



Impact of Corporate Social Responsibility on Stock Price Crash Risk. The moderating Role of Culture and Country of Study

Aliza Tabassam^{a*}, Tabrez Nawaz^b, Mariam Bilal^c, Shoket Ali^d

^aAllama Iqbal Open University, Islamabad. ^bPir Mehr Ali Shah Arid Agriculture University Rawalpindi. ^cJönköping International Business School. ^dInstitute of International Relations, Shah Abdul Latif University Khairpur.

*Email: alizatabassum@gmail.com

Abstract: This aims to explore the moderating effect of country of study and cultural dimensions on the relationship between Corporate Social Responsibility (CSR) and Stock Price Crash Risk (SPCR). In this study we used meta-analysis technique from 40 effect size paper which published between 1997 and 2024. The aim of this study was to explore previous studies findings about impact of CSR and SPCR. The meta-analysis technique discloses the significant negative relationship between CSR and SPCR. Furthermore, this study determined country of study and cultural dimension that moderate the relationship between CSR and SPCR. Specifically, dimension of culture like long term orientation (LTO) has a positive moderation effect, showing that CSR practices are more productive in transferring stock price crash risk in these cultural contexts. On the other hand, cultures with indulgence and high uncertainty avoidance showed negative moderation effects, which shows that the relationship between CSR and SPCR is disabled in these cultural conditions. It is important that this study did not shed light on the endogeneity issue between CSR and SPCR because of small debates about this issue in the previous studies in this meta-analysis. To the best knowledge of author this is the first meta-analysis research which is examining moderating role of country of study and cultural dimensions affecting the relationship between CSR and SPCR. The study provides new knowledge on the factors of stock price crash risk, contributing valuable new suggestion for stakeholders of the company in contexts of country and cultural conditions.

Key words: CSR, Stock Price, Crash Risk, Meta-analysis, Culture

1. Introduction

CSR is applied as the “commitment of commerce to behave in decent manners and commit to economic growth by cooperating with all stakeholders for the betterment of people’s lives and benefit of business” [1]. This concept shed light on the importance of CSR in all over the world industries and academic research papers. In recent business discussions, CSR has become an important concept, with top management of business progressively accepting its value for success of their business. CSR has been found as a major tool to contribute towards competitive advantage and corporate growth [2][3]. The core of business activities CSR initiatives can effectively upgrade their commercial operations [4]. Fundamentally, CSR activities support businesses to enhance community development and environmental protection. By implementing of CSR practices into their decision making process

and commercial operations, organizations achieve their huge milestone benefits. In these are competitive advantages, new market access opportunities, long-term sustainability and human development [5]. Therefore, the strategic incorporation of CSR principles in decision-making frameworks has great potential to drive the successful outcomes for business and the constituting society and broader stakeholders. As a result, companies concentrate their efforts on carrying out their obligations, increasing economic value and actively promoting society's welfare through the adoption of an effective governance structure [6]. Businesses show their enhanced social responsibility and ethical behavior by taking on a greater range of societal duties. Furthermore, companies that focus on social responsibility and stay attached to CSR activities play an important role in boosting society's moral fabric. These businesses create a more socially conscious atmosphere by serving as examples of dedication to sustainable projects and ethical business practices. Therefore, this also helps enhance the character of the employees and create socially responsible communities whose stakeholders go beyond the walls of the gardens. These sequential occurrences of business talents and social reforms confirm how CSR can be more than what it should be and can do tremendous things for the well-being of organizations and society [7]. CSR is the stakeholders of the society; it collaborates on the environment-friendly approach of the business that gives back to people from environmental, social and economic perspectives. Through CSR, companies admit responsibilities beyond the sole purpose of maximizing profits by realizing the considerable power of their influence on politics and capitalism, both economies and the environment. When the business engages in CSR, it becomes a tool for both good change and addressing issues such as poverty, inequality and the international environment [8]. Everybody can be more helpful in this world by expanding their interests, delivering social improvement to society at large by sponsoring different community developments, ensuring that people work and live well, and fostering carbon emissions reduction. Throughout, it can be speculated that there is a large number of community, labour, consumer, and investor stakeholders that desire to see the engagement of corporate social responsibility by the corporations [2]. It is they who think that companies should only do CSR if they would like to be able to take up and address the complex problems that they are facing and survive in today's fast-changing and unpredictable business environment. The CSR approach sees a business as part of a larger community rather than merely existing for its financial benefits. Such an approach is responsible for twofold gains - society as a whole and shareholders. Besides, companies that look after fiduciary duties might turn out to be the first choice of customers in an economy where it is believed that the environment and ethical business standards do make a difference. The researchers highlight this issue in the article.

