Navigating Financial Distress through CSR: The Mediating Influence of Information Asymmetry

Naeem Khan[1*] iD | Ahsen Saghir[2] iD | Muhammad Haroon Rasheed[3] iD

Abstract

This study examines the potential of CSR initiatives to mitigate financial distress by reducing informational asymmetry among non-financial enterprises listed on the Pakistan Stock Exchange (PSX). Specifically, this study examines the influence of Corporate Social Responsibility (CSR) on Financial Distress (FD), with an emphasis on the mediating effect of Information Asymmetry (IA). The research employs a sample of non-financial companies listed on the PSX from 2008 to 2023 using their reported data. The study utilizes the Generalized Method of Moments (GMM) technique to address potential endogeneity and other concerns related to panel data. The findings demonstrate that CSR engagement distinctly decreases the probability of financial distress by enhancing transparency and alleviating information asymmetry. The research suggests that diminished asymmetry is associated with lower levels of financial distress. In summary, CSR performance promotes social advancement while simultaneously improving financial outcomes, assisting companies in mitigating financial distress threats. This study provides significant insights for managers and investors, suggesting that investment in CSR activities may enhance financial stability by reducing informational asymmetries and promoting long-term sustainability. Organizations that participate in CSR programs are likely to achieve improved financial performance and diminished risks of financial crisis. This study contributes to the existing literature on CSR and financial distress by highlighting the mediating role of informational asymmetry. The results provide actionable insights for companies in emerging economies such as Pakistan, where CSR initiatives help enhance financial stability.

Keywords: *Pakistan Stock Exchange, Organizational Performance, Financial Distress, Information Asymmetry, Corporate Social Responsibility.*

GEL Classification: *G33, O16, M14, C23, L25*

Author's Affiliation:
Institution: Foundation University, Islamabad[1] | Abasyn University, Islamabad Campus | University of Sargodha, Sargodha[3]
Country: Pakistan
Corresponding Author's Email: *drnaeemkhan87@gmail.com

1. INTRODUCTION

In an increasingly connected and volatile global economic landscape, financial distress (FD) is a growing concern for modern business organisations that can have a severe effect on the survival and growth of businesses, especially in economically volatile and developing nations like Pakistan (Rasheed, Ali, & Khan,2023). It occurs when companies struggle to meet their liabilities, which can lead to bankruptcy, reorganisation, or even liquidation. Hence, businesses, investors, and regulators are becoming increasingly interested in knowing what causes financial hardship and how to lessen its effects. This is because FD can have effects that go beyond the companies themselves and influence the economy (Altman, 1968). In today's increasingly competitive and volatile corporate world, companies must take proactive steps to protect their financial health and avoid the risks associated with FD (Tan et al., 2024).

Many companies, especially those in emerging economies, struggle with financial hardship due to factors such as poor corporate governance, inadequate risk management, and a lack of financial transparency. Traditional economic indicators can help us understand some of the probable causes of FD; however, new research suggests that non-financial factors, such as CSR, may also be particularly important in mitigating or lessening the effects of FD (Sena, 2021). However, the actual dynamics of how CSR affects FD remain inconclusive, especially in developing countries like Pakistan.

CSR has evolved into a pivotal avenue for both business and academic circles, especially in the last few years. CSR activities initially emerged as a niche concept, but they have now become essential to people worldwide and are integral to the primary strategy of economic enterprises (Wang, Tong, Takeuchi, & George, 2016). As businesses become more aware of how their actions affect people and the environment, CSR has evolved from being a means to improve their reputation to engaging stakeholders and ensuring long-term success (Yee & Yazdanifard, 2012).

The interest in CSR is now expanding to include people, such as academics, governments, and the public, given its relevance for businesses to operate responsibly (Bowen, 2013). People no longer perceive the strategy of CSR as mere acts of charity; they perceive it as the means of making stakeholders happier and the business do better. This shift symbolises the transition to a more responsible and sustainable business operating process, where all stakeholders, including employees, customers, investors, and communities, are regarded as significant shareholders of CSR-driven activities (Khan & Malik, 2020; Mhiri et al., 2025). It is also well-known that CSR programs reduce costs and increase clarity and trust development among investors when the information is open to the public. This, in turn, enhances the company's reputation and market position (Yusoff, Mohamad, & Darus, 2013).

Another avenue that can influence the interaction of CSR and FD is the information asymmetry (IA). Based on the traditional financial theory, IA is one of the most significant problems that firms face in modern microstructure studies. This is when specific stakeholders have more information than others, which compromises market efficiency (Tan, Rasheed, & Rasheed, 2024). To mitigate these problems, companies need to be more transparent by providing stakeholders with more details (Chemmanur & Fulghieri, 1999). Chemmanur and Fulghieri (1999) said that companies with greater levels of IA tend to choose private placements over public offerings because they want to cut down on the costs of making information. He, Lepone, and Leung (2013) also found a positive link between IA and the return rate that investors need, which supports this finding.

