
CSR performance and the cost of financial debt in emerging MENA economies

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Abstract

This study tackles the debate regarding the effect of corporate social responsibility (CSR) performance on cost of debt. The relationship between corporate CSR performance and the interest rate of debt is examined using the system GMM technique estimator on 243 listed non-financial firms from 10 MENA emerging countries (Bahrain, Egypt, Jordan, Kuwait, Morocco, Oman, Qatar, Saudi Arabia, Turkey, and the United Arab Emirates) during the period 2011-2020. We provide substantial evidence that the association between CSR performance and the interest rate on debt - the accounting measure of the cost of debt, is significant and negative. This support stakeholders' value maximization view and suggest that lenders reward better CSR performance. However, findings show that firms with more transparent CSR reporting are penalized by institutional creditors. Our findings provide more in-depth evidence on why companies should improve their CSR performance while paying more attention to CSR reporting practices.

Keywords: Corporate Social Responsibility Performance; CSR reporting practice; Credit institutions; Cost of debt; MENA region.

JEL: G32; M41; Q56

1. Introduction

Over the past few decades, companies have allowed more resources to corporate social responsibility (CSR, hereafter) activities. This trend is set to continue because business actors regard CSR commitment as a driver of both tangible and intangible value. This suggests that the expected benefits (revenues/cost-related outcomes) outweigh the costs related to the development of CSR policies (Perrini *et al.*, 2011). Most current market research demonstrates that socially responsible companies that implement effective CSR practices have sound financial positions (El Ghoul *et al.*, 2011; Hoepner *et al.*, 2016). The explanations put forward in the literature highlight concepts such as legitimacy, reputation and brand image issues, and employees' health and safety (Magnanelli *et al.*, 2017) that create and maintain a corporate competitive advantage (Saeidi *et al.*, 2015).

According to CSR literature, managers have initiated CSR policies to reduce different types of risks, particularly reputational risk. We assume that commitment to CSR helps firms gain reputational advantages that enhance their risk profile, and thus positively impact their overall performance. In this study, we state that firms' CSR practices represent a crucial factor in determining their creditworthiness because they help institutional lenders assess two types of risk: reputational risk and default risk (Weber *et al.*, 2010). This study questions whether there is any financial advantage related to the pursuit of social responsibility for companies granted by lenders in granting loans. We examine whether creditors approve corporate CSR performance by exploring the relationship between CSR activities and the cost of borrowers' debt. In our view, CSR may play an important role in reducing firms' risk profile and cost of financial debt. In fact, the extant literature finds that the cost of debt and the corporate default risk are positively related (Dhaliwal *et al.*, 2011).

We build on both reputational and stakeholder theories to develop our hypothesis (Donaldson and Preston, 1995; Freeman, 1984). This theoretical perspective provides an opportunity to explore how institutional creditors, as primary stakeholder group comprehend CSR performance. We focus on lenders among all firms' stakeholders, given their neutrality, as they express their assessments only by considering the company's risk profile and ability to meet its financial requirements (Magnanelli and Izzo, 2017).

In the current context, characterized by the increasing pressure exerted by stakeholders to require firms to behave in a socially responsible manner and to minimize undesirable impacts on the economy, society and the environment (Eliwa *et al.*, 2021; Vitolla *et al.*, 2019); complying by engaging more in CSR activities means firms' reducing risk and improving financial performance. In this case, institutional creditors apply better terms for the loans granted. Thus, we expect a negative relationship between CSR performance and the cost of financing loans – evaluated as the global rate charged to a company when financing by debt.

Despite its relevance, the relationship between CSR performance and the cost of debt is still little studied, and the empirical results are inconclusive or mixed (Erragragui, 2018). Therefore, it is unclear whether credit institutions care about the CSR performance of corporate borrowers. Furthermore, most studies have focused on developed countries, whose business and institutional compositions differ from those of developing countries (La Rosa *et al.*, 2018; Boubakri *et al.*, 2021; Eliwa *et al.*, 2021). In other words, due to the differences in institutional environment between developed and developing countries (Hamrouni *et al.*, 2020; Du *et al.*, 2014), conclusions drawn from developed countries may not be appropriate for developing countries. In this regard, Baldini *et al.* (2018) underline that CSR policies are shaped by national-specific factors, such as labour and political systems, which have a heterogeneous effect.

Our study aims to fill this important gap by analysing the nexus between CSR performance and the cost of financial debt on a sample of listed non-financial companies belonging to 10 countries in the MENA region from 2011 to 2020. The MENA region is of particular interest because (1) little is known about CSR practices in this region as few studies have been published on this

subject (Al-Reyaysa *et al.* 2019; Sarhan and Ntim, 2019); (2) CSR can help firms in the MENA region overwhelm institutional voids reflected by the weakness of market-support institutions (e.g., weak legal frameworks and enforcement systems, less developed capital markets) (El Ghouli *et al.*, 2017); (3) the close relationship that characterizes lenders and large companies in the region, as evidenced by the percentage of total bank lending to large firms (European Bank for Reconstruction and Development, European Investment Bank, and The World Bank, 2016¹), leaving only 7%, the lowest level in the world, to small or medium-sized enterprises (Azour, 2019)².