Corporate social responsibility campaigns, a form of accountability, sustainability and transparency, are important factors to take note of when thinking about minimizing the opportunity for the collapse of the stock market [9]. They often show their commitment to genuine business ethics and stakeholder involvement by putting more emphasis on their CSR activities. This leads to investors' confidence and brings down the turbulence in the market. Supporting business ethics is a good illustration of the fact that society can be safer from the risk of a stock market collapse through the effort of corporate social responsibility [10]. Companies which embed corporate responsibility into their operating practice usually exhibit a stronger organizational structure, with a complete set of control procedures and risk management rules. There is little chance that the status of the stock market will be unstable for the reason that it will now be easier for investors to review a firm's financial performance and make sound judgments just because of accountability and transparency [11]. First, companies that have CSR initiatives often raise social responsibility and environmental sustainability issues, and the role of the company in this causes compliance with regulations and decreased risk of environmental disasters and demonstrations. Those enterprises that actively include environmental management not only enjoy superior adaptation to regulatory regimes and are spread as well to risk related to earth opening or climatic aberrations but also have the competitive advantage of environmentally friendly processes[12]. The CSR program of the organization is the most significant device that helps the organization earn a better profile and reputation. This may form the role of buffering the market unpredictability. Corporations with powerful personal responsibility programs are almost always preferred by investors, who, in addition to being stronger and more credible, are regarded as being stronger and more described investment regions [13]. Sustainable business initiatives work to avoid unethical behaviour, take good care of the environment and demonstrate social attitudes. This can help companies to last longer and become more robust.

Additionally, businesses that foster this positive view may remain unaffected by the market's going out of trend and may not experience such stock price drops as during turbulent times. Hence, investors get the reward of a valued price on the circulating market, and they can also become at risk of a stock market crash [14]. The probability of a

decline in share value in an unexpectedly major way is a stock price crash risk. It might happen relatively soon, depending on the level of risk. This risk signals many things that are the sources of danger to the firm and its potential investors, among them market volatility, economic recessions, and the use of information that is aimed at pulling down the corporation or its sector. Stock price crashes can wield profound repercussions for shareholders, entailing financial setbacks and eroding trust in the company's operational prowess and future prospects. Stakeholders, beyond solely scrutinizing financial metrics, also harbor a keen interest in the social impact of businesses [15]. Therefore, firms must establish robust governance frameworks to adeptly embrace CSR initiatives. A sound corporate governance structure not only facilitates the pursuit of financial objectives but also fortifies the foundation for successful CSR integration, ensuring holistic business sustainability.

Previous studies showed inconsistent results. Some studies showed significant positive relationship between CSR and SPCR [16], [17], [18], [19], [20]. Whereas some studies showed significant negative relationship [6], [21], [22], [23], [24]. Thus previous studies have showed inconsistent results that creates ambiguity for the readers, scholars, and practitioners. To resolve this ambiguity, the previous scholars have suggested to conduct met analysis to investigate the true relationship existing between CSR and SPCR (see review paper by Ali et al., 2022). In line with the previous research we are conducting a meta-analysis study to examine the true relationship between CSR and SPCR.

