monitor-intensive investors enhance CSR performance more than monitor-reluctant investors do.

4. Data and methodology

4.1 Data and variable definitions

4.1.1 Data collection on institutional investors as the independent variable

1) Sample collection for companies

The company data set utilised for regression analysis is derived from the Fortune 500 in the U.S. from 2010 – 2019. The Fortune 500 is chosen as the primary data sample due to its ability to provide insight into which companies and industries have significant influence on the U.S. economy. These companies, being among the largest in their respective industries, are considered representative. After picking companies ranking top 500 among 27 industries[5], overall, 197 companies were selected as depicted in Table 5.

[5] Excluded industries would be explained in the next section.

Table 5. Sample of companies

Airlines	Home Equipment, Furnishings	Food Consumer Products	Engineering & Construction
Delta Air Lines	Stanley Black & Decker	PepsiCo	Fluor
American Airlines Group	Mohawk Industries	Mondelez International	AECOM
United Airlines Holdings	Newell Brands	Kraft Heinz(Lack of data)	Jacobs Engineering Group
Southwest Airlines	Masco	General Mills	Quanta Engineering Group
	Fortune Brands Home & Security	Land O'Lakes (Private company)	Peter Kiewit Sons' (Private company)
Chemicals	**Utilities: Gas and Electric**	Kellogg	EMCOR Group
		Hormel Foods	MasTec
Dow (Split from DuPont in 2019)	Exelon	Conagra Brands	KBR
3M	Duke Energy	Hershey	**Food Production**
Sherwin-Williams	Southern	Campbell Soup	
DuPont (Lack of ESG data)	PG&E (Several times go to bankruptcy)	**Semiconductors and Other Electronics Components**	Archer daniels Midland
PPG Industries	NextEra Energy		Tyson Foods
Ecolab	American Electric Power	Intel	CHS (Private company)
Mosaic	DTE Energy	Qualcomm	Corteva(Lack of ESG data)
Westlake	Edison International	Jabil	Andersons
International Flavors & Fragrances	Dominion Energy	Micron Technology	Seaboard
Eastman Chemical	Consolidated Edison	Broadcom	Ingredion
Construction and Farm Machinery	Ecel Energy(Private Company)	Nvidia	**Homebuilders**
	Sempra	Applied Metarials	
Caterpillar	Entergy	Texas Intruments	D.R. Horton
Deere	AES	Advanced Micro Devices	Lennar
AGCO	FirstEnergy	Lam Reserch	PulteGroup
Oshkosh (Mainly in military industry)	Eversource Energy	Analog Devices	NVR
Food & Drug Stores	Public Service Enterprise Group	KLA	Toll Brothers
	Centerpoint Energy	Sanmina	Taylor Morrison Home
Walgreens Boots Alliance (Shares buyback often)	WEC Energy Group	ON Semiconductor	**Household and Personal Products**
Kroger	CMS Energy	**Computers, Office Equipment**	
Albertsons(Lack of ESG data)	UGI		Procter & Gamble
Publix Super Markets(Private Company)	PPL	Apple	Kimberly-Clark
Rite Aid	Ameren	Dell Technologies (List and delist several times)	Colgate-Palmolive
Frequency of M&A (2010-2017)	**Marked Color and Number**	HP	Estee Lauder
<3	**133**	Hewlett Packard Enterprise (Split from HP in 2015)	Clorox
3~5	**30**	Western Digital	**Waste Management**
>5	**24**	NCR	
Additional Resons for Exclusion	**10**	Xerox Holdings	Waste Management
Number of Selected Company	**163**		Republic Service

(The table is continued on next page)

Industrial Machinery	Apparel	Mining, Crude-Oil Production
General Electric	TJX	ConocoPhillips
Cummins	Nike	Occidental Petroleum
Carrier Global(Lack of ESG data)	Ross Stores	Freeport-McMoRan
Emerson Electric	Gap	EOG Resources
Illinois Tool Works	Burlington Stores	Pioneer Natural Resources
Parker-Hannifin	VF	Newmont
Otis Worldwide(Lack of ESG data)	PVH	Devon Energy
Dover	Foot Locker	Ovintiv
Westinghouse Air Brake Technologies	Hanesbrands	APA
Medical Products and Equipment	Victoria's Secret(No ESG data)	Hess
	Motor Vehicles & Parts	**Mail, Package, and Freight Delivery**
Abbott Laboratories		
Danaher	Ford	United Parcel Service
Becton Dickinson	General Motors	FedEx
Stryker	Tesla	**Building Materials, Glass**
Baxter International	Paccar	
Boston Scientific	Lear	Builders Firstsource
Zimmer Biomet Holdings (Struggle in antitrust lawsuit)	Tenneco(Delisted)	UFP Industries
Food Services	Goodyear Tire & Rubber	Owens Corning
	BorgWarner	**Energy**
Starbucks	Thor Industries	
McDonald's	Dana	World Fuel Services
Yum China Holdings(Lack of data)	Autoliv	NRG Energy
Chipotle Mexican Grill	**Wholesalers**	Vistra(Lack of ESG data)
Darden Restaurants		**General Merchandisers**
Yum Brands	Sysco	
Metals	Arrow Electronics	Walmart
	TD Synnex	Costco Wholesale
Nucor	Performance Food Group	Target
Cleveland-Cliffs	US Foods Holdings	Macy's
United States Steel	**Electronics, Electrical Equip.**	Kohl's
Steel dynamics		BJ's Wholesale Club (List again in 2018)
Reliance Steel & Aluminum	Honeywell International	Nordstrom
Alcoa(Lack of ownership data)	Whirlpool	Dillard's
Arconic(Lack of ESG data)	Corning	
Commercial Metals	Rockwell Automation	

These two tables show the overall sample of companies. It displays the names of industries, frequency of M&A, additional reasons coloured differently for exclusion, and the final sample size at the end.

To ensure the selection of standardised target companies, a set of screening criteria was applied to refine the sample further. Companies experiencing repeated listing and delisting, multiple mergers and acquisitions, privatisation, bankruptcy, spin-off, share buybacks, company splits, and pressures from anti-lawsuits were excluded from the sample due to their significant impact on changes in institutional ownership. Following the screening process outlined in Table 6, the sample size was reduced to 163 out of the initial 197 observations.

Table 6. Screening criteria and relative companies

Screening criteria	Name of companies
Repeated listed & delisted	*(2) Dell Technologies, BJ's Wholesale Club*
A series of Merge & Acquisition	*(24) Caterpillar Corporation, Intel Corporation, General Electric Corporation,* and so on
Privatised company	*(2) Cenex Harvest States (CHS), Peter Kiewit Son's*
Teetering on the brink of bankruptcy	*(1) Pacific Gas and Electric Company (PG&E)*
Spin-offs during or after the period of 2010-2017	*(2) Dow Corporation, Hewlett Packard Enterprise*
Pressure from the Anti-lawsuit	*(1) Zimmer Biomet Holdings*
Share buybacks frequently	*(1) Walgreens Boots Alliance*
Split from HP	*(1) Hewlett Packard Enterprise*

This table contains six types of screening criteria and the corresponding names of companies.

Additionally, companies in alcohol, tobacco, gaming, firearms, and the military industries were subsequently excluded. This decision was based on the belief that these companies having a notable impact on natural resources, should fulfil their environmental and social responsibilities first, instead of harming (Zagloel & Hasibuan, 2021). Furthermore, commercial banks (e.g., JPMorgan Chase, Bank of America, Wells Fargo, etc.) and financial service companies (e.g., PayPal Holdings, Visa, Mastercard, etc.), although listed in the Fortune 500 and trading on the stock market, were not considered either. Since companies in such financial service industry are lack of clear focus on either shareholders or the environment, and this is quite unusual given the performances in other industries (Dando & Swift, 2003).

During the collection of corresponding data for each company from the Refinitiv database, companies with missing data for at least 50% of the available information were delisted from the sample. And based on the information from the Refinitiv database, 17 companies were further removed (-), and 1 company was added (+) to the sample due to the reasons stated below.

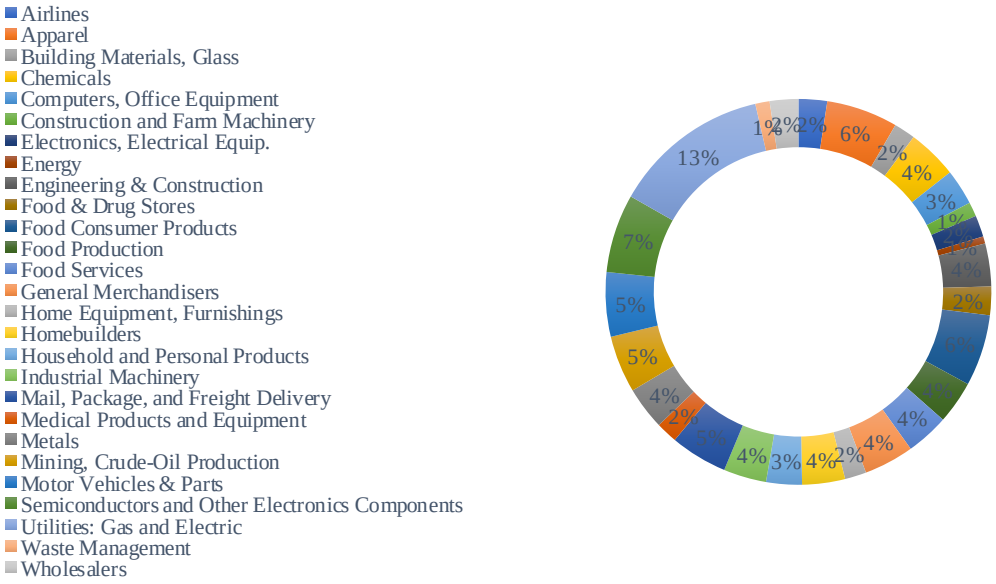
Table 7. Deleted companies

Reasons for exclusion (-)	Reason for addition (+)	Name of companies
Lack of data (-)		*(12) DuPont, Kraft Heinz, Albertsons, Cortrva, Seaboard, Carrier Global, Otis Worldwide, Yum China Holdings, Arconic, Burlington Stores, Victoria's Secret, Vistra*
Defining as a Private Company (-)		*(4) Publix Super Markets, Ecel Energy, Land O'Lakes, CHS*
	Publicly trading still (+)	*(1) Mosaic*
Delisted (-)		*(1) Tenneco*

Table 7 contains three reasons for sample exclusion: lacking data resources, the company being defined as private, and being delisted from their respective trading market. Moreover, each category corresponds relatively to the number of companies shown on the right side.

The final sample size reduced to 147 companies distributed among 27 industries showed in Figure 6.

Figure 6. Pie chart of selected industries



The figure was created by the research based on the findings from data collection. As recorded in the Fortune 500, industries like Food and Home Equipment are overrepresented. The reason is that sub-categorisation avoids over-concentration of the number of companies in broad industry categories.

Regarding to the number of companies, based on the 20:1 sample size rule proposed by Burmeister and Aitken (2012), the ratio of the sample size to the number of parameters in a regression model should be at least 20 to 1. Accordingly, the research design of this study has 5 parameters including the control

variables. Hence, the number of companies collected for the research meets the criteria for a sufficient sample size and is deemed adequate.

Meanwhile, considering that there are plenty of research about company-specific CSR, however the cross-industry studies are absent in this research field (Dabic et al., 2016). Hence, these 27 industries, based on similar production processes, similar products, or similar behaviour in financial market, will further be divided into three sectors: primary (extraction and agriculture)[6] including any industries involved in the extraction and production of raw materials, secondary (manufacturing)[7] encompassing industries that produce a finished, usable product or are involved in construction, and tertiary (service)[8] consisting of the provision of services instead of end products, according to the three-sector theory. These three sectors range from low-income fundamental economic sector to service sector with more value added within one country. By this means, the analyses obtained from such an all-encompassing sample collection become more convincing for testing the hypotheses of this thesis.