The study takes the view that the avenue of CSR has grown significantly over the last fifty years, and more people are realising that it can influence a company's performance and the value of its stakeholders (Matten & Moon, 2020). CSR has become a way for companies to grow by improving their public image and building trust with their stakeholders. This is evident from the substantial amounts of money that companies invest in upholding CSR values (El Akremi, Gond, Son, De Roeck, & Igalens, 2018). Although more companies are adopting CSR practices, there is limited research on the intersection of CSR and IA, particularly in developing countries like Pakistan (Khan, Malik, Saghir, Aslam, & Husnain, 2021).

Stakeholder theory is a key concept in CSR research, which suggests that businesses should act in the best interests of their stakeholders. Some companies view CSR as a means to build goodwill and foster long-term growth. In contrast, others do not want to incorporate it into their plans, as they are primarily interested in short-term profitability. This split illustrates the varying results obtained when examining the relationship between CSR governance and financial performance (Nkemjika & Nkechi, 2017). Also, CSR's effect on FD, especially how it might lower IA, is still not well understood (Healy & Palepu, 2001; Khan et al., 2021). Research shows that companies may have less IA when they do more CSR work, which would make their finances more stable (Naqvi et al., 2021).

The importance of CSR and openness became even more apparent after the world financial crisis of 2008. Companies began to consider what they are required to do for their employees, consumers, partners, and the world. Numerous companies have since incorporated CSR in their long-term strategies to render their businesses more resilient and their stakeholders retained (Ehsan et al., 2018). However, in Pakistan, CSR is complicated to enforce due to a lack of familiarity with the concept, as well as a lack of transparency, which discourages businesses from engaging in it (Majeed, Aziz, & Saleem, 2015). The researchers have considered CSR and FD individually, but there has been little effort to examine

the two and observe the relationships between them, particularly in Pakistan. The article by Al-Hadi et al. (2019) is an exception, as it explored the relationship between CSR and financial distress in various contexts.

It is to bridge this gap in the literature that this study will examine the influence of CSR on financial distress, with a particular focus on the role of information asymmetry in non-financial enterprises in Pakistan. This paper aims to investigate the effect that CSR programs have on financial issues and IA's potential to act as a mediator. The research seeks to provide new insights into how CSR, IA, and economic stability can collaborate in the current global context, where emerging markets are adapting to the new reality of CSR. The significance of this research lies in its potential to provide a deeper understanding of how CSR activities can lead to businesses becoming more transparent, reducing information asymmetry, and ultimately preventing financial issues. It will also contribute to the body of literature on CSR and its outcomes as a business, especially in the emerging economies.

2. LITERATURE REVIEW

Financial distress (FD) occurs when a firm is unable to meet its financial obligations, facing liquidity problems that may lead to bankruptcy or severe restructuring (Altman, 1968). It is a critical financial state that poses a threat to a company's survival. Factors contributing to FD include poor fiscal management, excessive leverage, and external economic shocks (Hubbard, 1997). Managing FD involves addressing the underlying causes, which can range from inefficient capital structure to poor governance and risk management. FD can significantly impact a firm's reputation, investor trust, and its long-term sustainability. FD is a growing concern for modern business organisations, which can have a severe impact on the survival and growth of businesses, especially in developing nations. It occurs when companies struggle to meet their liabilities, which can lead to bankruptcy, reorganisation, or even liquidation. Hence, businesses, investors, and regulators are becoming increasingly interested in knowing what causes financial hardship and how to lessen its effects.

2.1 CSR and Financial Distress

CSR refers to businesses operating in a manner that benefits society, the environment, and stakeholders beyond shareholders. It encompasses activities such as protecting the environment, conducting business ethically, engaging with the community, and caring for employees (Carroll, 1991). Companies now include social and environmental issues in their business plans as part of CSR (McWilliams & Siegel, 2001).

The Stakeholder Theory (Freeman, 1984) leads to a connection between the CSR and FD. According to this theory, organisations are expected as to deliver value to

all stakeholders, not just shareholders, if they want to stay in business in the long term. By aligning the interests of a company with those of its stakeholders through CSR policies, a company has better chances of developing a stronger relationship with its stakeholders and reducing operational risks, thereby reducing the likelihood of financial issues. CSR can also help a company raise its reputation, which will lead stakeholders to regard it more favourably. This may reduce the dangers associated with a fiscal crisis (Deng, Kang, & Low, 2013).

A new study reveals that CSR initiatives can help companies mitigate their risks. The authors state that CSR initiatives establish a connection between the company and its stakeholders, and the greater the connection, the more financially stable the company is, and the potential risk of entering a fiscal crisis decreases (El Akremi et al., 2018). According to Al-Hadi et al. (2019), CSR practices, particularly those that prioritise environmental protection, enable companies to create a favourable image among the general population, and the reduction of financial uncertainty can be achieved through this approach. This is particularly critical when the economy is facing tight times or has experienced an economic meltdown, as CSR-carrying companies tend to have fewer fluctuating stocks and lower financial risk (Awaysheh & Klassen, 2010).