1.1 Research Questions

The main research questions of this study are these

- a) What is the relationship between CSR and stock price crash risk?
- b) What is the moderating of impact of power distance on the relationship between CSR and stock price crash risk?
- c) What is the moderating of impact of individualism on the relationship between CSR and stock price crash risk?
- d) What is the moderating of impact of long term orientation on the relationship between CSR and stock price crash risk?
- e) What is the moderating of impact of uncertainty avoidance on the relationship between CSR and stock price crash risk?
- f) What is the moderating of impact of masculinity on the relationship between CSR and stock price crash risk?
- g) What is the moderating of impact of indulgence on the relationship between CSR and stock price crash risk?

1.2 Research Objectives

The research objectives associated with the research questions are mentioned below.

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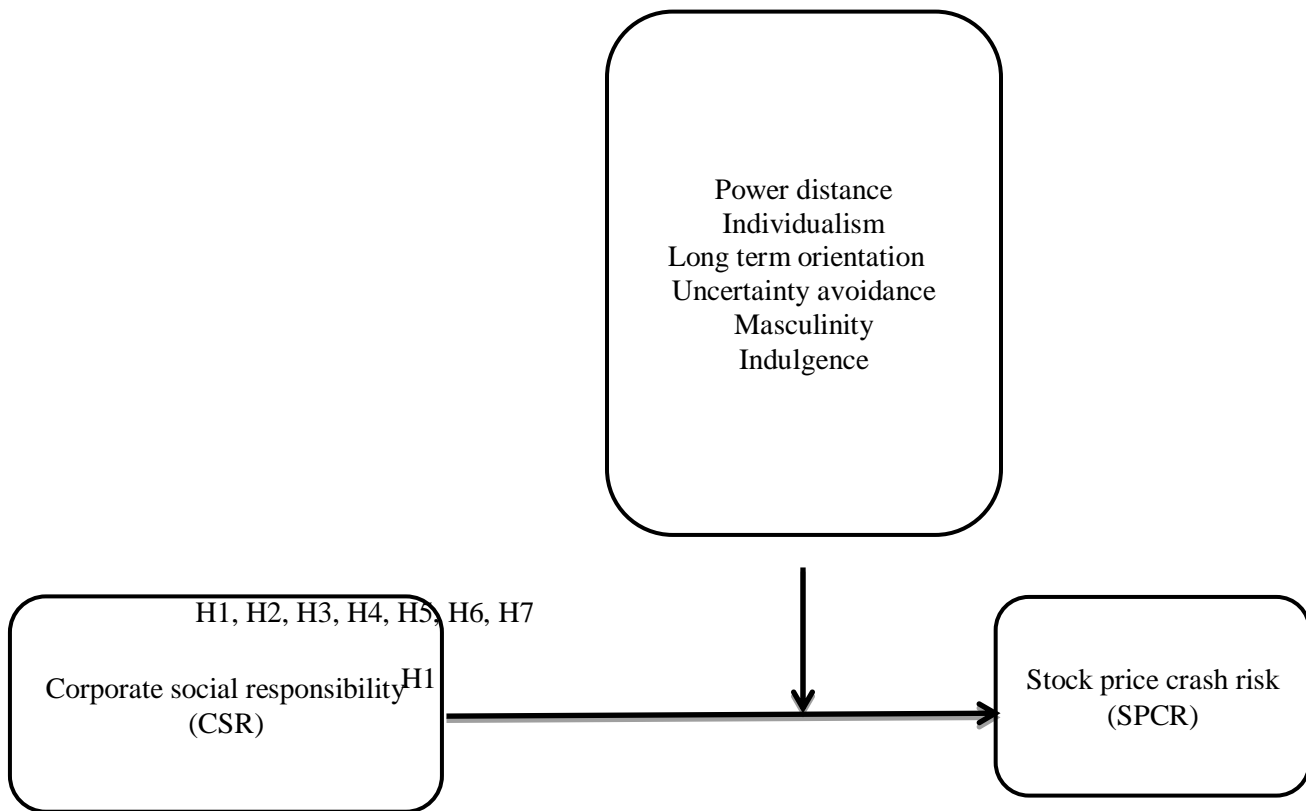
- a) To investigate the impact of CSR on stock price crash risk.
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- c) To examine the moderating impact of individualism on the relationship between CSR and stock price crash risk.
- d) To examine the moderating impact of long term orientation on the relationship between CSR and stock price crash risk.
- e) To examine the moderating impact of uncertainty avoidance on the relationship between CSR and stock price crash risk.
- f) To examine the moderating impact of masculinity on the relationship between CSR and stock price crash risk.
- g) To examine the moderating impact of indulgence on the relationship between CSR and stock price crash risk.