2) Sample description for institutional holdings and holding periods

The sample period for institutional ownership starts from the 2010[9] to 2017. These two specific time points were chosen to minimise the impact of two significant business events: the 2008 financial crisis and the 2019[10] COVID-19 pandemic, which could otherwise distort the data due to highly unfavourable market conditions. Institutional holdings data were collected at both year-end and quarter-end during this period.

One issue to consider in examining the relationship more accurately between these two variables is whether there is a delayed response in terms of CSR performance for firms that experience a change in institutional investor shareholdings. To address this, many researchers have mentioned the widespread use of 1- or 2-year lags in their published literature (Cochran & Wood, 1984; Hillman & Keim, 2001). This is because in the two years or so since these institutions acted proactively to get on board, the target company's operating cash flows, market value and social performance have changed dramatically (*Hedge Fund Activism's Impact on CSR Performance - HEC Paris Research*, 2020). Therefore, in this paper, the lag period will be set at 2 years.

---

[6] Primary sector (5) includes Utilities, Metals, Mining, Crude-Oil Production, Building Materials, Glass, Energy

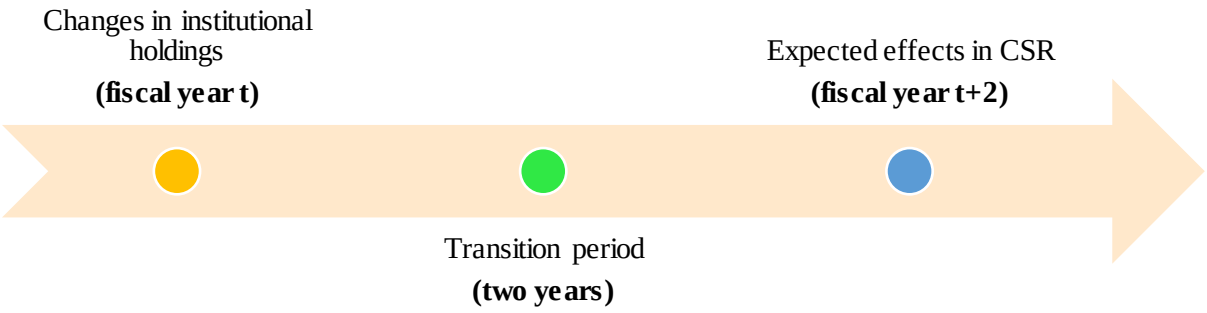
[7] Secondary sector (16) includes Chemicals, Construction and Farm Machinery, Food & Drug Stores, Home Equipment, Furnishing, Food Consumer Products, Apparel, Homebuilders, Household and Personal Products, Industrial Machinery, Medical Products and Equipment, Semiconductors and Other Electronic Components, Computers, Office Equipment, Engineering & Construction, Motor Vehicles & Parts, Electronics, Electrical Equip, Food Production

[8] Tertiary sector (6) includes Airline, Waster Management, Food Service, Wholesalers, Mail, Package, and Freight Delivery, General Merchandisers

[9] To avoid interference from the financial crisis in 2008.

[10] Since the period for collecting CSR performance data extends until 2019.

Figure 7. Timeline for lagged effect of institutional ownership on CSR



This timeline figure illustrates the two-year gap between the changes in institutional ownership and the expected effects happening in CSR. The chart is created by the research based on the findings from the literature.

Two separate period groups are designed to be applied due to the lagged effect of institutional investors on CSR. These groups span from 2010 to 2017 for both institutional ownership and control variables, and from 2012 to 2019 for CSR performance.

3) Measurement of the turnover rate of institutional ownership

The measurement of the turnover rate of an institutional investor in a company is calculated by the owner's trading activity relative to its assets under management, expressed as a percentage. The turnover rate is determined by the number of shares traded within institutions in a quarter, which is the absolute value of the change in the aggregate number of shares held by all institutions from the beginning to the end of that quarter. The formula is shown below:

$$Turnover\ ratio = \frac{|Changes\ in\ Ownerships|}{Total\ Assets}$$

In Refinitiv, the turnover rate is displayed quarterly. The measurement in this paper assumes that the turnover rate of institutional ownership maintains a stable trend over the same period. In such a case, the average rate of change in the sample institutional ownership will measure the final turnover rate with some error. Moreover, the Refinitiv Eikon database already lists the turnover rate of institutional ownership in a dedicated column, eliminating the need for users to calculate this turnover rate separately. Table 8 shows how the turnover rate was collected for each company before the final data processing.

Table 8. The example company (Costco Wholesale) of institutions collection table

Monitor-resistant investors	Investment Management	Pension Fund	Hedge Fund
Monitor-sensitive investors	Bank	Trust	Insurance Company
Costco Wholesale			
BlackRock Institutional Trust Company, N.A.	Investment Management		
Capital World Investors	Investment Management		
Fidelity Management & Research Company LLC	Investment Management		
State Street Global Advisors (US)			Hedge Fund
The Vanguard Group, Inc.			Hedge Fund
Berkshire Hathaway Inc.			Insurance Company
JPMorgan Private Bank (United States)	Bank		
Metropolitan Life Insurance Co. (US)			Insurance Company
Mitsubishi UFJ Trust and Banking Corporation	Bank		
Sumitomo Mitsui Trust Bank, Limited		Trust	
	31-Mar-10	30-Jun-10	30-Sep-10
BlackRock Institutional Trust Company, N.A.	37.37%	35.52%	34.03%
Capital World Investors	34.79%	31.44%	29.29%
Fidelity Management & Research Company LLC	45.34%	44.77%	66.41%
State Street Global Advisors (US)	18.88%	16.83%	16.19%
The Vanguard Group, Inc.	12.95%	13.32%	14.12%
Berkshire Hathaway Inc.	26.82%	27.97%	28.30%
JPMorgan Private Bank (United States)	33.05%	31.71%	31.04%
Metropolitan Life Insurance Co. (US)	14.87%	12.91%	12.68%
Mitsubishi UFJ Trust and Banking Corporation	40.55%	31.13%	32.21%
Sumitomo Mitsui Trust Bank, Limited	119.69%	117.58%	112.58%
Turnover rate of Monitor-sensitive investors	**47.00%**	**44.26%**	**43.36%**
Turnover rate of Monitor-resistant investors	**29.87%**	**28.38%**	**32.01%**
Notes: Delete Noisy Numbers			

This table presents examples of different types of institutional collections and their relative turnover rates of institutional ownership. All the data are collected by the researcher and from the Refinitiv Eikon database.

Table 8 briefly shows the classification of 10 institutions into two groups: monitor-intensive and monitor-reluctant investors. Since the available data for the turnover rate is mostly only shown for these top institutions, the data for the top 5 institutions were collected and averaged to obtain the original sample turnover rates directly from Refinitiv Eikon database. Additionally, due to limited space, the entire table could not be displayed, leaving data for 39 quarters on the right side.

4.1.2 Data collection on CSR as the dependent variable

Firms' CSR performance can be revealed from the company Environment, Social, and Governance (ESG) scores. In the Refinitiv database, the ESG scores are selected and collected from various resources, including CSR reports, sustainability reports, annual reports, non-governmental organisation (NGO) websites, and so on. Eventually, the collected information is transformed into the measurable ESG scores being used to reflect a company's CSR performance.

The company's ESG scores are measured on a scale ranging from 0 to 100, where 100 represents the best ESG score the company could achieve, and 0 represents the lowest score.

4.1.3 Data collection on control variable

According to Angrist & Krueger (2001), the best instrumental variables should be highly correlated with regressor variables and can be used as instruments for the dependent variables (CSR). In this case, control variable can establish a correlation or causation between the independent and dependent variables, ensuring that the results of the regression model are entirely due to the experimental manipulation. In multiple linear regression analyses, control variables could be added along with the independent variable as predictors. The results will indicate how many significant effects can be predicted by the independent variable when the control variables are fixed (Bhandari, 2022). Hence this paper follows these criteria in choosing control variables.

1) **The liquidity** will serve as a control variable in this regression model, measuring the ratio of current assets to current liabilities. As a company's ability to raise cash to meet its short-term obligation, according to Neubaum & Zahra (2006), companies with strong cash liquidity are more likely to support CSR activities.

$$Liquidity\ Ratio = \frac{Current\ Assets}{Current\ Liabilities}$$

2) **The debt-to-equity ratio** will serve as a control variable to account for the use of long-term debt in a firm's operation. Since, such solvency ratio reflects a company's long-run viability and ability to pay long-term obligations. Moreover, D/E ratio may also affect future CSR performance (Hamrouni et al., 2019). As the debt-to-equity ratio increases, more profits are directed towards debt and interest's payments, leaving fewer resources available for CSR activities (Graves & Waddock, 1994).

$$D/E\ Ratio = \frac{Long\text{ - }term\ Debt}{Common\ Equity}$$

3) **The size** of the company, measured by sales, will serve as a final control variable in this research. Research suggests that larger companies are likely to have more idle resources for CSR activities (Neubaum & Zahra, 2006).

$$Size = Sales\ \ \&\ \ Log\ of\ Sales$$

4.2 Methodology

4.2.1 Formulas

In this section, the methodology employs formulas to examine the relationship between two types of institutional investors and firms' CSR performance by four means, while also integrating control variables. As previously stated, all 27 industries are divided into three segments according to the Three Industry Sectors methodology. Through separate three linear regression equations, a multilinear regression model is applied. The model is structured as follows:

1) $\text{ESG Score}_{i,t+2}$ (***Primary***) $= \alpha + \beta_1 \text{InstTurn}_{i,t}^{\text{Total}}$ (M-I) $+ \beta_2 \text{InstTurn}_{i,t}^{\text{Total}}$ (M-R) $+ \beta_3 \text{Liquidity}_{i,t} + \beta_4 \text{Debt-to-equity ratio}_{i,t} + \beta_5 \text{Ln}(\text{Sales}_{i,t}) + \varepsilon_{i,t}$

2) $\text{ESG Score}_{i,t+2}$ (***Secondary***) $= \alpha + \beta_1 \text{InstTurn}_{i,t}^{\text{Total}}$ (M-I) $+ \beta_2 \text{InstTurn}_{i,t}^{\text{Total}}$ (M-R) $+ \beta_3 \text{Liquidity}_{i,t} + \beta_4 \text{Debt-to-equity ratio}_{i,t} + \beta_5 \text{Ln}(\text{Sales}_{i,t}) + \varepsilon_{i,t}$

3) $\text{ESG Score}_{i,t+2}$ (***Tertiary***) $= \alpha + \beta_1 \text{InstTurn}_{i,t}^{\text{Total}}$ (M-I) $+ \beta_2 \text{InstTurn}_{i,t}^{\text{Total}}$ (M-R) $+ \beta_3 \text{liquidity}_{i,t} + \beta_4 \text{Debt-to-equity ratio}_{i,t} + \beta_5 \text{Ln}(\text{Sales}_{i,t}) + \varepsilon_{i,t}$

These three distinctive industry sectors will be evaluated separately. Hence, an additional equation for overall companies would be added below.

4) $\text{ESG Score}_{i,t+2}$ (***Overall***) $= \alpha + \beta_1 \text{InstTurn}_{i,t}^{\text{Total}}$ (M-I) $+ \beta_2 \text{InstTurn}_{i,t}^{\text{Total}}$ (M-R) $+ \beta_3 \text{Liquidity}_{i,t} + \beta_4 \text{Debt-to-equity ratio}_{i,t} + \beta_5 \text{Ln}(\text{Sales}_{i,t}) + \varepsilon_{i,t}$

The evaluation of CSR will be based on aggregated ESG scores, making the fourth equation necessary. It will be utilised to examine the relationship between the turnover rate of institutions and CSR derived among these three industry sectors.