Our investigation makes three contributions to the literature. First, it extends the available literature on the determinants of the cost of debt by studying the nexus between CSR performance and cost of financial debt, adding new empirical evidence to an emerging area of research with controversial results. Second, this study is the first to examine this relationship in the context of MENA. Prior studies have concentrated on developed countries such as the U.S., Australia, and European countries (e.g., Erragragi, 2018; Bhuiyan and Nguyen, 2020; La Rosa *et al.*, 2018; Devalle *et al.*, 2017; Eliwa, 2021), and very few emerging economies, such as China and Indonesia (i.e., Du *et al.*, 2017; Xu *et al.*, 2021; Anis and Utama, 2016). Thus, by focusing on the MENA zone, our study enriches the existing literature on the economic consequences of CSR performance, in particular interest rate on debt. Third, using a universally available information source allows us to understand how the market uses the CSR information stream generated by a tierce party (i.e., the Refinitiv Eikon database).

Our results show a negative relationship between CSR performance and interest rate. This finding suggests that firms deemed more responsible have the possibility to access third-party financial resources under better conditions since lending institutions may find that firms' investments in CSR are beneficial. However, we find evidence that the cost of debt is affected by CSR reporting practices but not in the expected manner. The results show that CSR disclosure practices is significantly and positively associated with cost of debt. Overall, this indicates that institutional creditors appreciate firms' efforts to enhance their CSR performance and apply risk reduction but simultaneously consider CSR reporting activities as a waste of resources, which consequently has a negative effect on the cost of debt.

This finding highlights the important role of CSR in implementation of creditworthiness assessment models by credit institutions. Their strong positions encourage companies to increase their commitment to CSR, which benefits other stakeholders' groups. Additionally, from a

¹ European Bank for Reconstruction and Development, European Investment Bank, and The World Bank, 2016. What's Holding Back the Private Sector in MENA? Lessons from the Enterprise Survey. Washington, DC: The World Bank. License: Creative Commons Attribution CC BY 3.0 IGO

² « Poor access to finance is holding back businesses in MENA. This is how we can help them ». The World Economic Forum on the Middle East and North Africa. source: <https://www.weforum.org/agenda/2019/03/scaling-up-sme-access-finance-mena-region/>

practical perspective, we expect managers to better identify the positive influence of CSR policies on cost of financial debt, with pertinent repercussions for strategic planning.

The paper is organized as follows. Section 2 presents a literature review of previous studies and develops our hypothesis. Section 3 illustrates the sample, main variables, and regression model adopted. Section 4 presents and discusses the main findings. Section 5 concludes.

2. Literature review and hypothesis development

According to reputation theory, companies should adopt practices that positively shape their perceptions by society in order to maintain or enhance their legitimacy. CSR commitment makes it possible to enhance the reputation. Firms deemed more responsible are more attractive to their stakeholders, which enhances their reputations (Pérez, 2015). In this regard, lending stakeholders lower the interest rate granted to companies as long as they maintain a good credit history (Diamond, 1989).

Therefore, companies that want to lower their bank interest rates should constantly improve their image by acting responsibly (Hamrouni *et al.*, 2020).

The key to successful lending practices is the lender's aptitude to evaluate the borrower's repayment ability (Jung *et al.*, 2018). Meanwhile, firms with more CSR awareness are likely to improve their reputation, which translates into higher profitability and assurance of loan returns.

Thus, institutional lenders are tempted to lend money to companies strongly committed to CSR. Moreover, creditor institutions could be exposed to the risks related to the bad image that they could convey to their stakeholders if they established links with sinners' companies. This risk propels them to require an additional risk premium when negotiating the terms of a loan contract, which naturally leads to a high interest rate (Hamrouni *et al.*, 2020). As Zeidan *et al.* (2015) argue, the integration of CSR issues into a credit policy of banks creates a long-term existence in the market by highlighting its own support for society.

According to the stakeholder theory³, CSR commitment may meet stakeholders' moral expectations, thus mitigating transaction costs (Cheng *et al.* 2014; Clarkson *et al.* 2013). Thus, from a value-maximization perspective, CSR engagement can increase both corporate and stakeholder wealth (Godfrey, 2005; Kim *et al.*, 2012). Progress in CSR performance should enable companies to improve their risk profile, leading stakeholders to voluntarily provide the critical resources required to improve their economic performance (Deng *et al.*, 2013). On the other hand, sinner companies might not find assistance and resources to advance in a society that appreciates CSR commitment.