1.3 Theoretical Framework

Theoretically, the relationship between CSR and stock price collapse risk could be determined from several different perspectives. Stakeholder theory places corporate responsibility not only on shareholders but on a wide range of stakeholders, including Non-Governmental Organizations (NGOs), workers, suppliers, consumers, and the

community. Hence, these developments may not only help generate goodwill and confidence among stakeholders via CSR activities but also enable the value creation and risk reduction of stock prices in the long run. Moreover, along with agency theory, corporate governance that is efficient, including open reporting and CSR-related accountability practices, can reduce agency conflicts between shareholders and management; therefore, crashes are less likely. According to behavioural finance theories, the involvement of society, the psychological perception of the market, and the investors' feelings may play a role in making stocks more stable and assured. In short, these theoretical approaches provide important arguments that might be used to explain the role of corporate social responsibility practices in the absence of a stock market crash. They also stress the value of stakeholder engagement and accountability in the creation of long-term value and financial stability.

The theoretical settings in the research suggest that a diversity of factors apart from cultural particularities and countries, in general, has an individual impact on the probability of stock market crashes. In this model, the chance of stock market crashes depends on how the CSR variables influence each other and on cultural dimensions, including power distance, individualism, long-term orientation, uncertainty avoidance and indulgence. The theory of CSR, along with different cultural elements, countries, and future cases of stock market crashes, is included in its concepts and ideas. Each idea plays a crucial role in comprehending how national regulations, traditional culture, and corporate social responsibility all work in synchrony to determine the stock market condition, resiliency, and stability. We desire to give a comprehensible realization of the intricate issues of the probability of the stock market crashing by exploring the small connections among the CSR programs, culture and country makings through our theoretical framework. Through this, we can not only expand our knowledge on the mitigation of risks arising from stock market volatility but also know how to overcome the challenges of implementing international CSR strategies in various kinds of cultural and geographic settings



H1 = CSR has a significant relationship with SPCR.

H2. Power distance acts as a negative moderator in the relationship between CSR and SPCR.

H3. Individualism negatively moderates the relationship between CSR and SPCR.

H4. Long term orientation positively moderates the relationship between CSR and SPCR.

H5. A high level of uncertain avoidance serves as a negative moderator in the relationship between CSR and SPCR.

H6. Masculinity acts as a negative moderator in the relationship between CSR and SPCR.

H7. Indulgence negatively moderates the relationship between CSR and SPCR

3. Material and Methods

The use of a research paper methodology section is significant for presenting the study's approach, especially in analyzing the correlation between CSR and SPCR. In this section, the reader is provided with a guide to the systematic approach used to uncover the complex relationship between CSR undertakings and stock market stability. The methodological background of the study, which includes risk management, financial markets, and corporate social responsibility, is established through an extensive literature review. This thorough review is crucial as it positions the proposed methods within the context of current practices and theoretical frameworks, thereby informing further methodological choices.

3.1 Validation and Data Collection

The education of validation and data collection continues beyond verifying the correct and accurate results and coherent and pertinent information. This section begins by examining all the study components and establishing whether they are adequate and relevant in responding to the research objectives or questions, as the case may be. This process implies evaluating the methods and methodologies of the study as well as its samples so that they can represent and depict events. In addition, this segment ensures proper filing and categorization of data, literature sources and other relevant information for detailed reporting, analysis and synthesis of results. This way, the researchers try to set the scientific validity of the study and its procedures and methods. Lastly, validation and data collection help present and organize the research findings clearly and effectively, improving research relevance and utilization in promoting growth and development in related fields.