Conversely, other research reports indicate that CSR may consume too many resources and, when not conducted effectively, may divert focus from core fundamental fiscal management, leading to financial mishaps (Nkemjika & Nkechi, 2017). However, most studies concur with the notion that CSR enhances long-term sustainability, as it shields businesses against financial issues and reduces reputational risks (Khan, Malik, Saghir, Aslam, & Husnain, 2021). Based on what has been said so far, it is believed that companies that engage in CSR activities are less likely to experience financial difficulties.

H₁: There is a significant negative association between CSR and financial distress.

2.2 Information Asymmetry and Financial Distress

When one person in a deal has more or better information than the other, this is called information asymmetry (IA). This makes it more difficult for both parties to make informed decisions. In the world of corporate finance, IA commonly occurs between managers and outside stakeholders, such as investors and creditors. This can lead to poor choices, increased risk, and even financial difficulties (Akerlof, 1970). IA can make capital markets less efficient because investors may demand higher returns due to concerns about the risks associated with being closed (Myers & Majluf, 1984).

The Agency Theory (Jensen & Meckling, 1976) discusses the relationship between IA and FD. This idea says that managers (agents) and shareholders (principals) often disagree since they do not have the same information. Managers

may act in their own best interests instead of those of shareholders because they have more information about how the firm operates and its financial performance. The uncertainty that arises from this can harm the company's finances, increasing the likelihood of financial difficulties. The Signalling Theory (Spence, 1973) also suggests that companies with higher IA may struggle to communicate their proper financial health to the market, which increases the likelihood of bankruptcy.

Studies on the impact of IA on financial problems reveal that companies with more IA are more likely to experience financial issues. Healy and Palepu (2001), for example, argue that IA increases the cost of capital because investors require higher returns to compensate for the lack of information. Chan et al. (2007) also found that increased IA makes it more difficult to predict a company's future cash flow, which may lead to financial difficulties. Naqvi et al. (2021) have more recently stated that IA exacerbates the risk of financial distress by hindering external investors and creditors from obtaining accurate and timely information, thereby increasing the likelihood of unfavourable financial outcomes. Additionally, companies with high IA may face challenges in securing favourable financing arrangements, as lenders and investors may perceive them as riskier, which increases the cost of capital and the likelihood of financial difficulties (Chemmanur & Fulghieri, 1999). Based on these results, we propose the following hypothesis: the greater the information asymmetry, the more likely it is that someone will experience financial difficulties.

H₂: There is a significant positive association between information asymmetry and financial distress.

2.3 CSR and Information Asymmetry

By making a company's operations more open and more transparent, CSR can help reduce information asymmetry. This can build confidence among stakeholders and reduce people's concerns about the company's financial situation (Healy & Palepu, 2001). Firms engaging in CSR tend to provide more detailed accounts of the outcomes of their performance on the environment and society. This will close information gaps and ensure that credible information reaches external stakeholders more quickly. The Signalling Theory (Spence, 1973) simplifies the insight into the correlation between CSR and IA. In this hypothesis, firms utilise CSR programs to demonstrate to stakeholders that they are committed to ethical business practices and that they intend to remain stable in the long term. Companies mitigate the issues of information not being available to everyone by demonstrating their interest in responsibly conducting business, thereby making the market more efficient. The legitimacy Theory (Suchman, 1995) holds that companies engage in CSR activities to give their operations a sense of legitimacy in the eyes of stakeholders. It also assists in transparency and reduces IA. The recent studies supported the concept that CSR contributes to the equalization of the information. According to Khan et al. (2021), CSR initiatives

enable companies to be transparent with their stakeholders by providing accurate and complete information to them. This lowers IA and helps people make better decisions. Similarly, the study by Yusoff et al. (2013) demonstrates that CSR reporting provides more information, enabling investors and other stakeholders to make more informed decisions and bridge the information gap between the company and its external partners. Additionally, CSR efforts, particularly in areas such as environmental protection and ethical business practices, can demonstrate to stakeholders that the company is committed to long-term success. This can help reduce uncertainty and information asymmetry even more (He, Lepone, & Leung, 2013). Based on what we have learned, we believe that companies that engage in CSR activities have less information asymmetry.

H₃: There is a significant association between CSR and information asymmetry.

2.4 Mediation of Information Asymmetry

Information asymmetry may be significant in determining how CSR impacts financial issues. It is believed that CSR actions can reduce the amount of information that is not shared, thereby decreasing the risk of financial problems. The mediation process reveals that CSR does not directly impact financial distress but rather does so indirectly by increasing transparency and filling information gaps, which in turn lowers uncertainty and risk, making it less likely for individuals to experience financial problems. The Mediation Theory, as formulated by Baron and Kenny (1986), provides an understanding of the role of information asymmetry in the effectiveness of a mediator. According to this theory, the mediator demonstrates the relation between an independent variable (CSR) and a dependent variable (financial distress). The situation in this case means that CSR decreases undisclosed data, which reduces the probability of facing financial difficulties by fostering trust and enhancing the ability of capital markets to make informed decisions. The research, which examined the role of IA as a factor moderating the relationship between CSR and business performance, found that the ability to be more open and willing to exchange information more easily may assist companies in achieving financial well-being (Naqvi et al., 2021). For example, CSR reduces the IA by demonstrating that a firm is stable and has high ethical standards, thereby reducing the likelihood of a company experiencing financial distress (El Akremi et al., 2018). Healy and Palepu (2001) also revealed that firms doing CSR seek to reduce the asymmetry of information, which compels people to believe that the risks involved in financial distress are minimised. Based on the theory and the facts available, we believe that CSR actions reduce information asymmetry, thereby resulting in a lower likelihood of financial problems for the company.