4.2.2 Pre-analytical test

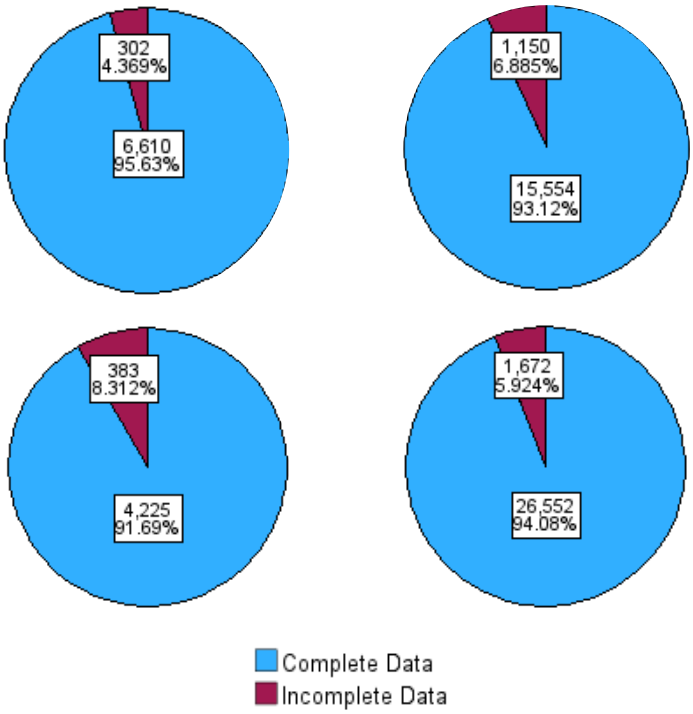
Before conducting the pre-analytical test, it is essential to acknowledge the significance of utilising appropriate statistical tools. SPSS (Statistical Package for the Science), a widely recognised and used software package for statistical analysis, will be employed to evaluate the process. The collected data will be imported into SPSS software in Excel format, with regression analysis conducted therein to test the validity of the study's hypothesis. Ensuring data integrity is crucial before proceeding with multiple regression modelling in SPSS. Without complete data, the credibility of the regression analysis results may be compromised, making it imperative to address issues such as outliers and missing values.

For the outliers, that is the tricky part for most data analysists. Without manual input errors, every piece of data is real and valid. Therefore, individually, data themselves do not look out of place. However, in linear regression analysis, to simulate the predictive relationship that exists in the displayed data as perfectly as possible, the presence of some noise value could distort this estimated linear relationship to varying degrees. In these real data, what criteria should be used to judge whether they are outliers or not, this problem has always been a critical concern for researchers before they start producing results.

In this research, the researcher is going to employ the Z-score, which is used to measure how many standard deviations a data point is from the mean, to determine the scale of outliers. As a benchmark for assessing data normality, values with Z-scores within the range of +1.96 and -1.96 represent approximately 95% of the data within these standard deviations. This range of standard deviations worth adopting to make the predicted regression line fit as many sample data as possible. A more normal distribution for the error term leads to more meaningful statistical outcomes when analysing the regression model.

After removing a series of outliers positioning outside of range from -1.96 to +1.96 and temporarily setting them to missing values, a summary of the missing values is provided below. According to pie charts, the percentages of missing values are 4.369%, 6.885%, 8.312%, and 5.924% separately as primary, secondary, tertiary, and overall sectors, which are still within the tolerance level (between 5% and 10%).

Figure 8. Overall summary of missing values



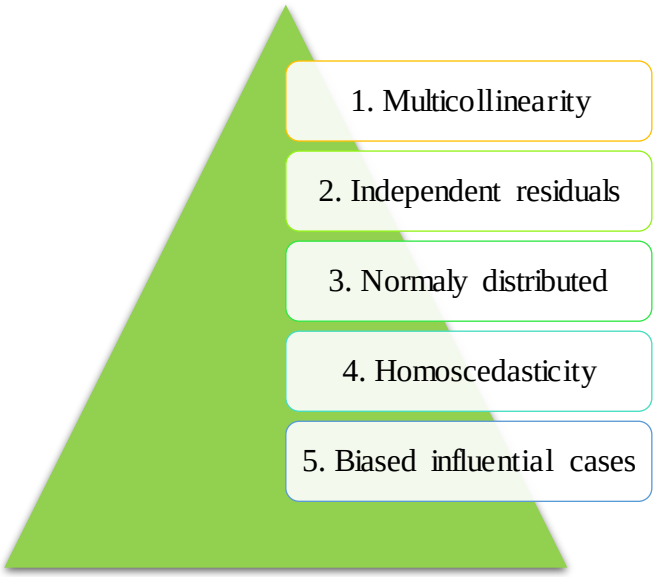
Four pie charts show the integrity of sample data of four categories (primary, secondary, tertiary, and full sample sectors from left to right). In the SPSS, the summarised results are given.

To handle missing values, SPSS offers various options such as excluding cases listwise, excluding cases pairwise, replacing them with mean values, or winsorize. However, for the collected data, any of these methods would either unnecessarily sacrifice the sample size significantly or distort the results of the regression analysis severely. For example, regarding to our sample data, using winsorize might twist and lift the head and tail of the regression line, since there are many either far left or far right extreme values in the sample data.

Therefore, to deal with the problems brought by missing value, the method of expectation maximisation (EM) will be used. This method is an iterative to find maximum likelihood and estimates of parameters in the multivariate regression model. By replacing missing value in the dataset, expectation maximisation method uses current estimate to output calculated data to solve the multiple linear regression problem too.

Afterwards, the completed dataset then will be used to run the multiple linear regression model. But, before discussing the outcomes of the multiple regression analysis, the 5 assumptions outlined below need to be checked in advance.

Figure 9. Linear assumptions of regression analysis



This figure shows five assumptions being used to test the linearity of the regression model. These five basic five assumptions are derived from a literature review concluded by the researcher.

4.2.2.1 Multicollinearity

Table 9. Collinearity statistics tables

Panel A: Primary sector			
		Collinearity statistics	
Model	Variable	Tolerance	VIF
1	(Constant)		
	$InstTurn_{i,t}^{Total}$ (M-I)	.886	1.129
	$InstTurn_{i,t}^{Total}$ (M-R)	.956	1.046
	D/E $Ratio_{i,t}$	.907	1.102
	Current $Ratio_{i,t}$	.784	1.275
	Ln ($Sales_{i,t}$)	.933	1.072
Panel B: Secondary sector			
2	(Constant)		
	$InstTurn_{i,t}^{Total}$ (M-I)	.868	1.152
	$InstTurn_{i,t}^{Total}$ (M-R)	.889	1.125
	D/E $Ratio_{i,t}$	.891	1.123
	Current $Ratio_{i,t}$	.812	1.231
	Ln ($Sales_{i,t}$)	.852	1.174
Panel C: Tertiary sector			
3	(Constant)		
	$InstTurn_{i,t}^{Total}$ (M-I)	.894	1.119
	$InstTurn_{i,t}^{Total}$ (M-R)	.909	1.100
	D/E $Ratio_{i,t}$	.853	1.173
	Current $Ratio_{i,t}$	.875	1.143
	Ln ($Sales_{i,t}$)	.901	1.110
Panel D: Full sample sector			
4	(Constant)		
	$InstTurn_{i,t}^{Total}$ (M-I)	.912	1.096
	$InstTurn_{i,t}^{Total}$ (M-R)	.938	1.066
	D/E $Ratio_{i,t}$	.925	1.081
	Current $Ratio_{i,t}$	.836	1.196
	Ln ($Sales_{i,t}$)	.893	1.120

Dependent Variable: ESG Combined $Score_{i,t+2}$

This table presents a summary of collinearity statistics derived for various independent variables in four panels.

Collinearity refers to a perfect or exact relationship between the regression exploratory variables. Violating this assumption in regression analysis leads to multicollinearity. In this section, tolerance value and VIF (Variance Inflation Factor) are utilised to assess this assumption. The tolerance value is estimated using $1\text{-}R^2$, and the VIF is calculated by $1/1\text{-}R^2$.

To confirm the absence of multicollinearity, neither the minimum tolerance (0.784) is smaller than 0.1 nor the maximum VIF value (1.275) is bigger than 10, suggests a violation of this assumption. Hence, there are no indications of multicollinearity issues.

4.2.2.2 The values of the residuals are independent

The residual values need to be independent to avoid autocorrelation in the dataset. To address this, the sample will be randomised. Table 10 primarily examines two key summary statistics: R square (will be illustrated in the hypothesis results table later) and the Durbin-Watson test.

Table 10. Model summary[b] tables

Panel A: Primary sector					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.310[a]	.096	.092	15.19943	1.951
Panel B: Secondary sector					
2	.376[a]	.141	.140	14.73599	2.026
Panel C: Tertiary sector					
3	.316[a]	.100	.094	13.69861	1.956
Panel D: Full sample sector					
4	.301[a]	.090	.089	15.02278	2.026

a. Predictors: (Constant), $InstTurn_{i,t}^{Total}$ (monitor-intensive), $InstTurn_{i,t}^{Total}$ (monitor-reluctant), D/E $Ratio_{i,t}$, Current $Ratio_{i,t}$, Ln ($Sales_{i,t}$), Ln ($Assets_{i,t}$)

b. Dependent Variable: ESG Combined $Score_{i,t+2}$

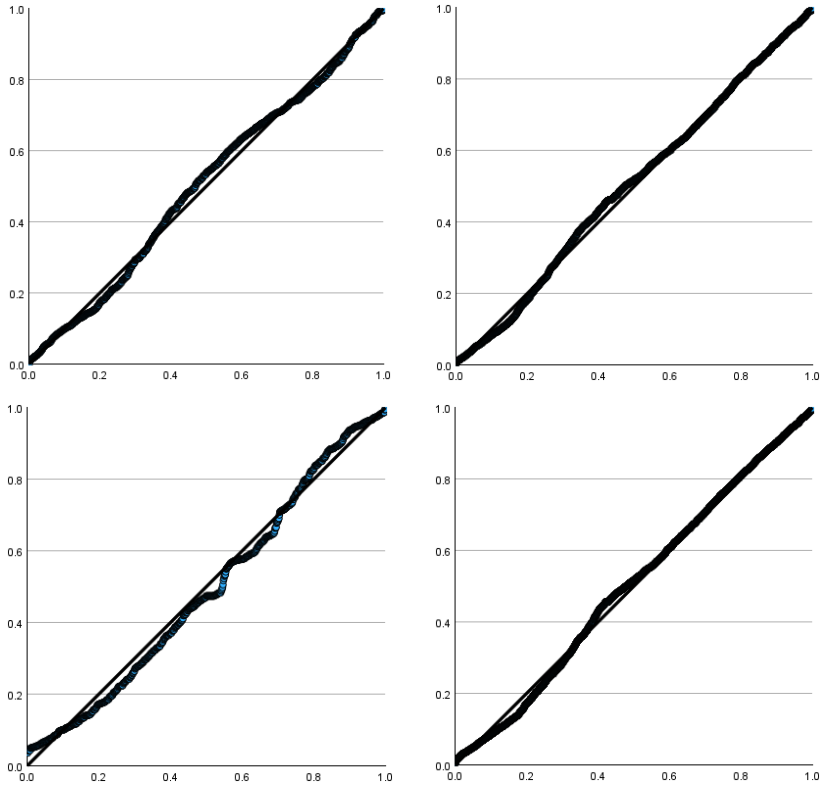
This table shows key values concerning the autocorrelation problem. Through the SPSS, the summarised results are given.

The Durbin-Watson statistic is a test statistic used to detect the presence of autocorrelation at lag 1 in the residuals from a regression analysis. It assesses whether the residual values of the residuals are independent. An ideal outcome would be around 2. In this case, the Durbin-Watson statistics in four panels are in the range between 1.951 and 2.026, indicating that this assumption is not violated.

4.2.2.3 The values of the residuals are normally distributed

A linear regression model performs optimally when the dependent variable is normally distributed. To assess assumption that residuals are normally distributed, a P-P plot was created. If the standardised residuals are normally distributed, the scatters should fall on or tightly close to the normal distribution line, indicating a normal distribution of residuals. Chart 10 shows a sample case of plots suggesting that it is normally distributed. Therefore, the P-P plot does not indicate a violation of this assumption.

Figure 10. P-P Plot



This figure shows the probability plots of residuals from four panels. In clockwise order, they are, in turn primary, secondary, tertiary, and full sample sector.