Coming to financial stakeholders such as institutional creditors, CSR could be an effective way to significantly increase economic performance (El Ghouli *et al.*, 2011) by decreasing interest rates. This is because debt issuance is priced based on an assessment of the future risks facing corporate

³ Established by Freeman's seminal 1984 book, stakeholder theory defines the company as a nexus of contracts between managers and stakeholders (e.g. lenders, suppliers, labour unions, consumers...). The latter provide firms with the resources to gain competitive advantage.

borrowers, notably, including future statutory and legal costs inflicted by the government and other stakeholders (e.g., the cost of compliance versus non-compliance with the law) (Ge and Liu, 2015; Khlif *et al.*, 2015).

This theoretical nexus is emphasized through the strong effect of CSR on financial risk reduction (Orlitzky and Benjamin, 2001), particularly default risk in a competitive business environment (Sun and Cui, 2014).

Currently, companies are increasingly compelled to meet stakeholder expectations to build sustainable relationships that identify them as operating within their societies' boundaries and norms, which guarantees their survival (Jeriji and Louhichi, 2021). Being proactive by adopting an integrated CSR strategy would mitigate conflicts in the business environment. This perspective can be considered as a risk-mitigation view (Goss and Roberts, 2011). Menz (2010) suggests that in addition to the classic financial risks that shape the risk premium (e.g., liquidity risk, credit risk...), other "missing risk factors" such as CSR matters should be taken into account. For example, Chava (2014) shows that companies with many environmental concerns face higher loan interest rates.

Studies investigating the nexus between CSR and the cost of financing loans are recent and scarce, and their results remain controversial (Devalle *et al.*, 2017; Hamrouni *et al.*, 2020; Stellner *et al.*, 2015). Some authors have provided evidence of a beneficial empirical connection. For example, the work of Cooper and Uzun (2015), on U.S. firms, and Eliwa *et al.* (2021), on the European area, find a negative relationship between CSR commitment and the cost of bank lending. Other researchers (e.g. Jiraporn *et al.*, 2014; Oikonomou *et al.*, 2014) have illustrated the beneficial effect of firms' high CSR scoring on credit ratings, which are typically used as a measure for credit risk, allowing firms to maximize bond yield spreads. Likewise, Ge and Liu (2015) find that CSR strengths (concerns) are linked with lower (higher) yield spreads. In the Chinese context, Xu *et al.* (2021) examine the effect of mandatory CSR disclosure on the cost of debt. The results highlight a reduction in the cost of debt, particularly for well CSR performing companies. Another research with similar results is that of Hamrouni *et al.* (2020), on a sample of French listed companies. In a complementary analysis, the authors examine the disaggregated effect of CSR disclosure (i.e., the three pillars: environmental, social, and governance) and find mixed results. Similarly, Hoepner *et al.* (2016) examine 470 loan agreements made in 28 countries during the period 2005-2012, and acknowledge that the social subdimension reduces the cost of financing loans less than the environmental subdimension. The findings of Stellner *et al.* (2015) provide evidence that CSR performance acts as a risk mitigator by rewarding a company with a higher quality rating, but only for environmental aspects. Du *et al.* (2017) show substitutive effects between firm environmental performance, a specific CSR weakness, and internal control on reducing interest rates on debt. Finally, the results of Bhuiyan and Nguyen (2020) confirm that the ethical behaviour of Australian listed firms leads lenders to relax financing conditions, in particular when setting loan rates.

In contrast to the above studies, other researchers have found no evidence of a favourable association. For instance, Menz (2010) showed that the risk premium of 498 European corporate bonds during the period 2004-2007 was higher for firms that integrated CSR issues into their strategic objectives. One year later, Goss and Roberts (2011) tested this relationship on 3,996 bank loans between 1991 and 2006 and concluded that institutional creditors punish "sinful" borrowers by charging between 7 and 18 basis points more than responsible firms. Finally, using a panel of 214 U.S. firms from 2000 to 2011, Erragragui (2018) inferred that social and governance concerns have no consequence on cost of financing loans.

In light of the above discussion, we expect that firms with a high level of CSR performance will have better lending terms, resulting in a lower cost of bank lending. Thus, we propose the following hypothesis:

H1: High CSR performance is negatively related to debt cost.

3. Research Methodology

3.1 Sample and Data

The sample consists of all non-financial firms that are publicly listed in the MENA region. Due to missing observations, especially CSR information, 243 non-financial firms (from a total of 5,241) from 10 countries were retained (Bahrain, Egypt, Jordan, Kuwait, Morocco, Oman, Qatar, Saudi Arabia, Turkey, and the United Arab Emirates) during the period 2011-2020.

We use Refinitiv Eikon database for both financial data (i.e., Datastream) and CSR data (i.e., Asset4). Table I shows the number of companies per industry and country. Panel A of Table I shows that except for technology sector, the different industries are well reflected in the sample. The manufacturing sector accounts for the largest proportion (23.5%). Approximately 15% of the sample includes companies from the consumer services sector, which is similar to the basic materials sector, whereas 11% are from the retail and telecommunications sectors. Panel B of Table I shows that our sample is marked by a strong presence of Turkish firms (55.1%). In the additional analysis, we exclude firms in this country.