H₄: Information asymmetry mediates the relationship between CSR and financial distress.

3. METHODOLOGY

Methodological rigour is the underlying force behind the validity, reliability, and generalizability of the inferential outcomes of the study. The current research follows a systematic and established pattern aligned with the deductive method of theory building. This section focuses particularly on the provision and justification of the quantitative data, as well as the subsequent testing of the underlying model. Given the inherent issues with panel data and following recent literature on similar topics and contexts, the current model utilises the generalised method of moments (GMM) for hypothesis testing. The GMM model overcomes data shortcomings by overidentifying the model through the incorporation of lagged instrumental variables. The specification of the econometric model is as follows:

$$\text{FD}_{it} = \alpha + \beta_1 IA_{it} + \beta_2 CSR_{it} + \beta_3 FS_{it} + \beta_4 FA_{it} + \beta_5 FL_{it} + \varepsilon \tag{1}$$

3.1 Data and sampling

The study is based on secondary data sources and utilises established data from audited reports and governmental sources. Data concerning companies operating in Pakistan is sourced from their official documents accessible on websites and publicly available platforms, including documents issued by the country's central bank. The sample for this study comprises all non-financial companies currently registered with the SECP and listed on the stock market in Pakistan. The study's sample excludes companies from the financial sector due to differences in reporting standards and operational modes compared to non-financial sector companies (Al-Malkawi & Javaid, 2018; Sarwar, Xiao, Husnain, & Naheed, 2018). The final sample consisted of non-financial companies listed on the PSX from 2008 to 2023.

3.2 Operationalisation of Variables

For analysis, these variables can be categorised into three distinct categories: dependent, independent, and control variables. The dependent variable is the financial distress (FD) score of a firm in a year, whereas Corporate Social Responsibility (CSR) is the independent variable of the study. Meanwhile, the study is particularly unique in considering Information Asymmetry (IA) as a mediator in the model. Lastly, the current model widely adopted measures of firm size (FS), age (FA), and leverage (FL) as control variables in the study. Table 1 lists study variables, the corresponding methods of measurement, and references from the literature.

Table 1: Operationalisation of Variables

Variable	Measurement	Reference
FD	"(1.2*working capital /total assets+1.4*Retained earnings/total assets +3.3*earnings before interest and taxes /total assets+0.6*Market value of equity /book value of total liabilities +0.99*sales /Total assets)"	Altman (1968), Hussain, Ali, Ullah, and Ali (2014)
CSR	"CSR monetary spending ratio" "Donations + employees' welfare + research and development/earnings after tax"	Pyo and Lee (2013), Ehsan et al. (2018)
IA	"Asymmetric information is captured through insiders' superior information on future performance."	Piotroski and Roulstone (2005)
FS	"Log of total assets"	Yang and Baasandorj (2017), (Boubaker, Cellier, Manita, & Saeed, 2020)
FA	"Age of the firm in years"	
FL	"Total liabilities/ Total assets"	

4. RESULTS

This section presents the findings of the quantitative analysis and discusses the results to evaluate the proposed hypothesis of the study. The final analysis is performed using E-Views software, and the findings are presented in descriptive, correlational, and inferential sections.

4.1 Descriptive Statistics

The descriptive statistics of the study variables are shown in Table 2. The table presents the mean, maximum, minimum, and standard deviation values for all variables utilised in the study. The CSR has a mean of 0.014, a standard deviation of 0.033, a maximum of 0.268, and a low of -0.086. The proxy for measuring CSR is the 'monetary spending ratio,' determined by the ratio of total CSR expenditures to profits after tax. The rationale for the negative minimum value is that several enterprises within the sample were experiencing losses. The descriptive statistics of CSR indicate that enterprises lack awareness of the advantages of participating in CSR activities, which is why a minimal fraction of their earnings is allocated to CSR-related initiatives. It is essential to educate managers on the advantages of corporate social responsibility (CSR) initiatives for organisations. Moreover, regulatory authorities must rigorously monitor and compel corporations to allocate resources towards corporate social responsibility.

The Altman Z-score model indicates a mean of 2.447, a standard deviation of 2.137, a maximum of 15.360, and a minimum of -6.553. The mean for IA is 0.481, the standard deviation is 0.500, the maximum is 1.000, and the minimum is 0.000. The logarithm of a firm's total assets determines its size. The average business size is 15.265, with a standard deviation of 1.469; the greatest and minimum values are 19.344 and 11.707, respectively. The average business age is 34.100, with a standard deviation of 17.653. The firm's age ranges from a minimum of 1 to a maximum of 157 years. The maximum age of 157 years belongs to Murree Brewery, established in 1860. Leverage is determined by the ratio of total liabilities to total assets. The average leverage is 0.577, with a median of 0.205. The leverage's maximum and minimum values are 0.998 and 0.004, respectively.