4.2.2.4 No influential cases biasing the model

Table 11 shows the summary statistics of Cook's distance, which is used to estimate the influence of each data point when performing a least-squares regression analysis (Kim, 2017), aiming to ensure that no influential cases bias the model. In the sample dataset, the maximum Cook's distance value (0.131) is below 1, suggesting that no cases are biasing the model.

Table 11. Residual statistics[a] table

Cook's Distance					
Panel A: Primary sector	Minimum	Maximum	Mean	Std. Deviation	N
	.000	.064	.001	.003	1152
Panel B: Secondary sector					
	.000	.017	.000	.001	2784
Panel C: Tertiary sector					
	.000	.131	.001	.005	768
Panel D: Full sample sector					
	.000	.018	.000	.001	4704

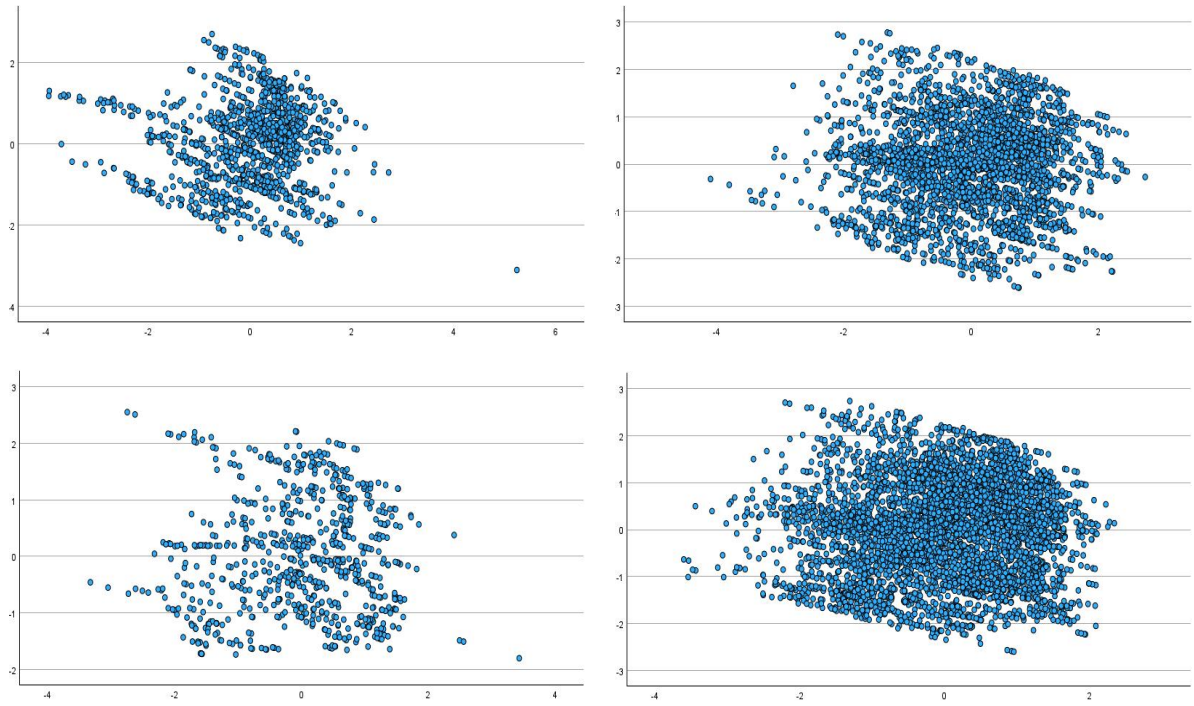
Dependent Variable: ESG Combined Score$_{i,t+2}$

This table shows the possibility of the existence of influential cases by Cook's distance.

4.2.2.5 Homoscedasticity

Homoscedasticity is an assumption of equal or similar variance in different groups being compared. A scatterplot (Chart 10) was created to assess this assumption, specifically examining whether the variance of the residuals was constant (homoscedasticity). Upon examination of the scatterplot, no obvious pattern was observed. Therefore, the plot did not indicate a violation of this assumption. The prediction equation performs equally well across the whole spectrum of the data.

Figure 11. Scatterplot



This scatterplot shows whether there is a problem with homoscedasticity.

After successfully meeting all five assumptions, the analysis part will be pursued.

5. Regression analysis results

5.1 Descriptive statistics

Table 12. Descriptive statistics table

Panel A: Primary sector (24.49%)			
Variable	Mean	Std. Deviation	N
1. ESG Combined Score$_{i,t+2}$	55.96	15.95	1152
2. InstTurn$_{i,t}^{Total}$ (M-I)	27.65%	5.44%	1152
3. InstTurn$_{i,t}^{Total}$ (M-R)	25.70%	5.25%	1152
4. D/E Ratio$_{i,t}$	1.20	.86	1152
5. Current Ratio$_{i,t}$	1.27	.53	1152
6. Sales$_{i,t}$ ($ million)	3148.27	2006.70	1152
Panel B: Secondary sector (59.18%)			
1. ESG Combined Score$_{i,t+2}$	56.22	15.89	2784
2. InstTurn$_{i,t}^{Total}$ (M-I)	29.01%	6.40%	2784
3. InstTurn$_{i,t}^{Total}$ (M-R)	24.82%	5.46%	2784
4. D/E Ratio$_{i,t}$	1.10	1.40	2784
5. Current Ratio$_{i,t}$	1.85	.71	2784
6. Sales$_{i,t}$ ($ million)	3465.54	3342.48	2784
Panel C: Tertiary sector (16.33%)			
1. ESG Combined Score$_{i,t+2}$	52.48	14.39	768
2. InstTurn$_{i,t}^{Total}$ (M-I)	29.12%	7.26%	768
3. InstTurn$_{i,t}^{Total}$ (M-R)	25.09%	5.46%	768
4. D/E Ratio$_{i,t}$	1.48	2.27	768
5. Current Ratio$_{i,t}$	1.26	.48	768
6. Sales$_{i,t}$ ($ million)	7236.36	6079.09	768
Panel D: Full sample sector (100%)			
1. ESG Combined Score$_{i,t+2}$	55.67	15.74	4704
2. InstTurn$_{i,t}^{Total}$ (M-I)	28.68%	6.31%	4704
3. InstTurn$_{i,t}^{Total}$ (M-R)	25.08%	5.42%	4704
4. D/E Ratio$_{i,t}$	1.20	1.48	4704
5. Current Ratio$_{i,t}$	1.60	.68	4704
6. Sales$_{i,t}$ ($ million)	4176.84	4298.79	4704

This descriptive statistics table presents the basic characteristics of dependent and independent variables.

The sample of companies consisted of 1152 (24.49%) in primary industry sector, 2784 (59.18%) in secondary industry sector, 768 (16.33%) in tertiary industry sector respondents (N = 4704, 100%).

1) ESG Combined Scores across industry sectors

The descriptive statistics show that both the mean & median values on the companies about their ESG Combined Scores are acceptable which are not less than 50 out of 100, and they are all range

between 52 and 58 scores. For example, the highest average ESG scores group is in the secondary sector (56.22, SD = 15.89), followed by primary sector (55.96, SD = 15.95), then full sample sector (55.67, SD = 15.72), and tertiary sector (52.48, SD = 14.39) at last. The result for ESG scores indicates that sample companies show mediocre responsibility towards ESG area.

2) Turnover rate of institutional ownerships

No major differences are found between the three industry sectors, either for same kind of institution or two opposite ones. The group with the largest ownerships variation for monitor-intensive institution is tertiary sector (29.12%, SD = 7.26%), and followed by secondary sector (29.01%, SD = 6.40%), full sample sector (28.68%, SD = 6.31), and primary sector (27.65%, SD = 5.44%) in the end.

For the monitor-reluctant institutions, they are followed from primary sector (25.69%, SD = 5.25%), tertiary sector (25.09%, SD = 5.46%), full sample sector (25.08%, SD = 5.42%), to secondary sector (24.82%, SD = 5.46%) in the end. Overall, the turnover rate in monitor-intensive institutions is generally higher than that in monito-reluctant ones by around 4%.

3) D/E Ratio and current ratio

Besides the D/E ratio in the tertiary sector (1.48, SD = 2.27), in rest of other industry sectors, D/E ratios are all around 1. And for the current ratio, in four panels, they all sit between 1.2 and 1.8. The highest current ratio is in the secondary sector (1.85, SD = 0.71).

Table 13. Average D/E ratio and current ratio

Output	D/E ratio (sample)	Sign	D/E ratio (average)	Current ratio (sample)	Sign	Current ratio (average)
Primary sector	1.20	>	0.63	1.27	<	1.77
Secondary sector	1.10	>	0.54	1.85	<	2.66
Tertiary sector	1.48	>	1.06	1.26	>	1.24
Full sample sector	1.20	>	0.63	1.60	<	2.36

Note. Average data is from full:ratio dataset.

At the same time, comparing sample D/E ratio with the average D/E ratio[11] in the relative industry sectors showed above, sample selected in this research, their D/E ratio are all significantly higher than the value in average sector. For the current ratio, besides the value in the tertiary sector is slightly higher than current ratio, in the rest of three sectors, average current ratios in relative industries are all higher than sample ones.

[11] Based on data from July 2024

4）Sales

Selected sample companies are from the Fortune 500 in the U.S., meanwhile they are also industry leaders in relative industries. Hence, sample firms tend to be large, which is not surprising given the relatively high sales and assets. In the full sample sector, the average sales (4.17 billion US dollar) are way larger than the minimum standard for large firms (1 billion US dollar). Even in the three industry sectors, the least sales holding sector primary sector also has more than 3.15 billion US dollar sales.

As the industry sector swifts from the primary (raw materials) and secondary (manufactures) sectors to the tertiary (service) sector, sales increased. The only distinctive situation happens in the sales (72.36 billion US dollar) in tertiary sector with the least number of companies, but their sales are larger than any other sectors.

5.2 Correlation matrix

Table 14. Correlation table

Panel A: Primary sector						
Variable	1	2	3	4	5	6
1. ESG Combined Score$_{i,t+2}$	--					
2. InstTurn$_{i,t}^{Total}$ (M-I)	-.102**	--				
3. InstTurn$_{i,t}^{Total}$ (M-R)	-.121**	.147**	--			
4. D/E Ratio$_{i,t}$	-.086**	-.046	-.103**	--		
5. Current Ratio$_{i,t}$	-.127**	.315**	.121**	-.278**	--	
6. Ln (Sales$_{i,t}$)	.241**	-.075**	-.076**	.031**	-.219**	--
Panel B: Secondary sector						
1. ESG Combined Score$_{i,t+2}$	--					
2. InstTurn$_{i,t}^{Total}$ (M-I)	-.243**	--				
3. InstTurn$_{i,t}^{Total}$ (M-R)	-.287**	.317**	--			
4. D/E Ratio$_{i,t}$	.060**	-.047**	-.056**	--		
5. Current Ratio$_{i,t}$	-.085**	.001	.088**	-.288**	--	
6. Ln (Sales$_{i,t}$)	.233**	-.189**	-.129**	.049**	-.296**	--
Panel C: Tertiary sector						
1. ESG Combined Score$_{i,t+2}$	--					
2. InstTurn$_{i,t}^{Total}$ (M-I)	-.209**	--				
3. InstTurn$_{i,t}^{Total}$ (M-R)	-.079**	.153**	--			
4. D/E Ratio$_{i,t}$	.138**	-.011	-.195**	--		
5. Current Ratio$_{i,t}$	-.192**	.263**	.060	-.231**	--	
6. Ln (Sales$_{i,t}$)	.212**	-.171**	-.135**	.215**	-.112**	--
Panel D: Full sample sector						
1. ESG Combined Score$_{i,t+2}$	--					
2. InstTurn$_{i,t}^{Total}$ (M-I)	-.197**	--				
3. InstTurn$_{i,t}^{Total}$ (M-R)	-.211**	.244**	--			
4. D/E Ratio$_{i,t}$	.007	-.067**	-.044**	--		
5. Current Ratio$_{i,t}$	-.105**	.153**	.067**	-.257**	--	
6. Ln (Sales$_{i,t}$)	.182**	-.146**	-.074**	.000	-.299**	--

**. Correlation is significant at the 0.01 level (2-tailed).

This correlation table shows the level of correlations among dependent and independent variables.

