Does Corporate Social Responsibility Affect Liquidity Risk? Evidence from GCC and non-GCC countries

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ABSTRACT

This study investigates the CSR-liquidity risk nexus in the banking sector of the MENA region. Growing concerns about financial stability and sustainable banking establishments prompt this study to examine whether CSR activities may reduce liquidity risk in an economic environment of volatility and regulatory disparity. A panel dataset of 40 commercial banks operating in ten MENA countries from 2010 to 2022 was used in the analysis, with estimation carried out with the System Generalized Method of Moment estimator to take care of issues of endogeneity and dynamics. To better reflect regional specificities, the sample gets further disaggregated into the GCC region and non-GCC region. The results of the estimations show that CSR is negatively related to liquidity risk in the whole sample. This reveals that socially responsible banks suffer from lesser liquidity constraints. However, the insignificance of this relationship for banks outside the GCC countries could be due to the relatively weaker institutional structures and low awareness of CSR among stakeholders, whereas for banks inside the GCC, CSR does significantly affect liquidity risk management because of better institutional provisions and expectation standards. These results are helpful for bank mangers and policymakers by pointing out the importance of including CSR as part of risk management. The study contributes to literature with new knowledge about the relationship between CSR and liquidity risk in emerging economies, particularly in the context of the MENA banking systems.

Keywords: Liquidity Risk, Corporate Social Responsibility, MENA Region, System Generalized Method of Moments
JEL Classifications: G30, L25, M14

1. INTRODUCTION

In the last several years, CSR has developed from a peripheral topic to a strategic imperative in the global financial industry. CSR involves the integration of environmental, social, and governance (ESG) considerations into primary business activities and stakeholder relationships, and it typically extends beyond compliance with the law (Carroll and Shabana, 2010). For banks, CSR is no longer just a reputation booster; it is also being viewed as a way of building financial resilience and risk management (Scholtens, 2009; Goss and Roberts, 2011).

Liquidity risks, the risk that a bank cannot meet its short-term financial obligations, is a significant threat to both individual institutions and the financial system (Diamond and Rajan, 2001; Zhao et al., 2021). Banks in the Middle East and North Africa (MENA) region are subject to high risk considering oil-dependent economies, political instability, shallow financial markets, and fragmented regulation (Cherif and Dreger, 2016; Trad et al., 2017; Alnabulsi et al., 2022). These structural weaknesses evoke the threat of liquidity shocks and render the adoption of prudent risk management practices even more imperative.

The potential for CSR to reduce liquidity risk is an intriguing research question with important policy implications. From a theoretical perspective, stakeholder theory posits that CSR can be used to build trust with depositors, investors, and regulators thereby reducing the possibility of liquidity crises (Freeman,

1984). Also, CSR is associated with better governance practices and moral management that can render a bank more creditworthy and allow it to obtain stable sources of funding (Chih et al., 2010). The resource-based view (RBV) also supports CSR as a strategic asset that enhances reputational capital, operational efficiency, and customer loyalty, which are all determinants of financial stability (Barney, 1991; Surroca et al., 2010). Despite strong theoretical foundations, the empirical literature concerning CSR and liquidity risk is scarce and fragmented.

Existing research has mostly examined the impact of CSR on financial performance, credit risk, or market risk (Lins et al., 2017; Jo and Na, 2012). The direct relationship between CSR and liquidity risk and more specifically, in banks has attracted little attention. Moreover, the limited research that does address CSR and bank risk is largely concentrated on advanced economies, with little evidence on how these dynamics play out in developing economies such as MENA. The MENA banking sector is peculiar in its CSR orientation, which is likely to be guided by religious teachings, societal expectations, and government-driven CSR agendas. As it is, it remains uncertain whether Western evidence is immediately relevant to MENA economies. The institutional and regulatory framework in the region remains under development, thus a need to establish whether CSR yields the same risk-reduction benefits under different socio-political settings (Nkundabanyanga et al., 2014).

This study seeks to investigate empirically the effect of CSR on liquidity risk in MENA commercial banks using the panel data of the past decade. By targeting this comparatively untapped link in a financially fragile region with evolving CSR norms, the study addresses a fundamental literature gap and adds to the nascent strand of research on sustainable banking in emerging markets. To achieve this goal, we used a sample of 40 MENA banks during the period 2010-2022 and perform the SGMM as an empirical approach.