Table 2: Descriptive Statistics

	Mean	Std. Dev.	Max	Min
CSR	00.014	00.033	000.268	-00.086
FD	02.447	02.137	015.360	-06.553
IA	00.481	00.500	001.000	00.000
FS	15.265	01.469	019.344	11.707
FA	34.100	17.653	157.000	01.000
FL	00.577	00.205	000.998	00.004

4.2 Correlation Matrix

The correlation matrix for dependent, independent, and mediating variables is presented in Table 3. The table presents the correlation coefficients for corporate social responsibility (CSR), financial distress (FD), and information asymmetry (IA). The table indicates that multicollinearity is not an issue, as the absolute values of all coefficients are below 0.8. According to the literature, multicollinearity is not a concern if the correlation coefficient is less than 0.8 (Cooper & Schindler, 2003; Gujarati & Porter, 2003).

Table 3: Correlation Matrix

	CSR	IA	FS	FA	FL
CSR	1				
IA	0.036	1			
FS	0.049	0.017	1		
FA	0.013	0.047	0.101	1	
FL	0.028	0.041	0.061	0.188	1

4.3 Regression Results

The results reveal that CSR has a significant and positive impact on FD (P < 0.05). A higher value of the financial distress proxy represents a lower level of economic distress. The effect of CSR on IA is significant (P<0.05) and negative. The impact of IA on FD is substantial (P<0.05) and negative.

The impact of CSR and IA on FD. Baron and Kenny (1986) Suggested that for complete mediation, the impact of CSR on FD should be insignificant, while the effect of IA on FD should be significant. Results reveal that the impact of CSR on FD is substantial (P<0.05), while the effect of IA on FD is also considerable (P<0.05) and negative. Firm size has an insignificant impact (P > 0.05) on FD. The effect of firm age on FD is significant (p < 0.05) and positive. The impact of leverage on FD is substantial (P < 0.05) and negative, indicating that a firm with more debt financing will have higher FD. The value of adjusted R2 is (0.223), indicating that the independent variable explains 22.30 per cent of the variance in the dependent variable. The value of the J-stat is (1.814), and the probability of the J-stat is (0.178), which is insignificant. Here, the fourth condition of Baron and Kenny (1986) The procedure for partial mediation is fulfilled, as the impact of CSR on FD is significant, whereas the effect of IA on FD is also significant. Overall, results indicate that IA partially mediates the relationship between CSR and FD.

Table 4: Regression Results

	Model 1			Model 2			Model 3			Model 4		
	FD			IA			FD			FD		
Variables	β	t-stat	Prob	β	t-stat	Prob	β	t-stat	Prob	β	t-stat	Prob
CSR	0.009	3.197	0.001	-4.218	-2.062	0.040				0.004	4.691	0.000
IA							-0.46	-3.373	0.001	-0.452	-3.14	0.002
FS	-0.050	-1.423	0.155	-1.938	-0.053	0.125	0.029	1.060	0.289	-0.007	-0.247	0.805
FA	0.100	2.264	0.024	-0.021	-0.503	0.615	0.132	1.728	0.084	0.150	1.982	0.048
FL	-7.342	-28.56	0.000	-0.271	-1.229	0.219	-7.12	-16.387	0.000	-7.077	-15.47	0.000
Adj. R²	0.248			0.129			0.215			0.223		
J-Stat	1.938			0.022			1.760			1.814		
Prob J-Stat	0.164			0.882			0.185			0.178		

The robustness of the findings is evaluated through the J-statistic and its probability. The insignificant values established that the overidentification conditions of the GMM regression are valid and the model specification is correct and reliable. Hence, proving the reliability and validity of the inferential model of the study.

The model examines the nature of the bond among Corporate Social Responsibility (CSR), Information Asymmetry (IA) and Financial Distress (FD) of non-financial companies in Pakistan. The findings reveal unique and complex relationships that can provide valuable insights into firm behaviour, particularly about CSR and its impact on financial well-being. The results indicate that the positive effect of CSR on FD is considerable and statistically significant (P-value < 0.05). This means that the increased degree of CSR activities is associated with a decreased degree of financial distress in non-financial firms. This could mean that companies that practice CSR have a greater chance of having well-established reputations, which can strengthen their ties with stakeholders, including customers, suppliers, and investors. This increase in reputation could give the firms better financial conditions, thereby minimising financial distress.

As in the case of Pakistan, companies often struggle with issues such as economic instability, government regulation, and shifting financial markets. CSR can help firms establish a strong image and gain an additional competitive advantage. Additionally, CSR activities have the potential to increase employee morale and organisational loyalty, which eventually results in increased efficiency and financial performance of the organisations.