In this research, we first analyzed and categorized the prior literature on the association between SPCR and CSR in thirty-seven studies based on three correlation methods. First, the author performed database creation through the use of search terms such as 'corporate governance', 'CSR', 'organization culture', 'developed countries', 'environmental disclosure', 'environmental reporting', 'social visibility', 'corporate social irresponsibility', 'CSR Disclosure', 'employee happiness', 'sustainability', 'national culture of secrecy', 'investor protection', 'stock price crash', 'SPCR', 'financial information', We also search Google Scholar by the exact keywords as in the previous step and used SSRN – Social Science Research Network for the unpublished papers. Moreover, For the ancestry approach, we followed the procedure mentioned by Ali et al. (2024) and used the meta-analysis of Doan and Sassen (2020). Thus, the reference list of the meta-analysis and earlier publications were scanned for relevant research.

The research was conducted on the two variables, CSR and SPCR, in the following meta-analytical research procedure. Publication bias is a typical pitfall in meta-analysis because only significant results are published; the fundamental composite indicates an inclination towards such results [26], [27]. This bias can interfere with reporting the findings as non-significant research contributions are usually unpublished [28]. To address this, we followed the meta-analytic procedure to incorporate correlation data from the CSR and SPCR studies where they were not the centre of research, hence avoiding publication bias, which in turn increases the validity of the results. To avoid bias and reach a more complete picture of the given research domain, we included significant studies and those that did not yield significant results.

To increase comprehensiveness against potential publication bias for end-point data, we also employed Rosenthal and Fisher's fail-safe N tests relating to the number of null-result unpublished studies that would be required in order to eliminate the observed effect [29]. Publication bias was also a concern in this analysis, and this was adduced by the fact that the number of missing studies needed to reduce the size to insignificance was insufficient

to alter our results. The final sample encompassed 35 articles and 40 effect sizes, which accounted for 627,430 observations, published between 1997 and the first half of 2024, with an increase in articles' publication tendency in recent years.

4. Analysis and Results

4.1 Correlation between CSR and SPCR

The correlation between CSR and SPCR is a well-examined phenomenon; we will discuss the results in detail and from meta-analyses in Table number 3. The results show a substantial and robust mean correlation $r = (0.47)$; 95% CI $\{0.08, 0.625\}$ between CSR and SPCR. This fact is an integral part of hypothesis H1, and the linear relation of the negative between CSR and SPCR is demonstrated. These results open the door for the implementation of a more encompassing support button for such corporations in the financial sector, as well as showing the benefits of the principles of transparency and sustainability in economic activities. In this investigation, we used both Fisher's and Rosenthal's Fail-safe statistically significant data tests to determine if publication bias was present. These tests revealed that by far the biggest of these missing effects was Vanderbilt's (46,002 for Rosenthal's test and 14,253 for Fisher's test), which, when incorporated into the subsumption set, would cause statistically non-significant results. This means that the outcome of the study would be the same even if the researchers published all the studies that are missing, for that is how much the result would fluctuate (see Fisher, 1932; Rosenthal; Doan & Sassen, 2020).

In addition, both the Q-Test and the I²-statistic were used to explore the uniformity assumptions found in the data. It is significant to note that the observed recognized contributed to commonly significant changes throughout the research due to the I² statistics, which was 97.65% effective in showing differences between the studies, thus making the research more robust. Likewise, the Q statistic screened ($Q = 5860.25$, $PQ = 0.001$) was significant, proving that moderation analysis is required as it will identify conceivable effects of some other variables on the connection between CSR and SPCR. Such a result shows the importance of using a different set of statistical tests prior to the final one in order to avoid the issue of any unreliable and invalid findings. (Frooman, 1997; Guerrero-Villegas et al., 2018)