Overall, the empirical findings support a negative association between CSR and liquidity risk for the whole sample. However, the disaggregate analysis shows that the results differ across regions.

This study makes several major contributions to the literature. First, a few empirical studies directly address the relationship between CSR and liquidity risk in the banking sector, an area which is less studied as compared to other financial risks. Second, this study treats the relationship in the MENA context, characterized by institutional diversity and regulatory heterogeneity, and emerging financial systems, wherein evidence is very scanty. Third, the study provides nuances by means of a comparative study between GCC and non-GCC countries to determine how regional institutional strength moderates the CSR–liquidity risk link. This paper thus lays out the differential effects of CSR in these sub-regions into academia and policymaking on sustainable finance and risk management. These contributions go toward deepening CSR's understanding as a non-financial risk mitigant in emerging markets.

The remainder of this paper is organized as follows. Section 2 reviews theoretical and empirical literature. Section 3 explains data sources, variable definitions, and methods. Section 4 presents the empirical results. Section 5 discusses the results considering theory and prior literature. Section 6 concludes the paper and offers recommendations for policy, practice, and further research.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Corporate Social Responsibility in Banking

Corporate Social Responsibility (CSR) has gained traction in the banking industry during the past two decades, evolving from voluntary philanthropic acts to a formal component of corporate strategy and risk management. CSR banking refers to a system of policies and practices beyond regulatory requirements to consider the social, environmental, and ethical implications of financial choices (Fernando and Lawrence, 2014). As opposed to CSR in manufacturing sectors, which is likely to emphasize labor rights and environmental accountability, CSR in banking is informed by transparency, ethical lending, community investment, and the promotion of ethical financial products (Simpson and Kohers, 2002; Prior et al., 2008).

The banking industry's systemic role in capital allocation and the guiding of economic activity makes it crucial for sustainable development. Cowton (2002) says that banks exercise significant indirect influence through their customers, thus their CSR responsibilities are far-reaching and effective. Responsible banking practices such as lending to clean energy, financing small enterprises, and not financing activities that damage the environment, or society can make financial stability more robust without diverging from business objectives and coordinating with common good aspirations (Weber, 2014).

Banking CSR has been linked with improved stakeholder relations, improved customer loyalty, and reduced operational and reputational risks (Aguilera et al., 2007; Cheng et al., 2014). These benefits are particularly pertinent in a post-crisis regulatory environment, where legitimacy and trust are essential to enduring success. For example, banks with good CSR practices can be seen in a more favorable light by regulators, depositors, and investors, making stable funding more readily available and enhancing resilience in the face of market pressure (Reinhardt et al., 2008).

Banking industry CSR initiatives have witnessed increased global convergence with regional distinctiveness in purpose and implementation. Chaudhury et al., (2012), examined CSR activities amongst banks in India and found that there is an ardent focus on community welfare, education, and environmental protection, often prompted by regulatory coaxing and public sector leadership. Their discovery indicated that although Indian banks have vibrant CSR engagement, the practices are informal and compliance driven as opposed to being strategic highlighting the influence of institutional maturity on CSR effectiveness. Current studies continue to validate the various values of CSR in banking, and its effects on not only the attitudes of stakeholders but also institutional resilience. Ruiz and Garcia

(2021), with the perspective of the European retail banking sector, ascertain that there exists a very high positive relationship between CSR conduct and corporate reputation. They prove that banks conducting genuine CSR construct stronger stakeholder trust, which reinforces reputational capital a non-material asset particularly vulnerable under liquidity pressures or market instability. Meanwhile, Mahdi et al. (2024) examine the dynamic interaction between CSR, FinTech, and bank stability through a quantile regression approach. Their MENA bank evidence shows how FinTech uptake supports the stabilizing effect of CSR on different levels of financial stability, suggesting that the integration of technology can support the governance and transparency infrastructures associated with CSR. Together, these papers highlight the growing acknowledgment that CSR supported by innovation and stakeholder engagement is a primary driver for reputation resilience as well as financial well-being in today's evolving banking landscape.