Table 14 presents the Pearson and Spearman correlations among independent and dependent variables. Among four panels, the tertiary sector has a different result from the rest of panels. In the rest of panels, both institutions are found to be very low negative and statistically significant correlated with ESG scores. Moreover, the downside of ESG scores is caused even more dramatic by the monitor reluctant institutions than monitor incentive institutions. However, in the tertiary, it is a different picture.

At the first time, monitor reluctant institutions ($r = -.079, p < .001$) have less negative effect on ESG scores than monitor intensive institutions ($r = -.209, p < .001$) do. Moreover, monitor reluctant institutions have markedly low negligible negative relationship with ESG scores, that has weaker influence than other institutions in other panels.

Although many of the correlations are sizable in magnitude, indicating that multicollinearity could be a problem in the sample, the tolerance and VIF values tested previously show otherwise. Since, the lowest tolerance (0.240) encountered was above 0.1 and the highest VIF value (4.161) was below 10, both indicators are far from the cutoff for harmful multicollinearity. Also, correlation is only used to understand the relationship between variables. This does not imply a causal relationship, but only illustrate the existed relationship between two variables.

5.3 Coefficients table

Table 15. Coefficients[a] table

Panel A: Primary sector					
		Unstandardised Coefficients		Standardised Coefficients	
Model	Variable	B	*Std. Error*	*Beta*	*Sig.*
1	(Constant)	36.657	6.042	--	<.001
	$InstTurn_{i,t}^{Total}$ (M-I)	-.133	.087	-.045	.129
	$InstTurn_{i,t}^{Total}$ (M-R)	-.406***	.087	-.134	<.001
	D/E $Ratio_{i,t}$	-2.168***	.545	-.117	<.001
	Current $Ratio_{i,t}$	-2.396*	.954	-.080	.012
	Ln ($Sales_{i,t}$)	4.980***	.638	.227	<.001
Panel B: Secondary sector					
2	(Constant)	53.269***	3.949	--	<.001
	$InstTurn_{i,t}^{Total}$ (M-I)	-.341***	.047	-.137	<.001
	$InstTurn_{i,t}^{Total}$ (M-R)	-.634***	.054	-.218	<.001
	D/E $Ratio_{i,t}$	.581**	.212	.051	.006
	Current $Ratio_{i,t}$	.074	.436	.003	.865
	Ln ($Sales_{i,t}$)	3.553***	.370	.183	<.001
Panel C: Tertiary sector					
3	(Constant)	45.262***	6.662	--	<.001
	$InstTurn_{i,t}^{Total}$ (M-I)	-.288***	.072	-.145	<.001
	$InstTurn_{i,t}^{Total}$ (M-R)	-.112	.095	-.046	.198
	D/E $Ratio_{i,t}$	.551*	.235	.087	.020
	Current $Ratio_{i,t}$	-3.411**	1.096	-.114	.002
	Ln ($Sales_{i,t}$)	2.586***	.626	.150	<.001
Panel D: Full sample sector					
4	(Constant)	58.582***	2.824	--	<.001
	$InstTurn_{i,t}^{Total}$ (M-I)	-.327***	.036	-.131	<.001
	$InstTurn_{i,t}^{Total}$ (M-R)	-.486***	.042	-.167	<.001
	D/E $Ratio_{i,t}$	-.201	.154	-.019	.192
	Current $Ratio_{i,t}$	.855*	.351	-.037	.015
	Ln ($Sales_{i,t}$)	2.544***	.269	.139	<.001

Dependent Variable: ESG Combined $Score_{i,t+2}$

Note. * p< .05

** p< .01

*** p< .001.

Table 15 provides the result of the regression of institutional ownerships on ESG scores with a two-year lagged effect, along with control variables. Both institutions have negative relationship with the ESG scores in four sectors. And in the secondary and full sample sectors, this negative relationship is

shown statistically significant for both kinds of institutions. Moreover, in these two panels, at the same level of change happening in the turnover rate of institutional ownership, one percent increase made by monitor reluctant institutions would lead more than 29% and 15% ESG scores decreases relatively than monitor intensive institutions do. Of the seven ESG levels, there is a 15% difference between two adjacent levels. However, the results of the regression analysis show that the decline in ESG scores due to the behaviour of institutional investors is much higher than 15%. Addition, declining ESG scores can also affect corporate profitability as measured by earnings before interest and taxes (EBIT). Companies with a weak ESG profile are not only perceived to be less committed to investing in sustainability, but also do not generate additional profit margins (D'Amato et al., 2024).

5.4 Hypotheses results

The study aims to examine if there is influence from monitor-intensive and monitor-reluctant institutions on CSR performance of companies in different industry sectors. If the answer is yes, then what would the direction of the influence be? Hence following hypotheses were proposed:

H_0: Monitor-intensive investors enhance the firms' CSR performance.
H_1: Monitor-intensive investors enhance CSR performance more than monitor-reluctant investors do.

Before illustration of the hypotheses results, it better to be aware that for the collected sample data, how good this regression model could represent it statistically? To know this, R-square cannot be a better storyteller. This research is based on a relatively low R^2 value (maximum R^2 value is from the Panel B dataset, 14.1%). R-square focuses on explaining the proportion of variance in the dependent variable explained by independent variable or variables in a regression model (Miles, 2005). This suggests that the significant factors (turnover rate of monitor-intensive and monitor-reluctant institutions) did not explain the majority of the variance in the ESG scores. Therefore, there is a possibility that the correlation and regression model adopted in this paper may not have included important assessment factors before measuring the independent variable of perception of authenticity in assessment. However, Ozili (2023) mentioned in his research paper that in social science research, an R-square between 0.1 and 0.5 is also acceptable, as long as there are some or most of the explanatory variables are statistically significant. Therefore, the predicted regression model in this research is representative as well as reliable for the collected data in this research.

Regarding to the hypotheses results from the Table 16, H_0 assesses whether monitor-intensive institutional investors enhance CSR performance. In either Panel dataset, there is no sign indicating that there is positive relationship between monitor-intensive institutional investors and ESG scores, no matter the coefficients are statistically significant or not. Hence, Null Hypothesis (H_0) is rejected. The results revealed that in the secondary sector and full sample dataset, monitor-reluctant institutional investors are more downsides influential to the CSR than monitor-intensive institutions do, evidence from (secondary sector: $B = -.341$, $p < .001$ for MI institutions and $B = -.634$, $p < .001$ for MR institutions; full sample sector: $B = -.327$, $p < .001$ for MI institutions and $B = -.486$, $p < .001$ for MR institutions). While the existence of this negative correlation across four sectors is undeniable, it is a disguised improvement for monitor-intensive institutional investors, which is not as bad for firm's CSR performance, when compared to monitor-reluctant institutional investors. Therefore, H_1 would be supported. These results are presented in Table 16.

Table 16. Hypotheses results

Panel A: Primary sector				
Hypotheses	Research target	B	P-Value	Results
H_0/H_1	CSR (M-I institutions)	-.133	.129	Rejected
	CSR (M-R institutions)	-.406***	.001	Rejected
R^2	.096			
F (5, 1145)	24.282			
Panel B: Secondary sector				
H_0/ H_1	CSR (M-I institutions)	-.341***	.001	Rejected
	CSR (M-R institutions)	-.634***	.001	Supported
R^2	.141			
F (5, 2778)	91.485			
Panel C: Tertiary sector				
H_0/ H_1	CSR (M-I institutions)	-.288***	.001	Rejected
	CSR (M-R institutions)	-.122	.198	Rejected
R^2	.100			
F (5, 762)	16.890			
Panel D: Full sample sector				
H_0/ H_1	CSR (M-I institutions)	-.327***	.001	Rejected
	CSR (M-R institutions)	-.486***	.001	Supported
R^2	.090			
F (5, 4698)	93.274			

Note. ***$p < 0.001$.

This table shows the results of two hypotheses after summarising relative indicators.

6. Discussion and contributions

6.1 Discussion

Utilising the Refinitiv Eikon database for data collection, a multivariable regression model was employed to test hypotheses and estimate the lagged effect on the dependent variable, ESG scores, which quantitatively measure CSR from different industry sectors (primary, secondary, tertiary sectors and full sample dataset). Additionally, control variables such as the D/E ratio, current ratio, logarithm of sales and assets were also included.

Do institutional investors drive the corporate social responsibility for firms positively? The results presented in Table 16 indicate that no matter coefficients for the two kinds of institutions are significant or not, as the turnover rates of both monitor-intensive and monitor-reluctant institutional ownerships increase, their relative ESG scores decline. Thus, rejecting the Null Hypothesis is accepted. However, both types of institutional investors bring a negative impact on firm's CSR performance, the degree of impact is quite different. The impact from monitor-reluctant institutional investors is much more influential, in the secondary sector and full sample dataset. Hence, hypothesis 1 was accepted, and in other two industry sectors, there is not solid evidence to prove any hypotheses.

To figure out the relationship between institutions and CSR performance, the literature review covered various aspects of institutional investors, such as directors selected by institutional shareholders (Pathan, 2009), investment trends in CSR (Neubaum & Zahra, 2006), excluding the "sin" stocks out of portfolio (Hong & Kacperczyk, 2009), and addressing concerns about environmental and social risks (Chava, 2014). All the above arguments can be used as incentives for institutions to monitor firms and promote CSR. Meanwhile, where there is momentum there is also bound to be an element of resistance. For example, intense competition among institutions (Graves & Waddock, 1990), prioritising basic financial performance goals (Wahba, 2010), or being short-term institutions (David et al., 2001) are shown to potentially create conflicts and barriers between principals and agents, hindering CSR activities.

Regarding to the factors having an impact on CSR performance, more studies have indicated that the influences on CSR performance tended to diverge based on the criteria used to classify institutional investors. When long-term institutions contributed positively to CSR, short-term institutions may also have had opposing effects. Hence, to avoid such conflicts from above categorisation, as an alternative, the turnover rate of institutional ownerships was introduced in this research and yielded an informative result. The inclusion of turnover rate as a factor in this study opens new avenues for further research in this academic area, and emphases the importance of the dynamic indicators in assessing the relationship between trading behaviours of institutional investors and firm's CSR performance.

6.2 Theoretical and practical contributions

The findings from empirical analysis have relevant contributions in both theoretical and practical perspectives for institutional investors and CSR performance in the U.S market. Since they provided new evidence of investigating the impact from institutional investors on CSR performance.

6.2.1 Theoretical contribution

In terms of theoretical contribution, this paper provides a new perspective suggesting that in the U.S., the turnover rate of institutional ownership indeed influences CSR activities. It provides statistical results to suspect or prove the existence of conflicting interests described by principle-agency theory, stakeholder theory, and other corporate governance theories. One of many potential scenarios would be like, corporate managers might be more cautious to evaluate the agency costs inherent in the agency contract to protect their CSR reputation from monitor-reluctant institutions. From the perspective of stakeholder theory, managers should be further accountable for fulfilling the firm's responsibilities, avoiding conflicts between monitor-reluctant institutions and other main stakeholders, and figuring to improve the performance from monitor-intensive institutions too. In this case, it is likely to form a well-balanced of interests within stakeholders (Clarkson, 1995).

6.2.2 Practical contribution

Also, this research offers a valuable practical contribution, within the U.S. publicly listed companies, providing the statistical evidence of the negative relationship between the behaviours of institutions and CSR performance. Several valuable insights could be provided to both companies, institutions, and outsider governors.

First, corporate managers in overall industries, especially in secondary industry sector, should encourage the involvement of monitor-intensive investors, as they are less likely to harm the firm's CSR performance. Second, managers need to raise awareness among monitor-reluctant investors about the benefits of disclosing CSR for both of company and institutions too. This is also a reasonable way to reverse the negative impact from the monitor-reluctant investors. Third, within the voluntarily performed market for disclosing CSR, policymakers could also shape regulatory frameworks and policies encouraging companies to set up their CSR goals in stages, move for better CSR activities, and guide as many as responsible participants in this market. From a broader way, countries which have not enacted legislation on CSR or been facing these similar problems, could rely on findings from this research as a reference to create a better business environment for corporate practices.