According to Table 3, we planned further to apply the data analysis tool of random-effects meta-regressions to explore possible confounding effects. With the aid of this analytical method, we could be able to investigate and even articulate all the aspects and effects that such relationships could have been affected. Firstly, among the studies used, a cluster of different meta-analysis studies was observed and then random-effects meta-regression models were used to account for the inherent heterogeneity within the studies by considering them. This technique is applicable to meta-analytical research since the modelling method will handle inter-study disparities, such as variations in people, situations, and procedures while integrating the data inputs. Consistently, we related and assessed on tabular data of Table 3 the degree to which possible modifiers influence the CSR-FPCR correlation. Features such as the design of the study, the cultural background of the samples, or even different research techniques are instances of the moderators. We were trying to get more knowledge about how the various forces manipulate relevant relationships, so we proceeded first with the meta-regression model building. By doing this analytical part, we were capable of walking into moderating factors that could influence the direction or forcefulness of the correlation between giving back to society on the one hand and Social performance and corporate Responsibility on the other in different environments. Not only that, this type of regression model widened our knowledge of how the correlations between CSR and SPCR generalize and showed in what situational factors these links may have a certain variance.

CSR and SPCR appear in most countries, including those with LTO, and are recognized as important principles in business relationships. This proves that transparency in a disclosure environment is more tightly associated with better environmental performance of organizations than short-term or profit values. In contrast, we observed that cultural dimensions related to uncertainty avoidance ($b = 0.22$; $p < 0.05$) and indulgence ($b = 0.32$; $p < 0.01$) exert a negative moderating influence on the relationship between CSR and SPCR. This implies that in cultures where there is a strong aversion to uncertainty and a high emphasis on indulgence and gratification, the link between environmental performance and disclosure tends to be weakened. These findings lend support to our hypotheses H6 and H7. However, our analysis did not reveal significant moderating effects for other dimensions of culture, including individualism, masculinity, and power distance. This suggests that these cultural dimensions do not substantially influence the relationship between environmental performance and disclosure within the context of

our study.

Table 1:

Analysis	K	N	R	95% CI		Q	Pq	L ² (%)	Fail-safe
				Lower	Upper				
CSR-SPCR	35	627430	-0.047	0.08	0.625	18783	0.001	98.48	17582-5769

Table 3

Note CSR = CSR; SPCR = stock price crash risk; K = sample size; N = observations; r = correlation mean; CI = confidence interval (lower and upper limits) Q = Q statistic; Pq = Q statistic significance; I² = variance %

Table 2: Regression Results

Moderators	B	p-value	R ² %	T2
Country	0.12	0.053	4.32	0.09
Culture	0.19	0.037	8.66	0.09
Masculinity	0.06	0.589	0.22	0.09
Power distance	0.08	0.386	0.41	0.09
Indulgence	-0.32**	0.001	7.98	0.09
Individualism	-0.15	0.072	2.22	0.08
LTO	0.37***	0.001	11.07	0.08
Uncertainty avoidance	-0.23**	0.027	5.12	0.09

Note *** < 0.1%, ** < 1%, * < 5%

4.2 Further Tests of Sensitivity

Given that 7 out of the 35 meta-analysis studies were conducted in Western countries, there is a potential for bias towards American perspectives in the complete sample results. To mitigate this bias, we made the decision to exclude studies from western countries from our future investigations. Consequently, Table 4 showcases the moderation analysis after the removal of Western countries studies from our sample. Consistent with the findings from the complete sample, the results from the non-Western countries studies underscored that long-term orientation (b = 0.37; p < 0.01) continues to positively moderate the relationship between CSR and SPCR. However, we observed that uncertainty avoidance (b = 0.22; p < 0.05) and indulgence (b = 0.29; p < 0.05) both appeared to exert a negative moderating influence on this relationship among non-Western studies. Notably, the dimensions of masculinity, individualism, and power distance once again founded to be insignificant in their moderating effects. The exclusion of Western-based studies from our sample did ‘not alter the moderation results, indicating that the patterns observed remain robust and consistent. This sensitivity analysis serves to validate the moderating effects of LTO, indulgence and uncertainty avoidance on the relationship between CSR and SPCR across diverse cultural contexts, reaffirming the robustness of our findings.

