Liquidity Risk Management and financial performance: A comparative study between Conventional and Islamic Banks of Saudi Arabia

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Abstract

This study aims to identify the key determinants influencing liquidity risk in both commercial and Islamic banks operating in Saudi Arabia. It further evaluates the comparative performance of these two banking models within the Saudi financial sector. The sample consists of eight banks—four commercial and four Islamic—analyzed over the period 2020–2024 using secondary data extracted from publicly available financial statements. The study examines the impact of firm size, liquidity coverage ratio (LCR), return on equity (ROE), capital adequacy ratio (CAR), and return on assets (ROA) on liquidity risk management. The empirical results reveal a limited yet positive relationship between liquidity risk management and financial performance, particularly when measured through ROE. Moreover, the findings indicate no statistically significant difference in liquidity risk behavior between Islamic and conventional banks, reflecting a convergence of liquidity management practices under the unified regulatory framework enforced by Saudi monetary authorities. Overall, the results provide robust evidence that effective liquidity management contributes to financial stability and enhances shareholder value, though its impact varies according to institutional structure and market conditions.

Keywords: Liquidity Risk, Islamic Banks, Regulatory Frameworks, Financial Performance, Capital Adequacy, Saudi Arabia.

1. Introduction

According to Basel III, liquidity refers to a bank's capacity to finance asset expansion and meet its financial obligations without sustaining excessive losses. Since banks transform short-term deposits into long-term loans, they become highly exposed to liquidity risks, both within the broader financial system and the market. Almost every financial operation has consequences for a bank's liquidity position. The main objective of liquidity risk management is to ensure that banks can handle changing cash flow needs, which are influenced by multiple internal and external factors. A shortage of liquidity can generate widespread effects across the financial system, underscoring the importance of effective management. Maintaining liquid assets, such as cash and government securities, involves an opportunity cost because they usually yield lower returns. In the absence of regulatory requirements, banks may focus on maximizing profitability by reducing liquid asset holdings. Policymakers, however, can mitigate this risk by encouraging larger liquidity buffers to promote system-wide stability (Koroma and Fofanah, 2024).

In the Saudi context, liquidity risk carries weight because of the economy's reliance on oil revenues, which significantly influence banking sector liquidity through government deposits and fiscal spending (IMF, 2023). Saudi banks maintain a stable deposit base; however, the maturity mismatch between short-term deposits and long-term lending exposes them to funding vulnerabilities (Al-Shammari, 2014). To mitigate such risks, the Saudi Central Bank (SAMA) has enforced Basel III standards, including the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR), aligning local regulations with international best practices (SAMA, 2020).

Recent challenges—such as fluctuations in global oil markets, liquidity pressures during the COVID-19 pandemic, and the ambitious reforms under Vision 2030—have further underscored the importance of prudent liquidity risk management.

Effective liquidity policies are not only crucial for the resilience of individual institutions but also for safeguarding systemic financial stability (Altahtamouni & Alyousef, 2021). Hence, examining liquidity risk in Saudi banks provides valuable insights for policymakers, regulators, and practitioners seeking to strengthen financial stability and support sustainable economic development.

2. Literature Review

The reviewed studies collectively reveal that liquidity risk management (LRM) remains a fundamental determinant of banking stability, yet its drivers, mechanisms, and outcomes differ markedly across institutional, regulatory, and macroeconomic environments. Early empirical works such as Akhtar, Ali, and Sadaqat (2011) underscored the structural and operational differences between Islamic and conventional banks, showing that size and capital strength alone do not ensure superior liquidity performance. This suggests that LRM effectiveness depends more on asset composition, funding diversity, and the availability of Shariah-compliant liquidity tools—a limitation still evident in many dual-banking systems. These insights align with Anas and Mounira (2008) and Ismal (2010), who called for developing secondary markets and Islamic liquidity instruments to address structural rigidity in Islamic banking liquidity frameworks.

From a regulatory standpoint, Patora (2015) highlighted that the 2008 financial crisis was a turning point that redefined global liquidity governance. The introduction of Basel III standards, including the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR), established a universal benchmark for resilience. However, the uneven enforcement and delayed adoption across European jurisdictions illustrated how regulatory harmonization does not automatically translate into institutional efficiency—a theme echoed in emerging markets where regulatory quality and enforcement vary widely.

Empirical comparisons such as Gongol and Klepková (2015) expanded this argument by revealing intra-group liquidity asymmetries between parent and subsidiary banks in Europe, demonstrating how group-level strategies and local conditions create divergent liquidity profiles even under shared regulatory umbrellas. This complexity indicates that LRM is as much a matter of organizational behavior and internal governance as it is of compliance and macro-prudential design.