6.3 Limitations

One notable limitation from this paper is the potential accuracy issues in the data. As the Refinitiv database may not always be regularly updated or may contain inaccuracies due to technical or manual input errors. Furthermore, comparability is limited by the fact that sample data collection for all variables in this study relied on a single database. Cross checking the data with other databases like Thomson Reuters, ASSET4 or KLD could enhance the robustness of the results.

About the availability of data, particularly within an 8-year retrospective timeframe, it also poses constraints on this research. Such a not enough long time period might also potentially limit the study's ability to fully capture the historical impact of institutional power on CSR, even though, big events like the 2008 financial crisis and the current COVID-19 pandemic were excluded.

Methodologically, determining the classification of institutional investors presents challenges. As different studies used varied measurements such as identities, time horizons, interests, or investing strategies (Aguilera & Jackson, 2003), using different methodologies may also lead to different results explaining the disparities between this paper and others.

Lastly, while efforts were made to include numerous control variables in the regression model, the presence of omitted variables remains a concern.

6.4 Recommendations

This research represents an initial step in highlighting the significance of considering the behaviour of institutions on CSR performance. However, there are still some shortcomings to be addressed and improved.

For the overall design idea of this research, these cautions include that: first, selected sample mainly focuses on industry leaders in the U.S. market. For the future research, involving small and middle enterprises (SMEs) is also a forward thinking. Second, the lack of measurements on CSR performance is also a concern and biased. More diversified and authoritative indicators for evaluating CSR performance need to be found. Third, more influential control variables need to be included for sure. Fourth, for optimising the classification problem of the object of study, a more logical way adopting to institutions' various volume, region, and period is needed necessarily. For example, databases like Bloomberg Industry Classification Standard (BICS), Global Industry Classification Standard (GICS), International Standard Industrial Classification of All Economic Activities (ISIC), and so on are widely known. In the future research, varied and more refined industry classification is better to be tested in terms of the peculiar characteristics from the different samples. Fifth, In the end, focusing on a different

country or continent could also contribute to a deeper and diversified understandings to the relationship between institutional investors and CSR performance globally.

7. Conclusion

The central question for this research was as follows: ***Do institutional investors drive the corporate social responsibility for firms positively?*** For the regression analysis part, this study aims to investigate the impacts from dynamic turnover rates of institutional ownership on ESG scores.

Initially, the fundamental theories of corporate governance (the principal-agent theory and the stakeholder theory) were established as the theoretical basis for this study. Subsequently, the two main variables: turnover rate of institutional ownerships (monitor-intensive institutions and monitor-reluctant institutions) and CSR (combined ESG scores) were introduced to measure the relationship quantitatively from three industry sectors and full sample sector. The turnover rate for two types of institutional ownership, as a new measurement for the behaviour of institutions, are used to present the relationship with CSR dynamically for the first time. Meanwhile, the U.S. serves as the representative country where the sample companies are drawn in the period of 2010-2019. Through a qualitative approach gathering theoretical literature and employing multivariable regression analysis to test hypotheses quantitatively, it was concluded that both monitor-intensive and monitor-reluctant institutions play significant negative roles in influencing companies' overall ESG scores.

Lopez et al. (2024) concluded that the size of the ownership stake has the negative relationship with ESG quality. As two types of institutional investors picked from sample companies in this thesis are those top shareholders. Meanwhile, sample companies from Fortune 500 are also large companies with relative completed ESG profile and high ESG scores. Hence, they are easily to receive too much attention from large institutional investors and are in danger of being exposed. This in turn will lead to activist investors favouring companies that perform relatively poorly in terms of ESG scores, while large institutional investors will slowly lose interests in investing in companies with similar advancing ESG profile. And for the hypothesis 1, it became clear that in the secondary industry sector and full sample sector, the findings were in line with hypothesis 1: monitor-intensive investors exhibit relatively better performance in CSR activities compared to monitor-reluctant investors. However, it is challenging to determine if monitor-intensive institutions do contribute to firms' CSR activities.

Additionally, in the three industry sectors (primary, secondary, and tertiary), and the full sample sector, the results indicate that hypothesis 1 was still consistent with secondary sector and full sample sector. However, in the rest of two sectors, due to the lack of complete significance of the empirical results, there is no way to compare how monitor-intensive and monitor-reluctant institutions influence ESG performance differently. At last, the fact that more frequent institutional ownership changes will bring no good but harm to the ESG performance of companies in all industry sectors.

Returning to the focus of this study, the best-case scenario would be that every participant could achieve their CSR goals. Overall, this paper calls for researchers to act and increase their efforts to advance CSR research and explore more elements related to the topic. It is believed that an increasingly solid theoretical foundation will pave the way for the widespread implementation of CSR practices throughout society.

References

1. Aguilera, R. V. and Jackson, G. (2003). 'The cross-national diversity of corporate governance: dimensions and determinants. *Academy of Management Review, 28,* 447–65.
2. Aguinis, H., & Glavas, A. (2012). What we know and don't know about corporate social responsibility: A review and research agenda. *Journal of management*, *38*(4), 932-968.
3. Almazán A, Hartzell JC, Starks LT. 2005. Active institutional shareholders and costs of monitoring: Evidence from executive compensation. *Financial Management 34: 5–34*
4. Angrist, J. D., & Krueger, A. B. (2001). Instrumental variables and the search for identification: From supply and demand to natural experiments. *Journal of Economic perspectives*, *15*(4), 69-85.
5. Baden, D. (2016). A reconstruction of Carroll's pyramid of corporate social responsibility for the 21st century. *International journal of corporate social responsibility*, *1*(1), 1-15.
6. Baldwin, N. S., & Rice, R. E. (1997). Information-seeking behavior of securities analysts: Individual and institutional influences, information sources and channels, and outcomes. *Journal of the American Society for Information Science*, *48*(8), 674-693.
7. Baron, David, 2008, Managerial contracting and corporate social responsibility. *Journal of Public Economics 92*, 268–288.
8. Bebchuk, L. A., Cohen, A., & Hirst, S. (2017). The agency problems of institutional investors. *Journal of Economic Perspectives*, *31*(3), 89-102.
9. Bergen, M., Dutta, S., & Walker, O. C. (1992). Agency Relationships in Marketing: A Review of the Implications and Applications of Agency and Related Theories. *Journal of Marketing, 56(3),* 1–24. https://doi.org/10.1177/002224299205600301
10. Berman, S. L., Wicks, A. C., Kotha, S., & Jones, T. M. (1999). Does stakeholder orientation matter? The relationship between stakeholder management models and firm financial performance. *Academy of Management journal*, *42*(5), 488-506.
11. Besley, Timothy, and Maitreesh Ghatak, 2007, Retailing public goods: The economics of social responsibility. *Journal of Public Economics* 91, 1645-1663.
12. Bethel, J. E., Liebeskind, J. P., & Opler, T. (1998). Block share purchases and corporate performance. *The Journal of Finance*, *53*(2), 605-634.
13. Bhandari, P. (October 17, 2022). *Control Variables | What Are They & Why Do They Matter?* Scribbr. Retrieved October 25, 2022, from https://www.scribbr.com/methodology/control-variable/
14. Blair, M. 1995. Ownership and control: Rethinking corporate governance for the twenty-first century. Washington, DC: Brookings Institution
15. Blowfield, M., Murray, A., 2008. *Corporate Responsibility. A Critical Introduction*. Oxford University Press.

16. Bosse, D. A., & Phillips, R. A. (2016). Agency theory and bounded self-interest. *Academy of management review*, *41*(2), 276-297.
17. Bowen, H. R. (1953). Social responsibilities of the businessman. New York, Harper.
18. Brickley JA, Lease JA, Smith GW. 1988. Ownership structure and voting on antitakeover amendments. *Journal of Financial Economics* 20: 267–291.
19. Brooks, S. (2010). CSR and the straitjacket of economic rationality. *The International Journal of Sociology and Social Policy, 11*(12), 604–617. doi:10. 1108/01443331011085213.
20. Burmeister, E., & Aitken, L. M. (2012). Sample size: How many is enough? *Australian Critical Care, 25*(4), 271–274. https://doi.org/10.1016/j.aucc.2012.07.002
21. Bushee, B. J. (1998). The Influence of Institutional Investors on Myopic R&D Investment Behaviour. *The Accounting Review, 73*(3), 305–333.
22. Bushee, B. J. (2001). Do institutional investors prefer near-term earnings over long-run value? *Contemporary accounting research*, *18*(2), 207-246.
23. Bushee, B. J., Carter, M. E., & Gerakos, J. (2014). Institutional investor preferences for corporate governance mechanisms. *Journal of Management Accounting Research*, *26*(2), 123-149.
24. Byrd, D. T., & Mizruchi, M. S. (2005). Bankers on the board and the debt ratio of firms. *Journal of Corporate Finance, 11*(1–2), 129–173.
25. Callen, J. L., & Fang, X. (2013). Institutional investor stability and crash risk: Monitoring versus short-termism? *Journal of Banking & Finance*, *37*(8), 3047-3063.
26. Calza, F., Profumo, G., & Tutore, I. (2016). Corporate ownership and environmental proactivity. *Business Strategy and the Environment*, *25*(6), 369-389.
27. Camara, K. (2004). Classifying institutional investors. *Social Science Research Network.* https://doi.org/10.2139/ssrn.573441
28. Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review, 4,* 497-505.
29. Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organisational stakeholders. *Business horizons, 34*(4), 39-48.
30. Carroll, A. B. (2008). *A history of corporate social responsibility: Concepts and practices* (The Oxford handbook of corporate social responsibility, pp. 19–46).
31. Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: A review of concepts, research, and practice. *International journal of management reviews*, *12*(1), 85-105.
32. Carson, T. (1993). Friedman's theory of corporate social responsibility. *Business and Professional Ethics Journal*, *12*(1), 3-32.
33. Castaldi R, Wortman MS. 1984. Board of directors in small corporations: An untapped resource. *American Journal of Small Business 9*(2): 1–15.
34. Catford, J. (2012). Battling Big Booze and Big Bet: why we should not accept direct funding from the alcohol or gambling industries. *Health promotion international*, *27*(3), 307-310.

35. Çelik, Serdar and Mats Isaksson (2014), "Institutional investors and ownership engagement", *OECD Journal: Financial Market Trends,* Vol. 2013/2.
36. Cella, C., Ellul, A., Giannetti, M., 2011. *Investor Horizons and the Amplification of Market Shocks*. Working Paper. Stockholm School of Economics and Indiana University.
37. Chan, C. C., Lin, B. H., Chang, Y. H., & Liao, W. C. (2013). Does bank relationship matter for corporate risk-taking? Evidence from listed firms in Taiwan. *The North American Journal of Economics and Finance*, *26*, 323-338.
38. Chava, S. (2014). Environmental externalities and cost of capital. *Management science*, *60*(9), 2223-2247.
39. Chen, X., Harford, J., & Li, K. (2007). Monitoring: Which institutions matter? *Journal of financial Economics*, *86*(2), 279-305.
40. Cheng, H., Hong, H., & Shue, K. (2013). *Do managers do good with other people's money?* (No. w19432). National Bureau of Economic Research.
41. Chirinko, R. S., & Elston, J. A. (2006). Finance, control, and profitability: The influence of German banks. *Journal of Economic Behaviour & Organisation, 59*(1), 69–88.
42. Chung, C. Y., & Wang, K. (2014). Do institutional investors monitor management? Evidence from the relationship between institutional ownership and capital structure. *The North American Journal of Economics and Finance*, *30*, 203-233.
43. Clarkson, M. E. (1995). A stakeholder framework for analysing and evaluating corporate social performance. *Academy of management review*, *20*(1), 92-117.
44. Coffey, B. S., & Fryxell, G. E. (1991). Institutional ownership of stock and dimensions of corporate social performance: An empirical examination. *Journal of business ethics*, *10*(6), 437-444.
45. Corporate Social Responsibility: Partners for Progress - OECD. (2001, October 15). OECD. https://www.oecd.org/corporate/corporatesocialresponsibilitypartnersforprogress.htm
46. Cox, J. (2021, April 9). *Investors have put more money into stocks in the last 5 months than the previous 12 years combined*. CNBC. https://www.cnbc.com/2021/04/09/investors-have-put-more-money-into-stocks-in-the-last-5-months-than-the-previous-12-years-combined.html
47. Cremers, M., & Pareek, A. (2014). Patient capital outperformance: the investment skill of high active share managers who trade infrequently. *Social Science Research Network*. https://doi.org/10.2139/ssrn.2498743
48. Cremers, M., Pareek, A., & Sautner, Z. (2017). Short-term investors, long-term investments, and firm value. *Recuperado el*, *15*, 39.
49. Cullinan, C. P., Mahoney, L., & Roush, P. B. (2017). Are CSR activities associated with shareholder voting in director elections and say-on-pay votes? *Journal of Contemporary Accounting & Economics*, *13*(3), 225-243.