IA has been found to have a strong negative correlation with FD, i.e., an increased level of information asymmetry is associated with a higher level of financial distress. This conclusion is corroborated by the hypothesis that the greater the information asymmetry a firm has, the more likely it is to suffer financial distress. Information asymmetry is caused by the imbalance that exists between the amount of information available to investors and the information available to management. Under these circumstances, the firm's financial status becomes a matter of secrecy, and the possibility of making poor decisions arises, leading to high levels of uncertainty and ultimately, economic distress.

The adverse effect of IA on FD in an emerging market, such as Pakistan, where information disclosure is imperfect and market efficiency is poor, is greater. A firm failing in its effort to deal with information asymmetry probably would not have the opportunity to source cheap capital or could have an elevated cost of capital, which would add to financial distress.

The study's findings also indicate that IA partially mediates the correlation between CSR and FD. In Baron and Kenny's, (1986) study mediation model, the CSR is expected to exert no appreciable direct influence on the FD. In complete

mediation, this relationship is uplifted by a full intermediary (IA). Nevertheless, the findings reveal that CSR still has a substantial direct influence on FD, and IA also shows a considerable impact. This implies that CSR can have a direct effect on FD; however, IA is crucial in enhancing or modifying the effect of CSR on FD. The hints that CSR activities also help reduce financial distress indirectly through the reputation and stakeholder trust routes, in addition to reducing information asymmetry as an aspect of this relationship. Companies which make CSR investments and simultaneously decrease the level of information asymmetry can diminish financial distress to a greater degree. The transparency of information, which in the case of CSR can be delivered through disclosures, can reduce the uncertainty faced by investors, creditors, and other stakeholders, thereby mitigating financial distress.

Overall, the model's findings contribute to the existing literature on CSR, IA, and FD, particularly in the context of non-financial companies in Pakistan. The findings indicate that CSR positively influences FD, whereas IA negatively influences FD and IA partially mediates the positive association between CSR and FD. These associations suggest that CSR activities, when combined to decrease information asymmetry, can serve as a considerable driver of a firm's financial stability. Therefore, organisations in Pakistan must implement policies that encourage CSR and transparency to alleviate their economic vulnerability and boost sustainability in the long term.

5. CONCUSION

In recent decades, the relationship between Corporate Social Responsibility (CSR) and financial distress (FD) has garnered considerable attention from scholars and policymakers in management and finance. This increasing attention highlights the significance of the subject, with CSR and its ramifications emerging as a central concern for stakeholders and regulatory entities. This study examines the correlation between corporate social responsibility (CSR), financial distress (FD), and the mediating effect of informational asymmetry (IA).

The results indicate a substantial inverse correlation between CSR and IA, suggesting that CSR efforts effectively mitigate the issue of informational asymmetry. This shows that companies participating in CSR initiatives promote enhanced transparency in their informational landscape. These findings align with stakeholder theory, which posits that CSR enhances transparency, thereby reducing information asymmetry among stakeholders and subsequently mitigating financial distress.

Moreover, the study indicates that information asymmetry (IA) exerts a substantial negative impact on the financial distress (FD), suggesting that the increased levels of IA lead to heightened financial misery. IA partially mediates the association between CSR and FD, indicating that the CSR actions enhance

information transparency, hence diminishing the probability of economic distress.

Meeting social duty creates a mutually advantageous situation for corporations. An effective CSR performance not only promotes social advancement but also enables companies to achieve improved financial results, thereby mitigating the risks associated with economic instability. These findings are particularly pertinent to investors, as they provide critical insights for assessing risk premiums and calculating the likelihood of a corporation encountering financial difficulties. Furthermore, corporate managers should prioritise CSR efforts to foster robust relationships with stakeholders, thereby enhancing long-term stability and mitigating financial risk.

This research examines non-financial publicly traded companies on the Pakistan Stock Exchange (PSX). Future studies may investigate the correlation between CSR and FD inside the banking industry, integrating other mediating variables. This study focuses on Pakistan; however, subsequent research could explore analogous connections in different nations, especially within South Asia, to improve the generalizability of these results. The study exclusively uses annual reports to gather CSR data, despite the possibility that corporations may release CSR information through alternative channels, such as media outlets or online platforms. Subsequent studies may enhance this dimension by investigating alternative sources of CSR data. Considering that these findings pertain specifically to Pakistan, it would be advantageous to undertake analogous research in other emerging countries to attain a more comprehensive understanding of the interplay between CSR, informational asymmetry, and financial distress.

Conflict of Interest
The authors declare no conflict of interest.

REFERENCES

Al-Malkawi, H.-A. N., & Javaid, S. (2018). Corporate Social Responsibility and Financial Performance in Saudi Arabia: Evidence from Zakat Contributions. Managerial Finance.

Al-Hadi, A., Chatterjee, B., Yaftian, A., Taylor, G., & Monzur Hasan, M. (2019). Corporate social responsibility performance, financial distress and firm life cycle: evidence from Australia. Accounting & Finance, 59(2), 961-989.

Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. The journal of finance, 23(4), 589-609.

Awaysheh, A., & Klassen, R. D. (2010). The impact of corporate social responsibility on firm performance: The role of innovation. Business & Society, 49(4), 435-466. https://doi.org/10.1177/0007650310384951.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of personality and social psychology, 51(6), 1173.