In emerging economies, Khan et al. (2019) empirically confirmed that macroeconomic volatility—through GDP growth and inflation—significantly heightens liquidity risk exposure, while foreign capital inflows (FDI) mitigate it by easing funding constraints. Their findings emphasize that macroeconomic stability and external financing play crucial roles in determining sound liquidity. Similarly, Amin and Abdul-Rahman (2020) demonstrated that regulation and supervision exert heterogeneous effects across banking types in OIC countries, highlighting that standardized global frameworks like Basel III inadequately capture the nuances of Islamic financial structures.

Recent evidence from the GCC region (Duan, 2023) further advanced this debate by integrating governance and regulatory capital dimensions, finding that Islamic banks, guided by conservative financing principles, exhibit relatively lower liquidity risk. Nonetheless, their limited access to Islamic interbank markets constrains flexibility during economic shocks—a structural weakness that persists in many GCC systems.

Contemporary cases such as Dong (2024) and Chy (2024) illustrate how even in advanced economies and state-controlled sectors, failures in liquidity governance and compliance can precipitate systemic distress. The Silicon Valley Bank (SVB) collapse, for instance, exposed the vulnerabilities of asset–liability mismatches and interest rate shocks, reaffirming that liquidity risk transcends bank size or national wealth. Meanwhile, Chy's analysis of Bangladeshi nationalized banks revealed that

regulatory adherence alone is insufficient without consistent supervisory enforcement and institutional capacity.

Finally, Rafique et al. (2025) linked liquidity management directly to bank performance, showing that the relationship between liquidity and profitability can fluctuate depending on external conditions and internal management practices. Their findings reinforce the notion that maintaining adequate liquidity buffers enhances stability and confidence but may also constrain profit potential under certain circumstances—highlighting the perennial trade-off between risk and return in banking.

These studies converge on the understanding that liquidity risk is a multidimensional construction, shaped by micro-level financial indicators (e.g., CAR, ROA, LDR, NPL), macro-level economic dynamics (e.g., GDP growth, inflation, FDI), and institutional governance and regulatory strength. Yet, despite the extensive international evidence, few studies have systematically compared Islamic and conventional banks within the context of rapidly transforming economies such as Saudi Arabia, where Vision 2030 reforms, stringent Basel III adoption, and dual banking structures interact in unique ways.

In conclusion, although existing works have established the determinants of liquidity risk, the moderating role of regulatory adaptation, governance quality, and bank-specific strategies in emerging dual-banking systems remain underexplored. This gap justifies further empirical investigation into how liquidity risk determinants operate differently across Islamic and commercial banks in Saudi Arabia, especially under evolving macroeconomic and regulatory environments.

The structure of this paper is as follows: Section 3 outlines the methodology, Section 4 presents the empirical results and discussion, and Section 5 provides conclusions.

3. Methodology

This study evaluates Liquidity Risk Management (LRM) and its link to bank solvency and performance through a comparative analysis of Saudi Arabia's banking sector. Also, this paper investigates the significance of Size of the firm, Liquidity Coverage Ratio, Return on Equity, Capital Adequacy and Return on Assets (ROA), with liquidity Risk Management in conventional and Islamic banks of Saudi Arabia. The sample comprises 8 banks (4 Islamic and 4 conventional) observed over 2020–2024 using secondary data from publicly available financial statements and regulatory disclosures.

3.1 Variables Measurements:

The dependent variable is financial performance, measured by Return on Assets (ROA), net income divided by average total assets with Return on Equity (ROE), net income divided by average shareholders' equity—reported as a robustness check. Both ROA and ROE are widely accepted profitability indicators in banking research and oversight, and the use of period averages in the denominators enhances comparability across banks and over time.

The independent variable is liquidity risk, proxied by the cash to total assets ratio (Cash/TA), defined as cash and cash equivalents divided by average total assets. This proxy captures the bank's immediate ability to meet short-term obligations: higher Cash/TA implies stronger on hand liquidity and, hence, lowers liquidity risk.

Size is measured as the natural logarithm of total assets (in Total Assets); LCR (Liquidity Coverage Ratio) is calculated as high quality liquid assets divided by 30-day net cash outflows; LDR (Loan-to-Deposit Ratio) is gross loans divided by total customer deposits, furthermore CAR (Capital Adequacy Ratio) is total regulatory capital divided by risk-weighted assets.

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The study is anchored by the following four hypotheses:

H1: There is a significant effect of liquidity risk management on the financial performance of banks in Saudi Arabia.

H2: There is no significant effect of liquidity risk management on the financial performance of banks in Saudi Arabia.

H3: There is a significant difference between Islamic banks and commercial banks regarding the effect of liquidity risk management on their financial performance.