Table I. Sample distribution by industry sector and country

Panel A: Total number of companies per industry

Industry	Total	
Basic Materials	38	15,6%
Consumer Services	37	15,2%
Consumer Goods	28	11,5%
Energy	9	3,7%
Health Care	8	3,3%
Industrials	57	23,5%
Real Estate	23	9,5%

Technology	1	0,4%
Telecommunications	29	11,9%
Utilities	11	4,5%
Others	2	0,8%
Total	243	100%

Panel B: Total number of companies per country

Country	Total	
Bahrain	5	2,1%
Egypt	10	4,1%
Jordan	1	0,4%
Kuwait	9	3,7%
Morocco	6	2,5%
Oman	4	1,6%
Qatar	31	12,8%
Saudi Arabia	26	10,7%
Turkey	134	55,1%
United Arab Emirates	17	7,0%
Total	243	100%

3.2. Variable measurement

This study examines the association between the cost of debt (*Cost_Debt*), the dependent variable, and CSR performance (*CSR_Score*), the independent variable. In line with the earlier literature, we included control variables in our model that may affect the cost of debt, as they have a direct or indirect influence on the risk profile of firms.

3.2.1. Cost of Debt

We used a direct accounting proxy (interest rate) to measure the cost of debt which is the ratio of interest paid to the average debt at the end of the year (Eliwa *et al.*, 2021; Hamrouni *et al.*, 2020; La Rosa *et al.*, 2018; Xu *et al.*, 2021). In this regard, Orlitzky *et al.* (2003) show that CSR activities are more related to accounting-based metrics than to market-based ones.

3.2.2. CSR Performance

The independent variable is CSR performance (*CSR_score*). Its measure is a score provided by Refinitiv Eikon database (formerly called Thomson Reuters database). These has been widely used by researchers (e.g., Devalle *et al.*, 2017; Eliwa *et al.* 2021; Jeriji and Louhichi, 2021), as it objectively measures companies' environmental, social, and governance performance on 10 topics (emissions, environment, product innovation, human rights, stockholders, etc.) using both public and primary sources (NGO websites, CSR reports, annual reports and media releases). The

score ranges from 0 for the least CSR-performing companies to 100 for the most CSR-performing companies.

3.2.3. Control variables

Many common control variables used in cost of debt research have been included into the model. Thus, we integrate firm-specific and ownership structure variables.

First, we consider the control variable *CSR_Rep_Pract* which reflects CSR reporting practices. Jeriji and Louhichi (2021) pointed out that companies not only need to make substantial efforts in their CSR actions but also need to communicate their progress to the general public. Following La Rosa *et al.* (2018), we assign a score of 2 if a firm discloses an audited CSR report, 1 if a firm discloses an unaudited CSR report, and 0 if a firm does not disclose a CSR report.

There is strong support for the view that larger firms have a lower risk profile (Maganelli and Izzo, 2017) as they are more resilient to adverse shocks (Raimo *et al.*, 2021). Firm size (*SIZE*) is measured by the natural log of total assets (La Rosa *et al.*, 2018; Xu *et al.*, 2021). There is some evidence that financial structure, operating profitability, market value, and risk-specific level, are all determinants of the risk profile (Raimo *et al.*, 2021). For example, financially successful companies generate more resources that enable them to better service their debts, which reduces the default risk profile. Therefore, we introduce the following control variables: Leverage (*LEV*), calculated as the ratio of total debt to total assets (La Rosa *et al.*, 2018; Raimo *et al.*, 2021); Financial performance (*Perf_Fin*), calculated as the ratio of earnings before extraordinary items to sales (Hoepner *et al.*, 2016; La Rosa *et al.*, 2018); Market-to-book ratio (*MTB*), measured as the market value divided by the book value of equity (Bhuiyan and Nguyen, 2020; Hamrouni *et al.*, 2020); liquidity (*Liquidity*), measured as the current asset deflated by current liabilities (Du *et al.*, 2017; La Rosa *et al.*, 2018); and specific risk (*P_Vol*), measured by the movement of the average annual price of the stock towards a high and low average price for a given year.

Finally, according to Xu *et al.* (2021) and Du *et al.* (2017), capital structure is used to control internal governance mechanisms. We consider the percentage of shares held by the government (*Gov_Own*) and that owned by larger shareholders (*Conc_Own*).