50. Dabic, M., Colovic, A., Lamotte, O., Painter-Morland, M. and Brozovic, S. (2016), "Industry-specific CSR: analysis of 20 years of research", *European Business Review*, Vol. 28 No. 3, pp. 250-273. https://doi.org/10.1108/EBR-06-2015-0058
51. D'Amato, V., D'Ecclesia, R., & Levantesi, S. (2024). Firms' profitability and ESG score: A machine learning approach. *Applied Stochastic Models in Business and Industry, 40*(2), 243-261.
52. Dando, N., Swift, T. Transparency and Assurance Minding the Credibility Gap. *Journal of Business Ethics 44*, 195–200 (2003). https://doi.org/10.1023/A:1023351816790
53. Dasgupta, A., Fos, V., & Sautner, Z. (2021). Institutional investors and corporate governance. *Foundations and Trends® in Finance*, *12*(4), 276-394.
54. David, P., Hitt, M. A., & Gimeno, J. (2001). The influence of activism by institutional investors on R&D. *Academy of management Journal*, *44*(1), 144-157.
55. Definition of GENERATION Z. (2019). Merriam-Webster.com. https://www.merriam-webster.com/dictionary/Generation%20Z
56. Della Croce, R., Stewart, F., Yermo, J., 2011. Promoting longer-term investment by institutional investors: selected issues and policies. *OECD Journal: Financial Market Trends (1).*
57. Deng, X., Kang, J. K., & Low, B. S. (2013). Corporate social responsibility and stakeholder value maximisation: Evidence from mergers. *Journal of Financial Economics*, *110*(1), 87-109.
58. Dewatripont, M., & Tirole, J. (1994). A theory of debt and equity: Diversity of securities and manager-shareholder congruence. *The Quarterly Journal of Economics, 109*(4), 1027–1054.
59. Dharwadkar, R., Goranova, M. and Brandes, P. (2008). 'Institutional ownership and monitoring effectiveness: it's not just how much but what else you own'. *Organization Science, 19*, 419–40.
60. Dimitrov, V., & Gatchev, V. A. (2010). Playing the Market: Turnover of Institutional Ownership and Stock Returns. *Available at SSRN 1571999*.
61. Dmytriyev, S. D., Freeman, R. E., & Hörisch, J. (2021). The relationship between stakeholder theory and corporate social responsibility: Differences, similarities, and implications for social issues in management. *Journal of Management Studies*, *58*(6), 1441-1470.
62. Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of management Review*, *20*(1), 65-91.
63. Dyck, A., Lins, K. V., Roth, L., & Wagner, H. F. (2019). Do institutional investors drive corporate social responsibility? International evidence. *Journal of financial economics*, *131*(3), 693-714.
64. Eccles, R. G., & Klimenko, S. (2019). The investor revolution. *Harvard Business Review*, *97*(3), 106-116.
65. Editorial, S. G. (2019, September 3). What Millennials and Gen Z Think of Your Brand's CSR Efforts, and What You Can Do About It. Sourcing Journal. https://sourcingjournal.com/topics/sustainability/qima-social-environmental-issues-165663/
66. Edmondson, V., & Carroll, A. (1999). Giving Back: An Examination of the Philanthropic Motivations, Orientations and Activities of Large Black-Owned Businesses. *Journal of Business Ethics, 19*(2), 171–179. doi:10.1023/A: 1005993925597.

67. Elfenbein, D. W., Fisman, R., & McManus, B. (2012). Charity as a substitute for reputation: Evidence from an online marketplace. *Review of Economic Studies*, *79*(4), 1441-1468.
68. Elbing, A. O., & Elbing, C. J. (1964). *The value issue in business*. New York, NY: McGraw-Hill.
69. *ESG vs. CSR: Key Distinctions & What Businesses Need to Know.* (2021, August 21). United States. https://us.anteagroup.com/news-events/blog/esg-csr-definitions-differences-sustainability
70. Fama, E. F. (1985). What's different about banks? *Journal of monetary economics*, *15*(1), 29-39.
71. Fernández-Feijoo B, Romero S, Ruiz-Blanco S. 2014. Women on boards: do they affect sustainability reporting? *Corporate Social Responsibility and Environmental Management 21*(6): 351–364.
72. Fernando, C., Sharfman, M., & Uysal, V. (2010, May). Does greenness matter? The effect of corporate environmental performance on ownership structure, analyst coverage and firm value. In *FMA European Conference, Hamburg, Germany*.
73. Ferreira, M. A., Massa, M., & Matos, P. (2010). Shareholders at the gate? Institutional investors and cross-border mergers and acquisitions. *The Review of Financial Studies*, *23*(2), 601-644.
74. Fortune. (2021). Fortune 500. Fortune; Fortune. https://fortune.com/fortune500/
75. FRC (2012), *Feedback Statement: Revisions to the UK Stewardship Code, www.frc.org.uk/Our-Work/ Publications/Corporate-Governance/Feedback-Statement-UK-Stewardship-Code-September-2.aspx.*
76. Freeman, R. E. (2010). Strategic management: A stakeholder approach. *Cambridge university press*.
77. Freeman, R. E., & Dmytriyev, S. (2017). Corporate social responsibility and stakeholder theory: Learning from each other. *Symphonya. Emerging Issues in Management*, (1), 7-15.
78. Freeman, R. E., Dmytriyev, S. D., & Phillips, R. A. (2021). Stakeholder Theory and the Resource-Based View of the Firm. *Journal of Management, 47*(7), 1757-1770. https://doi.org/10.1177/0149206321993576
79. Frias-Aceituno JV, Rodriguez-Ariza L, Garcia-Sanchez IM. 2013. The role of the board in the dissemination of integrated corporate social reporting. *Corporate Social Responsibility and Environmental Management 20*(4): 219–233. https://doi.org/10.1002/csr.1294
80. Friedman, M. (1970). The Social Responsibility of Business is to Increase its Profits. *The New York Times Magazine*. September 13.
81. Friedman, M. (2007). The social responsibility of business is to increase its profits. In *Corporate ethics and corporate governance* (pp. 173-178). Springer, Berlin, Heidelberg.
82. García-Meca, E., & Pucheta-Martínez, M. C. (2018). How institutional investors on boards impact on stakeholder engagement and corporate social responsibility reporting. *Corporate Social Responsibility and Environmental Management*, *25*(3), 237-249.
83. García-Sánchez, I. M., Aibar-Guzmán, B., & Aibar-Guzmán, C. (2021). What sustainability assurance services do institutional investors demand and what value do they give them? *Sustainability Accounting, Management and Policy Journal*.

84. Geva, A. (2008). Three models of corporate social responsibility: Interrelationships between theory, research, and practice. *Business and society review*, *113*(1), 1-41.
85. Ghosh, S. (2016). Banker on board and innovative activity. *Journal of Business Research, 69*(10), 4205–4214.
86. Gillan, S., Hartzell, J. C., Koch, A., & Starks, L. T. (2010). Firms' environmental, social and governance (ESG) choices, performance, and managerial motivation. *Unpublished working paper*, *10*.
87. Gillan, S., & Starks, L. T. (2003). Corporate governance, corporate ownership, and the role of institutional investors: A global perspective. *Weinberg Center for Corporate Governance Working Paper*, (2003-01).
88. Gillan, S.L., J. Hartzell, and L. Starks, 2003, "Explaining Corporate Governance: Boards, By-laws, and Charter Provisions," University of Delaware Weinberg Center for Corporate Governance and University of Texas at Austin Working Paper.
89. Gilson, R. J., & Kraakman, R. (1991). Reinventing the outside director: An agenda for institutional investors. *Stanford Law Review*, 863-906.
90. Graves, S. B., & Waddock, S. A. (1990). Institutional ownership and control: Implications for long-term corporate strategy. *Academy of Management Perspectives*, *4*(1), 75-83.
91. Graves, S. B., & Waddock, S. A. 1994. Institutional owners and corporate social performance. *Academy of Management Journal*, 37: 1034-1046.
92. Green, S. B. (1991). How many subjects does it take to do a regression analysis. *Multivariate behavioural research*, *26*(3), 499-510.
93. Grene, S. (2008). Investing in doing good can be good risk management. *Financial Times*.
94. Groenland, E. A. (2014). Employing the matrix method as a tool for the analysis of qualitative research data in the business domain. Social Science Research Network. https://doi.org/10.2139/ssrn.2495330
95. Grossman, S. J., & Hart, O. D. (1980). Takeover bids, the free-rider problem, and the theory of the corporation. *The Bell Journal of Economics*, 42-64.
96. Gulema, T. F., & Roba, Y. T. (2021). Internal and external determinants of corporate social responsibility practices in multinational enterprise subsidiaries in developing countries: Evidence from Ethiopia. *Future Business Journal*, *7*(1), 1-19.
97. Haley, U. C. (1991). Corporate contributions as managerial masques: Reframing corporate contributions as strategies to influence society. *Journal of Management Studies*, *28*(5), 485-510.
98. Hamrouni, A., Boussaada, R., & Toumi, N. B. F. (2019). Corporate social responsibility disclosure and debt financing. *Journal of Applied Accounting Research*.
99. Hansen, R. G., & Lott, J. R. (1996). Externalities and corporate objectives in a world with diversified shareholder/consumers. *Journal of Financial and Quantitative Analysis*, *31*(1), 43-68.
100. Hartzell, J. C., & Starks, L. T. (2003). Institutional investors and executive compensation. *The journal of finance*, *58*(6), 2351-2374.

101. He, F., Liu, G., Hao, J., & Li, Y. (2023). CSR performance and firm idiosyncratic risk in a data-rich environment: The role of retail investor attention. *Journal of International Financial Markets, Institutions and Money*, *89*, 101877.
102. *Hedge fund activism's impact on CSR performance - HEC Paris Research.* (2020). www.youtube.com. https://www.youtube.com/watch?v=jaFssOBAqkY
103. Heidrick & Struggles. 2011. Challenging board performance. European Report on corporate governance. Heidrick & Struggles. Retrieved from http://www.heidrick.com/~/media/Publications%20and%20Reports/HS_EuropeanCorpGovRpt2011.pdf [25 April 2016].
104. Hendry, J., Sanderson, P., Barker, R., & Roberts, J. (2006). Owners or traders? Conceptualizations of institutional investors and their relationship with corporate managers. *Human Relations*, *59*(8), 1101-1132.
105. Hillman, A. J., & Keim, G. D. (2001). Shareholder value, stakeholder management, and social issues: what's the bottom line? *Strategic management journal*, *22*(2), 125-139.
106. Hong, H., & Kacperczyk, M. (2009). The price of sin: The effects of social norms on markets. *Journal of financial economics*, *93*(1), 15-36.
107. Hopt, K. J., & Leyens, P. C. (2004). Board models in Europe–recent developments of internal corporate governance structures in Germany, the United Kingdom, France, and Italy. *European Company and Financial Law Review, 1*(2), 135–168.
108. Hoskisson, R. E., Hitt, M. A., Johnson, R. A. and Grossman, W. (2002). 'Conflicting voices: the effects of institutional ownership heterogeneity and internal governance on corporate innovation strategies'. *Academy of Management Journal*, 45, 697–716.
109. Ioannou, I., & Serafeim, G. (2012). What drives corporate social performance? The role of nation-level institutions. *Journal of International Business Studies*, *43*(9), 834-864.
110. James, C. (1987). Some evidence on the uniqueness of bank loans. Journal of Financial Economics, 19(2), 217–235.
111. Jensen, M. C. (2002). Value maximisation, stakeholder theory, and the corporate objective function. *Business ethics quarterly*, 235-256.
112. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305–360.
113. Johnson, R. A., & Greening, D. W. (1999). The effects of corporate governance and institutional ownership types on corporate social performance. *Academy of management journal*, *42*(5), 564-576.
114. Johnson, R. A., Schnatterly, K., Johnson, S. G., & Chiu, S. C. (2010). Institutional investors and institutional environment: A comparative analysis and review. *Journal of Management Studies*, *47*(8), 1590-1613.
115. K. Davis, "Can Business Afford to Ignore its Social Responsibilities?" *California Management Review, 2,* 3 (1960): 70-76.