5. Discussion and Conclusion

This study delves into the synergistic impact of CSR initiatives and SPCR, aiming to illuminate how diverse cultural contexts influence their interrelationship. Through a comprehensive analysis, this study uncovers a notable negative correlation between corporate crash risk and SPCR, thus offering substantive support for the tenets of stakeholder theory, which stat that” Stakeholder theory asserts that businesses bear responsibility not only to their shareholders but also to a diverse range of stakeholders, encompassing employees, customers, suppliers, and the broader community in which they operate. This framework emphasizes the interconnectedness of these stakeholders and advocates for the inclusion of their interests in corporate decision-making processes. Businesses, thereby, may create a set of strong connections; that is, they may build more effective relationships based on

principles like "trust" and "value creation" that sometimes go beyond the financial rewards by identifying the needs and problems of everyone concerned. Businesses can be provided with the opportunity to link their activities with the objectives of the society and come up with initiatives that are sustainable and promote the welfare of the communities they serve through the adoption of stakeholder worth. These principles revolve around finding a compromise between business efficiency and social effect, reminding us of the ethical dimension of making profits. Through the evaluation of CSR behaviour and the unstable regime in the financial market among cultural contexts, the research paper provides a new perspective on the business and the stock market's financial results. This study shows that apart from a profit motive, corporations must take a broader view and include stakeholders' interests during the decision-making processes, and it also indicates that a good CSR program may assist in market stability as well as resilience. Cultural distinctions, which were identified in our study on the effect of culture on the association between CSR and SPCR, showed that long-run cultures have intensified this relationship. This conclusion is of fundamental significance to all those businesses that are operating in the context of such cultural surroundings by their necessity to work hard on improving their CSR aspects with a major aim of creating long-term loyalty among their stakeholders. Such firms get hold of sustainable strategies as well as a long-continued dialogue with all their partners and stakeholders. With this objective, they aspire to increase the stability of the financial markets as well as reduce the possibility of stock market crashes. This provides evidence that cultural issues cannot be ignored when one is trying to determine how CSR influences the equity market dynamics. It also talks about long-term strategic planning being imperative to the sustainability strategies of corporate entities as well as the conformity of their business with the societal norms of their operational setting. Additionally, data from our investigation show that actions related to the meeting of distinct stakeholders inside the business, such as care for the needs of clients, suppliers and other funders, coupled with precise steps to build up strong connections with the customers, clients, and funder may bring significant advantages. Companies that put more emphasis on CSR undertakings do not just make their brands behave but can also actually decrease the risk of local businesses failing in the stock market. This speaks about the fact that CSR programs can be convenient in creating a resilient community and financial stability when they are properly adopted. In essence, businesses can ensure their survival in future market crises, improve their reputation and build long-term value for the benefit of stakeholders and shareholders by demonstrating integrity, fairness and sustainability in their relationships with stakeholders. With public concerns, administrative needs and corporate social responsibility efforts into play, corporate responsibility has become a critical point for management. As more and more businesses discover the vital link between their CSR programs and their strategic processes, it becomes less and less likely that the implementation of CSR programs results from mere philanthropy. The situation is that although there is a commonly recognized opinion that dedicated CSR procedures are beneficial for business, researchers have no common view, and their data is contradictory at this point.

Companies begin taking into consideration more social responsibility issues, adding to the ever-tightening regulations and growing heed of society. This suggests that businesses are doing this in view of profit generation and good community status as well. Initially, most corporations were believed to confine their CSR to charity. However, it is no longer recognized as a separate business segment but rather an indispensable element of business operations. Some debate that embracing socially responsible features that may include protecting the environment, labour equity, and community service, among others, might as well improve the company's bottom line. It can help boost the reputation of the business, encourage customers to return to the shop, build staff spirit, and improve the trust of investors. They also believe that all these positive outcomes will ultimately end in more financial gain. However, not everybody is persuaded. Some believe that corporate social responsibility might cost businesses more than it's worth, particularly in the short run. They contend that it's difficult to draw a clear connection between a company's financial success and its CSR initiatives. There are lots of things that can affect a company's financial performance, like what industry it's in, what the market is like, and how good the managers are. So, studies looking into this have given us mixed results. Because of all this, we're still trying to figure out exactly how CSR impacts a company's financial performance. Some studies say it's positive, others say there's no real connection, and some even suggest it could be negative. This is an ongoing debate among experts, and it's important because it affects how companies run their businesses, how they're governed, and what impact they have on society. For instance, after analyzing data from 437 main studies, we noticed that 39.8% of them concluded that CSR has a positive impact on Corporate Financial Performance (CFP). This means that in nearly 4 out of every 10 studies, researchers found evidence suggesting that when companies engage in CSR activities, it tends to have a positive influence on