3.3. Empirical model

The relationship between corporate CSR performance and the interest rate of debt on MENA listed non-financial firms is tested using the system GMM technique estimator, which is adequate for the dynamic panel model (Blundell and Bond, 1998). To some degree, this method addresses the issue of possible endogeneity between CSR performance and the cost of debt; that is, multidirectional causality and omitted variables. In fact, engagement in CSR activities may not be independent of a firm's debt costs (Du *et al.*, 2017). Furthermore, evidence of the effect of CSR performance on the cost of financing loans could be due to omitted variables that are simultaneously correlated with them (Eliwa *et al.*, 2021). The analysis model is represented by the following regression equation:

$$\text{Cost_Debt}_{i,t} = \alpha_0 + \alpha_1 \text{CSR_Score}_{i,t} + \alpha_2 \text{CSR_Rep_Pract}_{i,t} + \alpha_3 \text{Size}_{i,t} + \alpha_4 \text{MTB}_{i,t} + \alpha_5 \text{LEV}_{i,t} + \alpha_6 \text{Perf_Fin}_{i,t} + \alpha_7 \text{Conc_Own}_{i,t} + \alpha_8 \text{Gov_Own}_{i,t} + \alpha_9 \text{Liquidity}_{i,t} + \alpha_{10} \text{P_Vol}_{i,t} + \epsilon_{i,t} \quad (1)$$

where:

$\text{Cost_Debt}_{i,t}$ = the interest rate on debt, the proxy for the cost of debt for firm i at year t

$\text{CSR_Score}_{i,t}$ = CSR performance score for firm i at year t ;

$\text{CSR_Rep_Pract}_{i,t}$ = CSR reporting practice for firm i at year t ;

$\text{Size}_{i,t}$ = Natural log of total assets for firm i at year t ;

$\text{MTB}_{i,t}$ = Price-to-book ratio for firm i at year t ;

$\text{LEV}_{i,t}$ = Leverage ratio for firm i at year t ;

$\text{Perf_Fin}_{i,t}$ = financial performance for firm i at year t ;

$\text{Conc_Own}_{i,t}$ = Percentage of ownership concentration for firm i at year t ;

$\text{Gov_Own}_{i,t}$ = Percentage of government ownership for firm i at year t ;

$\text{Liquidity}_{i,t}$ = Ratio of liquidity for firm i at year t ;

$\text{P_Vol}_{i,t}$ = Stock's average annual price movement to a high and low from a mean price for firm i at year t .

4. Empirical Results and discussion

4.1. Descriptive analysis

Table II displays the main descriptive statistics for all variables used in our study. We winsorized all variables at the first and 99th percentile levels to moderate the effect of outliers.

Table II: Descriptive statistics

Variables	Obs.	Mean	Std. Dev.	Median	Min.	Max.
<i>Cost_Debt</i>	1,947	0.074	0.101	0.049	0.002	0.837
<i>CSR_Score</i>	1,325	42.545	22.836	43.650	0.74	92.85
	800	1.052	0.807	1.000	0	2
<i>CSR_Rep_Pract</i>						
<i>Size</i>	2,111	14.711	1.373	14.797	11.268	18.065
<i>MTB</i>	1,418	2.113	2.239	1.465	-1.92	13.25
<i>LEV</i>	2,116	0.272	0.185	0.257	0	0.775
<i>Perf_Fin</i>	2,105	0.14	0.234	0.100	-0.763	1.062
<i>Conc_Own</i>	2,192	0.539	0.314	0.450	0.04	1
<i>Gov_Own</i>	2,192	0.102	0.209	0.000	0	0.8
<i>Liquidity</i>	1,948	1.762	1.484	1.410	0.35	10.43

<i>P_Vol</i>	1,923	0.281	0.073	0.279	0.119	0.465
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This table summarises descriptive statistics for all the variables used to estimate model (1)

As shown in Table II, the average (median) cost of debt is about 7.4% (4.9%), which is similar to the results of other studies in developed countries. For example, Eliwa *et al.* (2021) find that the average (median) is 6.4% (5.1%) for non-financial European firms from 2005 to 2016. We find that the mean (median) of the *CSR_Score* variable is about 42.54 (43.65). This finding indicates that the firms in our sample perform moderately in terms of CSR. However, a wide disparity is observed as the CSR performance score varies from 0.74 to 92.85 from a maximum score of 100. Additionally, Table II shows that the average size of the firms in our sample is 14.711, which is consistent with prior studies (e.g., Eliwa *et al.*, 2021; La Rosa *et al.*, 2018). Also, they have very similar characteristics on average market value (2.11) (e.g., Hamrouni *et al.*, 2020), and average liquidity (1.76) (e.g., Xu *et al.*, 2021). However, they have a higher average for leverage (27.2%) and financial performance (0.14) than the samples of other cost of debt studies (e.g., Bhuiyan and Nguyen, 2020; Du *et al.*, 2017; Magnanelli and Izzo, 2017). With regard to capital structure, our sample is characterised on average by concentrated capital (53.9%) and low state involvement (10.2%). Finally, the statistics in Table II reveal that the average annual movement of a share price up and down (*P_Vol*) relative to the average price is about 28.1%, indicating a relatively high risk.