116. Kang, Y. C., & Wood, D. J. (1995). *Before-profit corporate social responsibility: turning the economic paradigm upside-down*. Austria: Paper presented at the Proceedings of the International Association for Business and Society Vienna.
117. Kim, M. G. (2017). A cautionary note on the use of Cook's distance. *Communications for Statistical Applications and Methods, 24*(3), 317–324. https://doi.org/10.5351/csam.2017.24.3.317
118. Kim, H. D., Kim, T., Kim, Y., & Park, K. (2019). Do long-term institutional investors promote corporate social responsibility activities?. *Journal of Banking & Finance*, *101*, 256-269.
119. Knoll, M. S. (2002). Ethical screening in modern financial markets: the conflicting claims underlying socially responsible investment. *The business lawyer*, 681-726.
120. Kochhar, R., & David, P. (1996). Institutional investors and firm innovation: A test of competing hypotheses. *Strategic management journal*, *17*(1), 73-84.
121. Kracaw, W. A., & Zenner, M. (1998). *Bankers in the boardroom: Good news or bad news.* Unpublished working paper. Pennsylvania: Pennsylvania State University.
122. Kroszner, R. S., & Strahan, P. E. (2001). Bankers on boards: Monitoring, conflicts of interest, and lender liability. *Journal of Financial Economics, 62*(3), 415–452.
123. Lins, K. V., Servaes, H., & Tamayo, A. (2017). Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *the Journal of Finance*, *72*(4), 1785-1824.
124. Lipton, M., Rosenblum, S. A., & Savitt, W. (2020). On the Purpose and Objective of the Corporation. Harvard L. Sch. Forum on Corp. Governance (Aug. 5, 2020), available at https://corpgov. law. harvard. edu/2020/08/05/on-the-purpose-and-objective-of-the-corporation/#:~: text= The% 20purpose% 20of% 20a.
125. Liu, W. Q., & Liu, X. X. (2014). Individual/institutional investor sentiment and stock returns: Study based on Shanghai A-share market. *J. Manag. Sci. China*, *17*(03), 70-87.
126. Lopez-de-Silanes, F., McCahery, J. A., & Pudschedl, P. C. (2024). Institutional investors and ESG preferences. *Corporate Governance: An International Review*.
127. Lowenstein, L. (1988). *What's wrong with Wall Street: Short-term gain and the absentee shareholder*. Addison-Wesley.
128. Ma, Z., Liang, D., Yu, K. H., & Lee, Y. (2012). Most cited business ethics publications: mapping the intellectual structure of business ethics studies in 2001–2008. *Business Ethics, 21(3), 286–297*.
129. Malik, F. (2012). *The right corporate governance: Effective top management for mastering complexity*. Campus Verlag.
130. Margolis, J. D., & Elfenbein, H. A. (2008). Do well by doing good? Don't count on it.
131. Martin, J. G. (2004). Compliance with the foreign corrupt practices Act of 1977 in the Post-Sarbanes Oxley world. *Winstead Seacrest & Minick PC, Houston, Texas, USA*.

132. Miles, J. (2005). R-squared, adjusted R-squared. *Encyclopaedia of statistics in behavioural science*.
133. Mintzberg, H. (1983). The case for corporate social responsibility. *Journal of Business Strategy*.
134. Monks, R., Minow, N., 1995. *Corporate Governance*. Blackwell, Cambridge, MA.
135. Monks, R. A. G., & Minow, N. 1991. *Power and accountability*. New York: HarperCollins
136. Neubaum, Donald O., and Shaker A. Zahra. "Institutional Ownership and Corporate Social Performance: The Moderating Effects of Investment Horizon, Activism, and Coordination." *Journal of Management* 32, no. 1 (February 2006): 108–31. https://doi.org/10.1177/0149206305277797.
137. Nisbett, R. E., & Wilson, T. D. (1977). The halo effect: Evidence for unconscious alteration of judgments. *Journal of personality and social psychology*, *35*(4), 250.
138. Nofsinger, J. R., Sulaeman, J., & Varma, A. (2019). Institutional investors and corporate social responsibility. *Journal of Corporate Finance*, *58*, 700-725.
139. Ozili, P. K. (2023). The acceptable R-square in empirical modelling for social science research. In *Social research methodology and publishing results: A guide to non-native english speakers* (pp. 134-143). IGI Global.
140. Panicker, V. S., Upadhyayula, R. S., & Mitra, S. (2021). Lender representatives on board of directors and internationalisation in firms: an institutionalised agency perspective. *Journal of Management and Governance*, 1-24.
141. Park, D. J. (2018). Remembering financial crises: the risk implications of the rise of institutional investors in project finance. *Mich. L. Rev.*, *117*, 383-414.
142. Pathan S. 2009. Strong boards, CEO power and bank risk-taking. *Journal of Banking and Finance* 33(7): 1340–1350. https://doi.org/10.1016/j. jbankfin.2009.02.001
143. Pedersen, E. R. (2010). Modelling CSR: How Managers Understand the Responsibilities of Business Towards Society. Journal of Business Ethics, 91(2), 155–166. doi:10.1007/s10551-009-0078-0.
144. Phillips, W., Lee, H., Ghobadian, A., O'regan, N., & James, P. (2015). Social innovation and social entrepreneurship: A systematic review. *Group & Organization Management*, *40*(3), 428-461.
145. Plastun Vyacheslav, L. (2012). Approaches to Classification of Institutional Investors. Business Inform, (9), 118-122.
146. Porter, M. 1992. Capital choices: Changing the way America invests in industry. *Boston: Council on Competitiveness/Harvard Business School.*
147. Preston, L. E., & Post, J. E. (1975). Private management and public policy: the principle of public responsibility (p. 175).
148. Pucheta-Martínez, M. C., & García-Meca, E. (2014). Institutional investors on boards and audit committees and their effects on financial reporting quality. *Corporate Governance: An International Review, 22*(4), 347–363.

149. Rangan, K., Chase, L., & Karim, S. (2015). The truth about CSR. *Harvard Business Review*, *93*(1/2), 40-49.
150. Renders A, Gaeremynck A. 2012. Corporate governance, principal-principal agency conflicts, and firm value in European listed companies. *Corporate Governance: An International Review* 20(2): 125–143. https://doi.org/10.1111/j.1467-8683.2011.00900.x
151. Ruder, D. S.: 1989, 'A Notion to Share Corporate Power', *Directors and Boards* 13(2), pp. 10-2.
152. Sachs, S., & Ruehle, E. (2009). *Sustainable Success with Stakeholders. The Untapped Potential.* Basingstoke: Palgrave MacMillan.
153. Schwartz, M. S., & Carroll, A. B. (2003). Corporate Social Responsibility: A Three-Domain Approach. *Business Ethics Quarterly*, 13(4), 503–530. doi:10.2307/ 3857969.
154. Securities and Exchange Commission. (2009). Enhanced disclosure and new prospectus delivery option for registered open-end management investment companies. *Security and Exchange Commission Release Notes*, *33*.
155. *SEC.gov | Institutional Investors: Power and Responsibility.* (2013, April 19). https://www.sec.gov/news/speech/2013-spch041913laahtm
156. Servaes, H., & Tamayo, A. (2013). The impact of corporate social responsibility on firm value: The role of customer awareness. *Management science*, *59*(5), 1045-1061.
157. Shleifer, A., & Vishny, R. W. (1986). Large shareholders and corporate control. *Journal of political economy*, *94*(3, Part 1), 461-488.
158. Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The journal of finance*, *52*(2), 737-783.
159. Shleifer, A., & Vishny, R. W. (1997). The limits of arbitrage. *The Journal of finance*, *52*(1), 35-55.
160. Simpson, J., & Taylor, J. R. (2013). *Corporate governance ethics and CSR*. Kogan Page Publishers.
161. Smith, A. (1776/1976). *An Inquiry into the Nature and Causes of the Wealth of Nations. In R. H. Campbell, A. S. Skinner & W. B. Todd (Eds.), Vol. II of the Glasgow Edition).* Oxford: Oxford, Clarendon Press.
162. Solomon J, Solomon A. 2006. Private social, ethical, and environmental disclosure. *Accounting, Auditing & Accountability Journal* 19: 564–591.
163. Srivardhan, M. (2009). Role of institutional investors in corporate governance. *Available at SSRN 1391803*.
164. Starik, M. (1995). Should trees have managerial standing? Toward stakeholder status for non-human nature. *Journal of business ethics*, *14*(3), 207-217.
165. Thorndike, E. L. (1920). A constant error in psychological ratings. *Journal of applied psychology*, *4*(1), 25.
166. Turnbull, S. (2019). Corporate governance: Its scope, concerns, and theories. In *Corporate governance* (pp. 180-205).

167. United Nations. (2010). *Overview of the UN Global Compact.* Retrieved from http://www.unglobalcompact.org/AboutTheGC/ index.html
168. University of Houston Energy Fellows. (2019, October 11). Can corporate social responsibility be legally enforced? Forbes. https://www.forbes.com/sites/uhenergy/2019/10/11/can-corporate-social-responsibility-be-legally-enforced/?sh=1fc08e7a3d44
169. Usman, B., Bernardes, O. T. F., & Kananlua, P. S. (2020). On the nexus between CSR practices, ESG performance, and asymmetric information. *Gadjah Mada International Journal of Business*, *22*(2), 151-177.
170. Villarón-Peramato, O., García-Sánchez, I. M., & Martínez-Ferrero, J. (2018). Capital structure as a control mechanism of a CSR entrenchment strategy. *European Business Review*.
171. Wahba H. 2010. How do institutional shareholders manipulate corporate environmental strategy to protect their equity value? A study of the adoption of ISO 14001 by Egyptian firms. *Business Strategy and the Environment* 19: 495–511.
172. Wallace, J. S. (2003). Value maximisation and stakeholder theory: compatible or not?. *Journal of Applied Corporate Finance*, *15*(3), 120-127.
173. Walther, B. R. (1997). Investor sophistication and market earnings expectations. *Journal of Accounting Research*, *35*(2), 157-179.
174. Wei, J. S., & Liu, C. C. (2003). Structure, Conduct, and Performance of Principal-Agent Models: An Overview. *International Journal of Business and Economics*, *2*(3), 177.
175. Wood, D. J. (1991). Corporate social performance revisited. *Academy of Management Review*, 16, 691-718.
176. Wright, P., Kroll, M., & Elenkov, D. (2002). Acquisition returns, increase in firm size, and chief executive officer compensation: The moderating role of monitoring. *Academy of Management journal*, *45*(3), 599-608.
177. Young MN, Peng MW, Ahlstrom D, Bruton GD, Jiang Y. 2008. Corporate governance in emerging economies: A review of the principal-principal perspective. *Journal of Management Studies* 45: 196–220. https://doi.org/10.1093/oxrep/gri010
178. Zagloel, T. Y., & Hasibuan, H. S. (2021, March). How corporate social responsibility from consumer goods industries in Indonesia contributes to sustainable development. In *IOP Conference Series: Earth and Environmental Science* (Vol. 716, No. 1, p. 012095). IOP Publishing.