Additionally, CSR is usually linked to ethical conduct and improved governance, which are vital for managing asymmetric information and moral hazard in capital markets (Aras and Crowther, 2009). CSR initiatives can reinforce the risk culture of a bank internally, allow for the prevention of malpractice, and give the impression of effective management to outside stakeholders—factors indirectly supporting improved liquidity, creditworthiness, and performance under stress (Servaes and Tamayo, 2013). Where these benefits are present, the effectiveness and practice of CSR vary significantly across banks and regions. In emerging economies, CSR practice is conditioned by institutional weaknesses, weak enforcement of sustainability codes, and diverse religious and cultural values (Jamali and Mirshak, 2007). This implies that region-based research is needed to discover how CSR functions in different regulatory, economic, and cultural contexts.

2.2. Corporate Social Responsibility and Liquidity Risk

Although CSR is highly researched in terms of profitability, market value, and credit risk, its inherent link with liquidity risk is less researched. Liquidity risk is the impairment of a bank's ability to fulfill its short-term commitment scan arises suddenly in the context of financial market stress or loss of reputation. Several theoretical models suggest that CSR can serve to reduce such risk by enhancing trust, reputation, and stakeholder engagement. Stakeholder theory (Freeman, 1984) contends that CSR fosters close relationships with key stakeholders like depositors, investors, and regulators. Trust from these stakeholders in banking finds expression in more confident depositors, more secure sources of finance, and fewer panic withdrawals in times of trouble (Chih et al., 2010). For instance, customers will be more willing to hold deposits in a socially responsible bank in times of trouble because they perceive it as more well-managed and transparent.

The resource-based view (RBV) also supports the CSR rationale that CSR is a strategic asset that builds reputational capital and operational capabilities (Barney, 1991). Strong reputational capital can reduce information asymmetry and the cost of capital while giving access to more long-term financing. These reputation benefits are especially crucial during liquidity shocks, where immediate access to capital markets or depositor stability is an issue (Surroca et al., 2010). Empirical evidence, even if the research is constrained, provides growing testimony of such association. Chih et al. (2010) created the fact that socially responsible banks act better when the financial system experiences crises and hold steadier trends in deposit patterns. Cornett et al. (2016) illustrated that U.S. banks that register higher CSR ratings experience reduced liquidity risk and benefit from more stable funding configurations. Similarly, Cheng et al (2014) stated that companies with strong CSR performance can secure funding more effectively during crises, which suggests a liquidity premium linked to non-financial disclosure and trust mechanisms. Most recently, Bouslah et al. (2018) revealed that bank CSR initiatives have a negative relationship with tail risk and liquidity shocks, particularly during periods of stressed markets. Their findings support the proposition that CSR fosters financial stability in the form of enhanced stakeholder confidence and reduced prospects of abrupt funding losses. In addition, Li et al. (2023) provide evidence that greener and socially responsible banks achieve more stable and long-term funding, which is less sensitive to market shocks. CSR can enhance internal risk management capabilities as well, better-equipping anticipation and management of liquidity risks.

Recent empirical research continues to confirm the role of Corporate Social Responsibility (CSR) in mitigating the risk of liquidity and financial stability of the banking sector in different world contexts. Neitzert and Petras (2022) found that CSR, particularly environmental initiatives, has a crucial contribution toward reducing the overall bank risk, underlining its importance in comprehensive risk management systems. In the US, Zhao et al. (2021) observed that there exists a strong negative correlation between CSR involvement and firm liquidity risk, indicating that socially responsible behavior serves to protect firms from unexpected funding shocks. Similarly, Jouini et al. (2025) discovered that CSR improves the credit risk profiles of banks but perhaps at the expense of efficiency trade-offs highlighting the intricate relationship between CSR and operating performance. In the Asia-Pacific area, Gupta and Kashiramka (2024) illustrated how disclosures on ESG mediate bank stability and liquidity generation, by the necessity of transparency and sustainability reporting to facilitate funding confidence. To support these findings, Liu and Xie (2024) provided evidence that good ESG performance reduces liquidity risk at commercial banks, serving to affirm the role of ESG practices in enhancing liquidity management. Collectively, these studies consolidate the position that CSR and ESG practices increasingly play a role in fostering bank resilience, depositor confidence, and liquidity management for both developed and emerging markets.