4.2. Correlation analysis

The correlation matrix (Table III) shows that correlation between cost of financing loans and CSR performance is significantly negative, thus supporting our hypothesis. Cost of debt is also negatively correlated with *Size*, *Perf_Fin*, and *Gov_Own*, and positively correlated with *Liquidity* and *P_Vol*, which is consistent with previous literature (Eliwa *et al.*, 2021; Hamrouni *et al.*, 2020; Magnanelli and Izzo, 2017).

Furthermore, the most highly correlation is between *CSR_Score* and *CSR_Rep_Pract* (0.60), denoting that CSR performing companies tend to report verified CSR information, which is consistent with the voluntary disclosure theory (Verrecchia, 1983). Furthermore, this result is consistent with that of Jeriji and Louhichi (2021), who suggest that CSR performance and CSR reporting practices capture dissimilar attributes. Furthermore, the correlation coefficients between independent variables were sufficiently low to support multicollinearity, which is consolidated by a VIF test with a satisfactory level below three.

Table III. Pearson's correlation matrix and VIF test

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	VIF
(1) <i>Cost_Debt</i>	1.000											
(2) <i>CSR_Score</i>	-0.035*	1.000										1.65
(3) <i>CSR_Rep_Pract</i>	-0.059	0.602***	1.000									1.69
(4) <i>Size</i>	-0.243*	0.179***	0.178***	1.000								1.24
(5) <i>MTB</i>	0.115*	0.058	0.039	-0.133*	1.000							1.10
(6) <i>LEV</i>	-0.193*	0.217***	0.056	0.192*	-0.069***	1.000						1.22
(7) <i>Perf_Fin</i>	-0.042*	-0.264***	-0.138***	0.023	0.007	-0.316***	1.000					1.59
(8) <i>Conc_Own</i>	-0.009	0.085***	-0.009	-0.296*	-0.075***	0.105***	-0.014	1.000				1.12
(9) <i>Gov_Own</i>	-0.041*	-0.219***	-0.247***	0.325*	0.005	-0.020	0.192***	-0.298***	1.000			1.56
(10) <i>Liquidity</i>	0.089*	-0.212***	0.074**	-0.069*	0.044	-0.372***	0.417***	0.025	0.038*	1.000		1.56

				**								
(11) <i>P_Vol</i>	0.076*	-0.027	-0.046	-	-0.064**	0.197***	-	0.187***	-	0.081*	1.000	1.34
	**			0.175*			0.177***		0.279***	**		
				**								

This table presents correlation statistics between all variables of model 1 and variance inflation factor (VIF). ***, ** and *represent significance levels at 1, 5 and 10%, respectively.

4.3. Results and discussion

Table IV (Column 1) presents the estimation results for Equation (1). The findings show that the coefficient of CSR performance is negative and significant at the 1% level (-0.001). From an economic point of view, this means that the interest rate decreases by approximately 2.28 basis points (-0.001×22.836) when the CSR performance standard deviation increases by one unit. This result is consistent with our prediction and therefore supports our hypothesis (Hypothesis 1) that institutional creditors apply lower interest rates to borrowers with good CSR performance. Much of the existing literature echoes our findings in other jurisdictions, including Europe (Eliwa *et al.*, 2021), China (Du *et al.*, 2017), France (Hamrouni *et al.*, 2020), the USA (Bae *et al.*, 2019), and Australia (Bhuiyan and Nguyen, 2020).

Our results imply that lending institutions incorporate the ethical behaviour of borrowers when assessing their risk profile and creditworthiness during the default risk assessment process (Devalle, *et al.*, 2017). In other words, lenders acknowledge the potential of CSR to minimise corporate risk. This risk arises from the possibility of incurring costly penalties due to adverse legislative and regulatory actions and court rulings, which may shape investors' perceptions of future revenues and costs.

Finally, our results provide evidence that socially responsible lenders prefer to limit their investment in companies committed to CSR. Otherwise, their reputation will be threatened, as they will be labelled as supporters of sinful corporate borrowers who do not meet societal expectations, including CSR norms (Attig *et al.*, 2013; Caragnano *et al.*, 2020; Jung *et al.*, 2018).

Table IV. Results of GMM dynamic panel regression on cost of debt

Variables	(1) <i>Cost_D</i>	(2) <i>Cost_D</i>
<i>L.Cost_D</i>	0.7192*** (0.0281)	0.8265*** (0.0408)
<i>CSR_Score</i>	-0.0010*** (0.0001)	-0.0001*** (0.0000)
<i>CSR_Rep_Pract</i>	0.0148*** (0.0021)	-0.0127*** (0.0031)
<i>Size</i>	-0.0246*** (0.0035)	-0.0188*** (0.0011)
<i>MTB</i>	-0.0021*** (0.0004)	-0.0027*** (0.0002)
<i>LEV</i>	-0.0318** (0.0146)	-0.0485*** (0.0087)
<i>Perf_Fin</i>	-0.0137** (0.0066)	0.0122*** (0.0047)
<i>Conc_Own</i>	-0.0140 (0.0088)	-0.0541*** (0.0052)
<i>Gov_Own</i>	0.0620*** (0.0105)	0.0168** (0.0079)
<i>Liquidity</i>	-0.0063*** (0.0011)	-0.0018 (0.0012)
<i>P_Vol</i>	-0.2823*** (0.0278)	-0.1122*** (0.0140)
Constant	0.5230*** (0.0508)	0.3824*** (0.0164)
Obs.	362	202
Arellano-Bond p-value	0.1383	0.1472
Sargan/Hansen p-value	0.2795	0.8807