Boubaker, S., Cellier, A., Manita, R., & Saeed, A. (2020). Does corporate social responsibility reduce financial distress risk? Economic Modelling.

Bowen, H. R. (2013). Social responsibilities of the businessman: University of Iowa Press.

Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. Business horizons, 34(4), 39-48.

Chemmanur, T. J., & Fulghieri, P. (1999). A theory of the going-public decision. The Review of Financial Studies, 12(2), 249-279.

Cho, S. Y., Lee, C., & Pfeiffer Jr, R. J. (2013). Corporate social responsibility performance and information asymmetry. Journal of Accounting and Public Policy, 32(1), 71-83.

Cohen, J., Holder-Webb, L., Nath, L., & Wood, D. (2011). Retail investors' perceptions of the decision-usefulness of economic performance, governance, and corporate social responsibility disclosures. Behavioral Research in Accounting, 23(1), 109-129.

Cooper, D. R., & Schindler, P. S. (2003). Business research methods McGraw-hill: New york. In.

Deng, X., Kang, J. K., & Low, B. S. (2013). Corporate social responsibility and stakeholder value maximization: Evidence from mergers. Journal of Financial Economics, 110(1), 87–109. https://doi.org/10.1016/j.jfineco.2013.01.040.

Du, S., & Yu, K. (2021). Do corporate social responsibility reports convey value relevant information? Evidence from report readability and tone. Journal of Business Ethics, 172, 253-274.

Ehsan, S., Nazir, M., Nurunnabi, M., Raza Khan, Q., Tahir, S., & Ahmed, I. (2018). A Multimethod Approach to Assess and Measure Corporate Social Responsibility Disclosure and Practices in a Developing Economy. Sustainability, 10(8), 2955.

El Akremi, A., Gond, J.-P., Swaen, V., De Roeck, K., & Igalens, J. (2018). How do employees perceive corporate responsibility? Development and validation of a multidimensional corporate stakeholder responsibility scale. Journal of Management, 44(2), 619-657.

Freeman, R. E. (1984). Strategic management: A stakeholder approach. Pitman Publishing.

Gujarati, D. N., & Porter, D. C. (2003). Basic econometrics (ed.). New York: McGraw-HiII.

He, W. P., Lepone, A., & Leung, H. (2013). Information asymmetry and the cost of equity capital. International Review of Economics & Finance, 27, 611-620.

Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. Journal of Accounting and Economics, 31(1-3), 405-440.

Hussain, F., Ali, I., Ullah, S., & Ali, M. (2014). Can Altman Z-score model predict business failures in Pakistan? Evidence from textile companies of Pakistan. Journal of Economics and Sustainable development, 5(13), 110-115.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. Journal of Financial Economics, 3(4), 305-360. https://doi.org/10.1016/0304-405X(76)90026-X

Khan, M. T., & Malik, M. I. (2020). The role of corporate social responsibility in financial performance: Evidence from the banking sector of Pakistan. Asian Journal of Business and Accounting, 13(1), 95-114. https://doi.org/10.22452/ajba.vol13no1.4

Khan, N., Malik, Q. A., Ali, S., Rasheed, M. H., & Saghir, A. (2021). Impact of Corporate Social Responsibility on Firm Performance: Mediating Role of Information Asymmetry. Indian Journal of Economics and Business, 20(4).

Khan, N., Malik, Q. A., Saghir, A., Aslam, M., & Husnain, M. (2021). DOES CORPORATE SOCIAL RESPONSIBILITY REDUCE INFORMATION ASYMMETRY?: EMPIRICAL EVIDENCE FROM PAKISTAN. Humanities & Social Sciences Reviews 9(3), 943-950.

Khan, N., Malik, Q. A., Saghir, A., Rasheed, M. H., & Husnain, M. (2021). Does corporate social responsibility reduce financial distress? Evidence from emerging economy. Management Science Letters, 8(11), 2225-2232.

Majeed, S., Aziz, T., & Saleem, S. (2015). The effect of corporate governance elements on corporate social responsibility (CSR) disclosure: An empirical evidence from listed companies at KSE Pakistan. International Journal of Financial Studies, 3(4), 530-556.

Matten, D., & Moon, J. (2020). Reflections on the 2018 Decade Award: The Meaning and Dynamics of Corporate Social Responsibility. Academy of management review, 45(1), 7-28.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. Journal of Financial Economics, 13(2), 187-221. https://doi.org/10.1016/0304-405X(84)90023-0

McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. Academy of Management Review, 26(1), 117-127. https://doi.org/10.5465/amr.2001.4011987

Mhiri, C., Ajina, A., Hussain, N., Mnzava, B., & Wieczorek-Kosmala, M. (2025). Corporate social responsibility and capital structure: Moderating effect of culture. Corporate Social Responsibility and Environmental Management, 32(1), 698-717.

Naqvi, S. K., Shahzad, F., Rehman, I. U., Qureshi, F., & Laique, U. (2021). Corporate social responsibility performance and information asymmetry: The moderating role of analyst coverage. Corporate Social Responsibility and Environmental Management.