Aguilera et al. (2007) argue that firms with a robust CSR culture will have greater ethical sensitivity and self-accountability, both key attributes of engaged risk governance. Yet scholars have also sounded cautious about the uniform assumption of the positive CSR impact. CSR investments in some cases will divert money from liquidity buffers or will be used strategically to mask inefficiencies (Prior et al., 2008). CSR can minimize liquidity risk only concerning context and with dependence on the quality of governance, financial regulation, and institutional

development. In developing nations such as those in the MENA region, the CSR–liquidity nexus is especially under-explored. Regional banks are exposed to structural vulnerabilities, including shallow capital markets, political instability, and regime fragmentation (Cherif and Dreger, 2016; Alqahtani et al., 2017). These vulnerabilities increase exposure to liquidity shocks, making trust-building initiatives such as CSR even more crucial to financial resilience. But whether the CSR–liquidity relationship documented in developed markets is true for MENA is an empirical question.

This study aims to fill this gap by empirically analyzing the impact of CSR on liquidity risk in 40 MENA banks. To our knowledge, this is one of the first studies to test this relationship in the region. The results are hoped to add to both the CSR–risk literature and the wider debate on sustainable banking in emerging markets.

Based on the literature and theoretical justification, the following hypothesis is proposed:

H₁: Corporate Social Responsibility is negatively correlated with liquidity risk in MENA banks.

H₂: The CSR mitigating effect on liquidity risk is stronger in banks that are situated in institutionally more stable MENA countries.

3. EMPIRICAL DESIGN

3.1. The Sample
To explore the relationship between CSR and liquidity risk, we used an initial sample of 76 banks located in 10 MENA countries over the period 2010-2022. However, due to the non-availability and the discontinuity of bank information, several banks have been excluded. Hence, the final sample contains only 40 conventional banks. To get a better understanding and reliable results on the impact of CSR on liquidity risk we split the MENA region into two sub-regions. The first bloc contains the GCC countries with a sample of 22 banks and the second involves the GCC countries with a sample of 18 banks (Table 1).

3.2. Variable Selection and Theoretical Justification
3.2.1. Dependent variable: Liquidity risk
The current study uses the loan-to-deposit (LTD) ratio to measure the liquidity risk as a dependent variable (Khemiri, 2025). This ratio is a key banking metric that indicates the proportion of customer deposits a bank lends out, reflecting its liquidity

Table 1: Distribution of the sample

GCC		NON GCC	
Countries	**Number of banks**	**Countries**	**Number of banks**
Kuwait	4	Egypt	1
Oman	2	Morocco	2
Qatar	4	Tunisia	10
Saudi Arabia	6	Jordan	4
United Arab Emirates	6	Lebanon	1
Number of banks	22	Number of banks	18
Whole sample	40 banks		

management and credit risk exposure. It helps assess a bank's ability to cover withdrawals while maintaining profitable lending activities.

3.2.2. Main explanatory variable: Corporate social responsibility
According to Boussaada et al. (2023), this study applies a composite Environmental, Social, and Governance (ESG) index. This is an index that comes in the form of a pillar score that provides a general and balanced indication of the performance of a firm based on environmental, social, and governance dimensions.

3.2.3. Control variables
To take into consideration a variety of factors that may affect liquidity risk, this study included several control variables. The first category of variables pertains to bank-specific factors, including bank size (BS) (Anginer et al., 2018), non-performing loans (NPLs) measured by bank non-performing loans to gross loans (%), and capital adequacy ratio (CAR) (Molyneux and Thornton, 1992). The second category of variables is relative to industry-specific, such as Bank concentration (CONC) (Vardar, 2015). The third category encompasses macroeconomic conditions, represented by the GDP growth rate (GDPG), inflation rate (INF), and unemployment rate (UNEM) (Hakimi et al., 2023; Abreu and Mendes, 2001).

The bank-specific data, such as LTD, and ESG score (composite environmental, social, and governance score), and control variables, were obtained from the Refinitiv Eikon database. Country-level data, reflecting industry-specific and macroeconomic conditions, were gathered from two primary sources: the Global Financial Indicators database and the World Bank Indicators database.