This table shows regression coefficients for the variables of equation (1). For all independent variables lags are used as GMM-style instruments. Regression of Column 1 integrate firms of all countries. Column 2 exclude Turkish firms. Robust standard errors are in parentheses. The p-value of the Arellano-Bond test is the test for second-order autocorrelation in first differences errors. The p-value of the Sargan/Hansen statistic is the over-identification test for the validity of the instruments. ***, ** and * represent significance levels at 1%, 5% and 10% respectively.

With respect to the control variables, the signs of the coefficients of *Size*, *Perfo_Fin*, *MTB*, *Liquidity*, and *LEV* are significantly negative and are in line with the existing literature (e.g., Du *et al.*, 2017; Hamrouni *et al.*, 2020; La Rosa *et al.*, 2018). However, a counterintuitive result shows that firms with high price volatility (*P_Vol*) have a higher cost of financing loans. This could be explained by the trust relationship that has developed over the years between financial institutions and borrower firms, which goes beyond the perceptions of the other financial market players of these firms.

Furthermore, the results show that the interest rate is higher for companies that invest in CSR disclosure. In other words, lenders charge higher interest rates to borrowers who disclose CSR information in order to communicate their CSR progress to the public.

Overall, our results imply that lending institutions value CSR performance, but not more. They assume that, in the area of CSR, any expenditure outside of actions that address CSR issues, such as those related to CSR reporting, could be seen as a costly diversion of rare resources that destroys the value of the firm (Jeriji *et al.* 2022). Overall, MENA companies are called upon to "be a good and silent citizen".

Credit institutions believe that strengthening corporate reputation does not necessarily require CSR reporting practices. This interpretation is confirmed when we introduce the moderator variable $CSR_Score \times CSR_Rep_Pract$ into our main regression model:

$$\begin{aligned} Cost_Debt_{i,t} = & \alpha_0 + \alpha_1 CSR_Score_{i,t} + \alpha_2 CSR_Rep_Pract_{i,t} + \alpha_3 (CSR_Score \times CSR_Rep_Pract)_{i,t} \\ & + \alpha_4 Size_{i,t} + \alpha_5 MTB_{i,t} + \alpha_6 LEV_{i,t} + \alpha_7 Perf_Fin_{i,t} + \alpha_8 Conc_Own_{i,t} + \alpha_9 Gov_Own_{i,t} + \alpha_{10} \\ & Liquidity_{i,t} + \alpha_{11} P_Vol_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (2)$$

Table V (Column 1) shows that the coefficient of the interaction variable ($CSR_Score \times CSR_Rep_Pract$) is significant and positive at the 1% level (0.0009), indicating that the negative influence of CSR performance on the cost of debt is less relevant for transparent companies that disclose more CSR information. Therefore, the costs of CSR reporting are higher than the associated benefits, and lenders do not recognize better credit terms for socially responsible companies that practice high-quality CSR reporting.

According to agency theory, managers may overinvest in CSR disclosure practices to enhance their reputation, leading to inefficient CSR activities that generate agency costs. Consequently, investors and lenders may adjust their expected returns upward to penalise managers' overinvestment behaviour (Barnea and Rubin, 2010).

Moreover, as mentioned above, due to their privileged relationship with borrowers, lending institutions have easy access to private information, including information about their CSR performance. Therefore, they no longer see the point of making this information public.

Our findings corroborate those of Ye and Zhang (2011), who found a U-shaped relationship between CSR and the cost of debt, showing that CSR engagement reduces the loan interest rate as when there is no CSR overinvestment. This relationship reverses when CSR investment exceeds a critical threshold.

Furthermore, when we re-estimate our main model without Turkish companies as a sensitivity test, the results (Table IV, Column 2) show that the *CSR_Rep_Pract* coefficient becomes significantly negative at the 1% level. This result indicates that CSR reporting plays a crucial role in lenders' default-risk assessment processes. Lenders reward companies that disclose more CSR information by reducing the loan interest rate. Thus, CSR disclosure practices represent a key tool for the inclusion of relevant nonfinancial indicators in the assessment of business risk and borrower creditworthiness. However, the insignificant coefficient of the moderator variable *CSR_Rep_Pract* (Table V, Column 2) does not allow us to confirm this conclusion.