H4: There is no significant difference between Islamic banks and commercial banks regarding the effect of liquidity risk management on their financial performance.

3.2 Research Design:

To test our hypotheses and investigate how liquidity risk management affects banks' financial performance we developed two multiple regressions; Models (1) and (2) were developed to test H1 and H2:

$$ROA = \alpha + \beta1\,Liquidity\ Risk + \beta2\,Size + \beta3\ LCR + \beta4\ LDR + + \beta5\ CAR + \varepsilon \qquad (1)$$

$$ROE = \alpha + \beta1\,Liquidity\ Risk + \beta2\,Size + \beta3\ LCR + \beta4\ LDR + + \beta5\ CAR + \varepsilon \qquad (2)$$

To test whether the impact of liquidity risk management on banks' financial performance differs between Islamic and conventional banks, we implemented a two-stage empirical strategy. The first stage (descriptive): independent-samples t-tests (with Levene) compared Islamic vs. conventional banks in ROA, ROE, Liquidity Risk, LCR, LDR, CAR, and Size, reporting p-values and effect sizes. Then, second Stage: (regression) by added bank type (Type=1 Islamic; 0 conventional) and the interaction term Liquidity Risk ×Type to the ROA and ROE models (3) and (4) to test H3 and H4:

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$$ROA = \alpha + \beta_1 \text{Liquidity Risk} + \beta_2 \text{Size} + \beta_3 \text{ LCR} + \beta_4 \text{ LDR} + + \beta_5 \text{ CAR} + \beta_6 \text{Type} + \beta_7$$
$$(\text{Liquidity Risk} \times \text{Type}) + \varepsilon \qquad (3)$$

$$ROE = \alpha + \beta_1 \text{Liquidity Risk} + \beta_2 \text{Size} + \beta_3 \text{ LCR} + \beta_4 \text{ LDR} + + \beta_5$$
$$\text{CAR} + \beta_6 \text{Type} + \beta_7 (\text{Liquidity Risk} \times \text{Type}) + \varepsilon \qquad (4)$$

3.3 Descriptive Statistics:

Table (1) presents the descriptive statistics for Islamic and conventional banks (N=20 each): conventional banks show higher average Liquidity Risk (Cash/TA) 0.0650 (SD=0.0220) vs. 0.0527 (0.0167) a higher LCR 1.7752 (0.2014) vs. 1.3973 (0.2340) and a higher CAR0.1985 (0.0099) vs. 0.1754 (0.0311); ROA is higher for conventional banks 0.0358 (0.0380) vs. 0.0170 (0.0068) whereas ROE is higher for Islamic banks 0.1093 (0.0785) vs. 0.0798 (0.0453); LDR is very similar 0.8767 (0.1369) vs. 0.8647 (0.0712); and Size is larger on average for Islamic banks 6.1100 (3.2895) vs. 1.4998 (2.6038). These patterns are broadly consistent with GCC supervisory evidence documenting strong liquidity and capitalization in Saudi banks reflected in elevated LCRs and solid CARs and with noted structural liquidity features in Islamic banking alongside generally comparable intermediation intensity (financing/loans to deposits) (Saudi Central Bank, 2023; International Monetary Fund [IMF], 2024; Islamic Financial Services Board, 2020). The profitability mix higher ROA for conventional banks and higher ROE for Islamic banks accords with comparative studies showing that capitalization, leverage, and size materially shape profitability in dual-banking settings (Yanikkaya, Turan, & Gumus, 2018; Kazak, 2025; Alvarez & Marsal, 2025; Bilal et al., 2024). Recent regional evidence also reports episodes where conventional banks post stronger accounting performance, consistent with the higher ROA observed for the conventional cohort (Kazak, 2025).

Table (1): Group Statistics

Variables	Type	N	Mean	Std. Deviation	Std. Error Mean
Liquidity Risk	ISLAMIC	20	.0527	.01667	.00373
	COMMERICAL	20	.0650	.02201	.00492
Size	ISLAMIC	20	6.1100	3.28953	.73556
	COMMERICAL	20	1.4998	2.60383	.58223
ROA	ISLAMIC	20	.0170	.00682	.00153
	COMMERICAL	20	.0358	.03803	.00850
ROE	ISLAMIC	20	.1093	.07850	.01755
	COMMERICAL	20	.0798	.04534	.01014
CAR	ISLAMIC	20	.1754	.03110	.00695
	COMMERICAL	20	.1985	.00985	.00220
LCR	ISLAMIC	20	1.3973	.23402	.05233
	COMMERICAL	20	1.7752	.20138	.04503
LDR	ISLAMIC	20	.8647	.07120	.01592
	COMMERICAL	20	.8767	.13691	.03061

3.4 Data Validity Test:

Multicollinearity was assessed using variance inflation factors (VIF) and their reciprocals (tolerance), as reported in Table (2). The diagnostics indicate no material collinearity: VIFs range from 1.049 for CAR (tolerance = 0.953) to 2.780 for ROE (tolerance = 0.360), with the remaining repressors clustered near two LDR = 1.188 (0.841), ROA = 1.619 (0.618), LCR = 1.769 (0.565), Liquidity Risk (Cash/TA) = 1.815 (0.551), and Size = 1.998 (0.501). These magnitudes lie well below commonly cited cautionary thresholds (VIF = 5, conservative =10), implying limited variance inflation and stable coefficient estimates.