3.3. Empirical Approach and Model Specification
In this study, we used the SGMM model, which is more appropriate for exploring relationships between CSR and bank risks (Lahouel et al., 2021). According to Hakimi and Khemiri (2024) and Boussaada et al. (2023), this approach is appropriate for resolving endogeneity and heterogeneity problems. This econometric technique is well-suited for dynamic panel models, as it accounts for the lagged dependent variable, thereby capturing the persistence of banks' risk-taking behavior over time.

To investigate the relationship between CSR and liquidity risk, we estimated the econometric following model:

$$LTD_{i,t} = \beta_0 + \beta_1 LTD_{i,t-1} + \beta_2 ESG_{i,t} + \beta_3 BS_{i,t} + \beta_4 CAR_{i,t} + \beta_5 NPLs_{i,t} + \beta_6 CONC_{i,t} + \beta_7 GDPG_{i,t} + \beta_8 INF_{i,t} + \beta_9 UNEM_{i,t} + \varepsilon_{i,t} \quad (1)$$

Table 2 provides definitions for all variables.

4. EMPIRICAL RESULTS

4.1. Summary Statistics and Correlation Matrix
Table 3 presents descriptive statistics that inform about CSR, bank specifics, industry specifics, and macroeconomic conditions in the MENA region. According to the ratio of liquid assets to deposits, the mean level of liquidity risk reaches about 84.858% from a

minimum value of 42.21% and a maximum value of 162.312%. The mean value of ESG scores (ESG) is 40.292, ranging from 80.794 as the maximum value to 12.843 as the minimum. The average bank size is 23.553, ranging from 20.942 to 26.512.The CAR stands for Capital Adequacy Ratio, which averages 15.839%, ranging from 1.25% to 40.350%. The average value of credit risk measured by (NPLs) is equal to 8.3% with a maximum value of 42.6% and a minimum value of 0.1%. As for the industry specifics

Bank concentration (CONC), results recorded in Table 3 indicate that the average value of Bank concentration (CONC) is equal to 80.886 with a maximum value of 100.000 and a minimum value of 56.035.

Concerning the macroeconomic conditions variables, Table 3 shows that the average value of the growth rate of GDP (GDPG) is equal to 2.54% with a maximum value of 19.59% and a minimum value of −21.4. The average value of the inflation rate (INF) is 3.816 with minimum and maximum values of −3.74% and 171.20% respectively. Finally, the unemployment rate (UNEM) has an average of 8.09%, with a maximum of 19.83% and a minimum of 0.1%.

According to Table 4 the absence of multicollinearity is ensured when the correlation coefficients between independent variables are below 70% (J.B. Kervin, 1992). The results in Table 4 confirm that our model does not suffer from multicollinearity problem.

4.2. Discussion of the Empirical Findings
The first step of the empirical strategy followed in this paper consists of testing the impact of CSR measured by the ESG score on liquidity risk in the MENA region measured by the LTD ratio. According to Table 5, the diagnostic tests, including the Sargan test for over-identifying restrictions and the Arellano-Bond test for serial correlation, support the validity of the model. In particular, the P-values of both the Sargan test and the AR (2) test are >5%, indicating that the null hypothesis of valid over-identifying restrictions and no serial correlation cannot be rejected.

The empirical findings support a negative relationship between CSR and liquidity for the whole sample. CSR can reduce liquidity risk in banks through enhanced reputation and stakeholder confidence, which becomes greater depositor confidence and less volatile sources of funding. CSR-oriented banks have easier access to capital markets and attract less volatile, long-term clients since they are viewed as lower-risk and more ethically high-standard. In addition, CSR promotes enhanced internal risk management procedures and planning in the longer term to enable banks to