Table V. Moderating effect of CSR reporting practice on the relationship between CSR performance and cost of debt

Variables	(1) <i>Cost_D</i>	(2) <i>Cost_D</i>
<i>L.Cost_D</i>	0.7083*** (0.0252)	0.8420*** (0.0431)
<i>CSR_Score</i>	-0.0016*** (0.0002)	-0.0002** (0.0001)
<i>CSR_Rep_Pract</i>	-0.0379*** (0.0123)	-0.0145*** (0.0025)
<i>CSR_Score</i> × <i>CSR_Rep_Pract</i>	0.0009*** (0.0002)	0.0001 (0.0001)
<i>Size</i>	-0.0269*** (0.0030)	-0.0187*** (0.0014)
<i>MTB</i>	-0.0020*** (0.0003)	-0.0027*** (0.0002)
<i>LEV</i>	-0.0395*** (0.0118)	-0.0529*** (0.0064)
<i>Perf_Fin</i>	-0.0158*** (0.0051)	0.0116** (0.0052)
<i>Conc_Own</i>	-0.0136 (0.0084)	-0.0571*** (0.0046)
<i>Gov_Own</i>	0.0606*** (0.0084)	0.0191** (0.0089)

<i>Liquidity</i>	-0.0041*** (0.0010)	-0.0024** (0.0011)
<i>P_Vol</i>	-0.2646*** (0.0318)	-0.1023*** (0.0163)
Constant	0.5773*** (0.0498)	0.3805*** (0.0205)
Obs.	362	202
Arellano-Bond p-value	0.1496	0.1183
Sargan/Hansen p-value	0.3169	0.8607

This table shows regression coefficients for the variables of equation (2). For all independent variables lags are used as GMM-style instruments. Regression of Column 1 integrate firms of all countries. Column 2 exclude Turkish firms. Robust standard errors are in parentheses. The p-value of the Arellano-Bond test is the test for second-order autocorrelation in first differences errors. The p-value of the Sargan/Hansen statistic is the over-identification test for the validity of the instruments. ***, ** and * represent significance levels at 1%, 5% and 10% respectively.

What distinguishes Turkey from the rest of the countries in our sample is, first, its membership in Europe, but also its ethnic and linguistic differences (non-Arab country). Its strong institutional framework, characterized by the importance of an effective and efficient legal and regulatory system, a democratic political system, and healthy capital market, suggests that investors view CSR disclosure as a costly practice that boils down to greenwashing (Marquis *et al.*, 2016).

5. Conclusion

This paper investigates the relationship between the CSR performance and the cost of debt. Specifically, we examine whether credit institutions reward listed non-financial firms in 10 MENA countries—a largely unexplored context—for CSR performance by reducing their cost of debt from 2011 to 2020. This study provides recent evidence regarding this topic. Furthermore, given that the accounting literature on CSR distinguishes between CSR performance and CSR reporting practices (Jeriji and Louhichi, 2021), we investigate whether lending institutions consider CSR disclosure as part of their lending decisions.

As expected, the results indicate that companies benefit from a high level of CSR performance, resulting in a lower cost of debt. However, contrary to expectations, CSR reporting is positively associated with the cost of debt (i.e., it increases the cost of debt), which is surprising. These results highlight the important role of market forces, namely credit institutions, in improving the relevance of CSR performance and the sustainability impact. However, they do not appreciate corporate borrowers going beyond this, such as investing in CSR reporting. In the latter case, they go as far as sanctioning these additional practices.

These findings have important implications for companies, policy makers and investors. Corporate managers should be more conscious of social performance's influence on debt cost since financial debt is one of the most predominant forms of external financing in the MENA region. As CSR helps companies build a strong reputation, managers should devote more resources to improving their CSR performance. In particular, high-risk companies can use CSR to implement a coherent strategic plan that enhances their reputation, thus improving their risk profile.

Regarding CSR reporting practices, if lenders punish firms for over-reporting stakeholder concerns. Goss and Roberts (2011) suggest that this situation requires government intervention to limit the adverse impacts. Indeed, firms that perform well in CSR and disclose CSR information but are charged higher interest rates than companies that do not disclose CSR information might change their CSR reporting strategy and choose to be opaque, which could undermine transparency, a key driver for the development of financial markets. Thus, our results are of primary interest to regulators and policy makers who consider making CSR reporting practices mandatory in their respective countries.

For investors, the results suggest that lenders play an important role in motivating companies' CSR practices. They should consider CSR performance when formulating investment decisions and managing portfolios. In particular, they are discouraged from investing in sinful companies.

In conclusion, we propose some limitations of our study that should be considered in future studies. Firstly, it uses secondary data obtained from the Refinitiv Eikon database. The use of primary data would robustly complement our conclusions; that is, questioning CEOs of institutional creditors in MENA countries on the credit granting process. Secondly, given that access to private information of companies could vary across lender categories, future research should examine whether there is a difference across categories in the impact of CSR on the cost of debt. Finally, our analysis overlooks the specific characteristics of debt contracts, particularly the contractual constraints and obligations (Jung *et al.*, 2018).

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