their financial performance. In about half of the studies, exactly 49.7% in total, researchers have failed to exhibit a significant statistical connection between CSR and SPCR. The implication is that about half of the companies that were researched did not have any connections between their CSR indicators and financial performance. Nevertheless, in 10.5% of the studies, the researcher's uncovered data favoring the idea that financial surplus goes hand in hand with the practice of CSR. This is more evidence that social responsibility spending can actually increase profits, as the research shows that in approximately 1 out of 10 cases, companies whose social responsibility spending increased their finances. This rendered the conflicting information from research that relies on empirical work in order to establish the link between corporate social performance and share price reaction. They demonstrate that this correlation is rather intricate, and research into this subject will go on in the future in order to understand the details and underlying processes completely [30].

The findings of earlier, meticulous research, which elucidated the connection between CSR and SPCR, have suggested that CSR can function as a form of 'insurance' in the absence of such mechanisms. This perspective posits that CSR is a tool for mitigating the negative impact of adverse changes in a company's profitability conditions. In essence, firms that engage in philanthropy and CSR activities build a reserve of positive goodwill and expand their reputational capital, which can serve as a protective barrier against image-damaging events such as economic recessions. This "insurance" impact of corporate social responsibility effectively serves as a shield, enabling businesses to navigate rough financial waters with more resilience and reducing the severity of adverse effects on their overall performance measures. Therefore, the argument suggests that by protecting businesses against unexpected risks and uncertainties, investments in CSR not only provide real financial advantages but also provide inherent social and environmental benefits.

5.1 Limitation of Study

Although our research explains the connection between CSR and SPCR, it is important to understand its limitations. First off, the endogeneity issue between CSR and SPCR was left unresolved. This problem was mostly ignored in earlier research that our meta-analysis included. To adequately address endogeneity problems, future empirical research might greatly benefit from studying the reciprocal link between CSR and crash risk. Second, our research neglected other important variables including the degree of law enforcement, power dynamics among stakeholders, the evaluation of CSR success, and the nation's economic progress in favor of concentrating only on cultural circumstances. These organizations may influence the correlation between CSR incidents and accidents. This more detailed breakdown of the CSR-crash risk organization would be achieved by including these aspects in future research. First of all, we used the cultural dimensions score, which has been criticized for not adequately representing the actual corporate culture, as the main data set of our study. The score may reflect investors' bias on company culture because it heavily relies on their evaluation. Hence, in order to better describe organizational cultures, additional futuristic research can examine different indicators or quantitative methods.

In addition, there might be a risk of bias if unmeasured factors are also involved. Even based on the purest intentions, the researcher may not have managed to include all the crucial determinants involving CSR-SPCR, causing a big factor of confusion. By not considering the non-measurable factors, these results will be inaccurate, and the conclusion will not be true. On top of that, information availability and sampling favours may create restrictions for the generalization of the conclusions. At the same time, many studies have been conducted on data collected from specific industries, places, or periods that may not fairly reflect all firms. Along with that, there is a possibility that the data on the CSR and SCR indexes includes reporting bias and inconsistency, which can cause measurement errors and hampers the accuracy of the results. However, the determination of the direction of the link in the association of CSR and SPCR is very difficult now. Companies with lower SPCR levels will be more willing to carry out CSR to demonstrate stability and such commitment to stakeholders, while their routes of alleviating SPCR by strengthening business resilience and reputation are explained by other research. The dynamic nature of the financial market and the environment of the changing regulations provide a basis for the complexity of long-term CSR's impact on the SPCR. Both CSR and SPCR relationships may be affected by variations in investor preferences, market conditions, and regulations; thus, constant research needs to be done so that all the dynamics can be fully understood.

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