Table 2: Definition of variables

Variables	Definitions	Measures
Dependent variables (LTD)		
LTD	Liquidity risk	Loans to deposits ratio (%)
Corporate social responsibility		
CSR	Corporate social responsibility	Composite environmental, social and governance index (ESG).
Bank specifics		
BS	Bank size	Natural logarithm of total assets
CAR	Capital adequacy ratio	Bank capital to total assets (%)
NPLs	Non-performing loans	Bank nonperforming loans to gross loans (%)
Industry specifics		
CONC	Bank Concentration	Bank concentration (%)
Macroeconomic conditions		
GDPG	The growth rate of GDP	Annual growth rate of GDP (%)
INF	The inflation rate	Consumer price index (%)
UNEM	Unemployment rate	The unemployment rate (%)

Table 3: Descriptive statistics

Variable	Mean	Standard Deviation	Min	Max
LTD	84.858	25.228	40.218	162.312
ESG	40.292	12.561	12.843	80.794
BS	23.553	1.339	20.942	26.512
CAR	15.839	10.987	1.256	40.350
NPLs	8.312	0.073	0.107	42.60
CONC	80.886	13.979	56.035	100
GDPG	2.547	4.035	−21.4	19.592
INF	3.816	10.791	−3.749	171.205
UNEM	8.095	6.394	0.1	19.837

Table 4: Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) LTD	1.000								
(2) ESG	−0.037	1.000							
	(0.407)								
(3) BS	0.211*	0.238*	1.000						
	(0.000)	(0.000)							
(4) CAR	0.052	0.001	0.248*	1.000					
	(0.241)	(0.975)	(0.000)						
(5) NPLs	0.038	0.034	−0.436*	−0.185*	1.000				
	(0.390)	(0.457)	(0.000)	(0.000)					
(6) CONC	−0.004	−0.151*	0.400*	0.234*	−0.412*	1.000			
	(0.919)	(0.001)	(0.000)	(0.000)	(0.000)				
(7) GDPG	0.023	0.012	0.091	0.055	−0.211*	0.136*	1.000		
	(0.604)	(0.782)	(0.057)	(0.210)	(0.000)	(0.002)			
(8) INF	−0.062	−0.017	−0.054	−0.069	0.194*	−0.149*	−0.177*	1.000	
	(0.156)	(0.708)	(0.258)	(0.117)	(0.000)	(0.001)	(0.000)		
(9) UNEM	−0.132*	0.050	−0.620*	−0.257*	0.439*	−0.720*	−0.166*	0.051	1.000
	(0.003)	(0.266)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.245)	

***P<0.01, **P<0.05, *P<0.1

Table 5: Regression results: MENA countries

ltd	Coefficient	Standard error	t-value	P-value
Ltd (−1)	0.871	0.003	306.43	0.000***
ESG	−0.005	0.001	−9.73	0.000***
BS	0.433	0.015	29.82	0.000***
CAR	−0.114	0.076	−1.51	0.131
NPLs	0.284	0.105	2.69	0.007***
CONC	−0.001	0.000	−2.81	0.005***
GDPG	−0.011	0.001	−16.40	0.000***
INF	−0.003	0.001	−4.06	0.000***
UNEM	−0.017	0.003	−6.06	0.000***
Constant	−9.538	0.351	−27.21	0.000***
obs			406	
AR (1)			−1.072	
Prob			0.284	
AR (2)			−1.313	
Prob			0.189	
Sargan test			37.60914	
Prob			0.9999	

***P<0.01, **P<0.05, *P<0.1

maintain adequate liquidity buffers. These factors combined reduce the likelihood of surprise liquidity shortfalls, therefore lowering liquidity risk. This finding is in line with different studies (Bouslah et al., 2018 Li et al, 2022). Therefore, we accept H_1.

Concerning the effect of bank specifics on liquidity risk, findings in Table 5 indicate that bank size is positively associated with liquidity risk. Large banks have more liquidity risk due to their more complex operations, greater dependence on wholesale funding, and greater exposure to illiquid assets. Unlike their smaller peers with greater use of wholesale deposits, large banks often practice short-term market-based funding regularly, which is very volatile during times of financial stress. Their extensive geographical reach can also lead to misalignments between where liquidity is needed and where liquidity is found. Moreover, the perception that large banks are "*too big to fail*" may lead them to maintain lower liquidity buffers and therefore be more exposed to unexpected funding shocks. This finding is in line with the works of Agustuty et al. (2020).