Nkemjika, O. M., & Nkechi, O. (2017). Corporate Social Responsibilities and Firm Performance: A Comparative study of Banking and Non-Bank Sector in Nigeria. Int. J. Manag. Excell, 8, 946-955.

Nkemjika, A. P., & Nkechi, E. M. (2017). Corporate social responsibility and firm performance in the banking sector of Nigeria. African Journal of Economic Review, 5(2), 56-72.

Piotroski, J. D., & Roulstone, D. T. (2005). Do insider trades reflect both contrarian beliefs and superior knowledge about future cash flow realizations? Journal of Accounting and Economics, 39(1), 55-81.

Pyo, G., & Lee, H.-Y. (2013). The association between corporate social responsibility activities and earnings quality: Evidence from donations and voluntary issuance of CSR reports. Journal of Applied Business Research (JABR), 29(3), 945-962.

Rasheed, M. H., Ali, A., & Khan, N. A. (2023). Technological advancements and noise trading: A case of investors' sentiments at the Pakistan stock exchange. Computers in Human Behavior Reports, 12, 100344.

Sarwar, B., Xiao, M., Husnain, M., & Naheed, R. (2018). Board financial expertise and dividend-paying behavior of firms. Management decision.

Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. Academy of Management Review, 20(3), 571-610. https://doi.org/10.5465/amr.1995.9508080331

Spence, M. (1973). Job market signaling. Quarterly Journal of Economics, 87(3), 355-374. https://doi.org/10.2307/1882010

Tan, Q., Rasheed, H.R., Rasheed, M.H., and Ali, K. (2024). Navigating EconomicLandscape in Asian Pacific: A Study of Climate, Security, and Economic Spillovers across StockMarkets." Lahore Journal of Economics, 28(2), 77–97. https://doi.org/10.35536/lje.2023.v28.i2.a4

Tan, Q., Rasheed, M. H., & Rasheed, M. S. (2024). Post-COVID-19 technology adoption and noise trading: elucidation of investors' sentiments across cultures. China Accounting and Finance Review, 26(4), 431-458.

Wang, H., Tong, L., Takeuchi, R., & George, G. (2016). Corporate social responsibility: An overview and new research directions: Thematic issue on corporate social responsibility. In: Academy of Management Briarcliff Manor, NY.

Wang, W., Fu, Y., Qiu, H., Moore, J. H., & Wang, Z. (2017). Corporate social responsibility and employee outcomes: A moderated mediation model of organizational identification and moral identity. Frontiers in psychology, 8, 1906.

Yang, A. S., & Baasandorj, S. (2017). Exploring CSR and financial performance of full-service and low-cost air carriers. Finance Research Letters, 23, 291-299.

Yee, N. W., & Yazdanifard, R. (2012). Corporate Social Responsibilty; Importance, Benefits, Consequences, Approaches to Managing Corporate Social Responsibilty.

Yusoff, W. F. W., Mohamad, Z., & Darus, F. (2013). The impact of CSR on firm performance: The role of transparency in the Malaysian context. International Journal of Business and Society, 14(1), 89-108.

Yusoff, H., Mohamad, S. S., & Darus, F. (2013). The influence of CSR disclosure structure on corporate financial performance: Evidence from stakeholders' perspectives. Procedia Economics and Finance, 7(1), 213-220.

Al-Malkawi, H.-A. N., & Javaid, S. (2018). Corporate social responsibility and financial performance in Saudi Arabia: Evidence from Zakat contribution. Managerial Finance.

Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. The journal of finance, 23(4), 589-609.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of personality and social psychology, 51(6), 1173.

Boubaker, S., Cellier, A., Manita, R., & Saeed, A. (2020). Does corporate social responsibility reduce financial distress risk? Economic Modelling.

Ehsan, S., Nazir, M., Nurunnabi, M., Raza Khan, Q., Tahir, S., & Ahmed, I. (2018). A Multimethod Approach to Assess and Measure Corporate Social Responsibility Disclosure and Practices in a Developing Economy. Sustainability, 10(8), 2955.

Hussain, F., Ali, I., Ullah, S., & Ali, M. (2014). Can Altman Z-score model predict business failures in Pakistan? Evidence from textile companies of Pakistan. Journal of Economics and Sustainable development, 5(13), 110-115.

Piotroski, J. D., & Roulstone, D. T. (2005). Do insider trades reflect both contrarian beliefs and superior knowledge about future cash flow realizations? Journal of Accounting and Economics, 39(1), 55-81.

Pyo, G., & Lee, H.-Y. (2013). The association between corporate social responsibility activities and earnings quality: Evidence from donations and voluntary issuance of CSR reports. Journal of Applied Business Research (JABR), 29(3), 945-962.

Sarwar, B., Xiao, M., Husnain, M., & Naheed, R. (2018). Board financial expertise and dividend-paying behavior of firms. Management decision.

Yang, A. S., & Baasandorj, S. (2017). Exploring CSR and financial performance of full-service and low-cost air carriers. Finance Research Letters, 23, 291-299.