The empirical results also show a positive and substantial relationship between non-performing loans ratio and the dependent variable LTD, indicating that NPLs increase liquidity risk by weakening a bank's ability to generate cash flow and destabilizing its funding. If a high proportion of a bank's loan book is non-performing, the expected receipt of repayments falls, which reduces the bank's internal liquidity generation. Further, high NPLs are reflective of poor asset quality, which will lower investor and depositor confidence, even leading to deposit withdrawal or being unable to secure external funding. High-NPL banks can also be forced to spend more money on loan loss provisions or to sell assets at a loss to absorb liquidity, thereby further weakening their liquidity position. This result corroborates the works of Permata et al. (2024).

Concerning the influence of industry specifics, our results indicate that bank concentration has a negative and significant effect on liquidity risk measured by the LTD ratio. The concentration of banks can reduce liquidity risk by supporting a more stable and

less volatile banking system with fewer large, well-capitalized banks. In concentrated banking systems, large banks will have economies of scale, more market power, and easier access to stable sources of funding, such as core deposits. Their power and size can also give them greater access to interbank markets and central bank support, which enhances liquidity resilience. Also, concentrated systems are likely to involve closer regulatory control, reducing the likelihood of excessive risk-taking. Therefore, these circumstances can assist in minimizing overall liquidity risk within the banking system. This result is in line with the work of Vardar (2015).

The liquidity risk of MENA banks is significantly influenced by macroeconomic conditions such as GDP growth, inflation rate, and unemployment rate. The economic growth negatively and significantly affects the level of liquidity risk. Economic growth can affect the level of liquidity risk negatively and profoundly, in the sense that the better the economic growth, the less the liquidity risk. With high economic growth, companies and individuals will be more inclined to repay loans on time, which raises banks' cash inflows and enhances their liquidity position. Improved economic conditions also raise deposit levels and reduce the risk of abrupt withdrawals, as confidence in the banking system increases. Further, higher growth supports asset values and reduces credit and market uncertainties, making it easier for banks to raise funding from capital markets. Thus, growth in the economy over some time improves the environment for liquidity management and thereby largely thereby reduces liquidity risk. This finding is in line with the works of Mattana and Panetti (2014).

Findings also indicate that the inflation rate has a negative and significant impact on liquidity risk. The inflation rate may hurt liquidity risk, in such a way that higher inflation will reduce liquidity risk in certain cases. In an inflationary world, nominal interest rates and asset returns typically increase, which can lead to increased deposit flows as households scramble to maximize returns, augmenting the banks' liquidity positions. Additionally, inflation has the effect of reducing outstanding debt in real terms, facilitating loan repayment for the borrowers, thus enhancing banks' cash inflows. All these impacts can enhance banks' liquidity in modest inflationary situations. However, it should be noted that this relationship might not hold in cases of high or unstable inflation, where uncertainty and funds costs may increase liquidity risk. Therefore, the negative impact of inflation on liquidity risk is likely to be observed in stable, moderate inflation periods. This result corroborates the works of Molyneux and Thornton (1992).

Our analysis indicates that unemployment exerts a negative relationship on liquidity risk. With lower rates of unemployment, people will have a more stable income, increase their repayment capability and enabling them to keep more deposits in banks. This enhances firm cash inflows stronger and more regular for banks, hence improving their position in liquidity. Besides, greater employment boosts consumer and business confidence, inducing economic activity and the volume of transactions and deposits. With more stable funding and reduced credit stress, banks have

Table 6: Regression results: GCC countries and non-GCC countries

ltd	GCC countries		Non-GCC countries	
	Coefficient	t-value	Coefficient	t-value
Ltd (−1)	0.887	143.20***	0.597	2.53**
ESG	−0.009	−7.37***	0.000	−0.28
BS	0.512	12.75***	−0.052	−1.07
CAR	−0.999	−1.36	0.032	0.49
NPLs	1.753	4.02***	−0.026	−0.10
CONC	−0.003	−2.05**	−0.002	−1.62
GDPG	0.002	1.10	−0.002	−1.69*
INF	−0.06	−23.26***	0.000	1.09
UNEM	0.055	4.30***	0.002	0.48
Constant	−11.636	−10.22***	1.644	1.30
AR (1)	−1.103		−1.992	
Prob	0.270		0.046	
AR (2)	0926		−0.609	
Prob	0.354		0.543	
Sargan Test	20.231		5.470	
Prob	1.000		1.000	
Obs	226		180	

***$P<0.01$, **$P<0.05$, *$P<0.1$

less necessity to cover unexpected withdrawals or losses on loans, hence decreasing their overall liquidity risk. This finding is in line with the works of Madhi (2017).

4.3. Sensitivity Analysis: GCC versus NGCC Countries

Before delving into the analysis, it is worth mentioning that there exist macroeconomic, financial and regulatory heterogeneities between MENA countries despite belonging to the same bloc. Therefore, to get a better understanding and reliable results on the impact of CSR on bank Liquidity risk we split the MENA region into two sub-regions. The first bloc contains the GCC countries and the second involves the non-GCC countries. We follow the same empirical strategy for the disaggregate analysis based on the GCC and Non-GCC countries. The output of the model has provided two different. Indeed, unlike the results of the whole sample that confirm the negative effect of CSR on liquidity Risk, the results of the disaggregate analysis indicate that the effect of CSR differs across the two regions of GCC and non-GCC countries. Findings displayed in Table 6 show that the results differ across regions. We found that corporate social responsibility reduces liquidity risk for banks in the GCC, while there is no significant effect for banks located in the non-GCC.

Findings displayed in Table 6 indicate that corporate Social Responsibility reduces liquidity risk in GCC countries due to stronger institutional frameworks, increased stakeholder trust, alignment with national visions and Islamic finance principles, and greater public value in ethical banking. They maximize depositor trust and funding stability. Compared to non-GCC countries, weak institutions, lower public awareness, and political or economic instability limit the role of CSR, making it less effective in influencing liquidity risk. Therefore, while CSR reinforces financial stability in the GCC, its effect is moderated in the broader MENA region. Therefore, we accept H$_2$.

5. CONCLUDING REMARKS AND POLICY RECOMMENDATIONS

This paper aims to investigate the interaction between corporate social responsibility and liquidity risk in the MENA region. It uses a sample of 40 MENA banks during the period 2010-2022 and performs the SGMM technique. Due to several economic, financial, and regulatory differences, we splited the MENA region into two sub-regions using the classification of the International Monetary Fund. The first group consists of GCC countries, while the second group includes the remaining countries.

Overall, the empirical findings support a negative relationship between corporate social responsibility and liquidity for the whole sample. However, the disaggregate analysis shows that, in GCC countries, corporate social responsibility hurts liquidity risk, conversely, in non-GCC countries, there is no significant effect of CSR on liquidity risk.

The findings of this study carry significant policy implications for both policymakers and bankers for GCC and non-GCC MENA countries. First, in GCC countries, where CSR reduces liquidity risk, policymakers must further integrate CSR into banking law, promote mandatory CSR disclosure, and align CSR programs with national development plans to enhance financial stability. Regulators would also be able to promote CSR-compliant banks through preferential treatment due to their role in reducing liquidity vulnerability. Second, conversely, the non-GCC countries need to strengthen institutional frameworks, impose CSR standards, and raise public and stakeholder awareness to make CSR an effective tool for risk avoidance. A common CSR or ESG reporting framework can help comparability and transparency throughout the MENA region, as regional cooperation can promote best practice sharing.

Although these results are enlightening for policymakers, some limitations need to be highlighted. Firstly, the analysis can be restricted by the data availability and quality of CSR disclosures, which may vary significantly between banks and nations, particularly in the non-GCC region. Secondly, the research is restricted to a certain regional context, the MENA region, which might limit the generalizability of the results to other emerging or developed economies. Lastly, the research may not reflect all aspects of CSR or control for informal or unreported social responsibility activities that may affect liquidity dynamics.

To this end, future research on the subject should seek to address these limitations by employing more precise and standardized CSR measures, possibly drawing on third-party ESG ratings or firm-level CSR indices to improve data comparability and reliability. Extending the study to include other regions or income groups could strengthen our generalization of the CSR–liquidity risk nexus influenced by institutional and economic contexts. Further studies can also identify which aspects of CSR affect different types of financial risks and offer more specific policy recommendations accordingly.

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