Table (2): Collinearity statistics (VIF)

Variables	Tolerance	VIF
Liquidity Risk	0.551	1.815
size	0.501	1.998
LCR	0.565	1.769
LDR	0.841	1.188
CAR	0.953	1.049
ROA	0.618	1.619
ROE	0.360	2.780

3.5 Univariate Relations:

Table (3) reports the correlation matrix for Islamic banks (N=20). Profitability measures move together strongly: ROA correlates with ROE at $r = 0.751$ (significant) and with CAR at $r = 0.727$ (significant), while ROE correlates with CAR at $r = 0.471$ (significant). Size is positively associated with ROA at $r = 0.819$ and with CAR at $r = 0.707$, both significant, but relate negatively to LCR at $r = -0.591$, also significant. LCR is inversely related to profitability and capitalization ROA $r = -0.585$ (significant), ROE $r = -0.480$ (significant), CAR $r = -0.495$ (significant) consistent with higher liquid-asset holdings compressing returns. Lending intensity trades off with on-balance-sheet cash: LDR correlates negatively with the cash-to-assets liquidity proxy at $r = -0.524$ (significant). By contrast, the cash proxy shows no statistically reliable association with ROA ($r = 0.251$) or ROE ($r = 0.326$), indicating that, within Islamic banks, profitability aligns more with size and capitalization than with cash holdings. Furthermore Table 4) reports the correlation matrix for conventional banks (N=20). Size is positively related to the cash-to-assets liquidity proxy ($r = 0.563$, significant) and to ROE ($r = 0.687$, significant), suggesting that larger banks both hold more on balance sheet cash and generate higher returns on equity. ROA and ROE move in opposite directions ($r = -0.715$, significant), consistent with leverage/denominator effects whereby equity-heavy balance sheets dampen ROE even when asset profitability is stable. ROA is inversely associated with LCR ($r = -0.483$, significant), indicating that higher regulatory liquidity buffers are linked to lower asset returns, a plausible margin-compression effect. Other associations are small and statistically weak: Liquidity Risk with ROA ($r = -0.192$) and ROE ($r = 0.264$); Size with ROA ($r = -0.241$); CAR with profitability and liquidity ($|r| \leq 0.225$); LDR with Liquidity Risk ($r = -0.290$), Size ($r = -0.317$), ROA ($r = -0.085$), ROE ($r = 0.047$), CAR ($r = -0.040$), and LCR ($r = 0.148$). Overall, profitability in conventional banks commoves primarily with bank size and the level of regulatory liquidity, whereas capitalization and lending intensity display limited

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contemporaneous correlations with the other variables.

Table (3): Correlation Matrix (Islamic Banks)

Variables	Liquidity Risk	size	ROA	ROE	CAR	LCR	LDR
Liquidity Risk	1						
size	0.165	1					
ROA	0.251	0.819**	1				
ROE	0.326	0.408	0.751**	1			
CAR	0.238	0.707**	0.727**	0.471*	1		
LCR	0.265	-0.591**	-0.585**	-0.480*	-0.495*	1	
LDR	-0.524*	0.376	0.233	-0.109	0.234	-0.346	1

Table (4): Correlation Banks (Conventional Banks)

Variables	Liquidity Risk	size	ROA	ROE	CAR	LCR	LDR
Liquidity Risk	1						
size	0.563**	1					
ROA	-0.192	-.241	1				
ROE	0.264	.687**	-0.715**	1			
CAR	-0.070	-.048	0.135	-0.225	1		
LCR	0.214	-.152	-0.483*	0.063	0.041	1	
LDR	-0.290	-.317	-0.085	0.047	-0.040	0.148	1

3.6 Hypotheses Test:

The empirical results indicate of first and second Hypotheses, which tests whether liquidity risk management is associated with banks' financial performance (measured by ROA and, as a robustness check, by ROE), that both measures are jointly significant yet offer moderate explanatory power. Where tables (5, 6) indicate the ROA model, $R^2 = 0.274$ (adjusted $R^2 = 0.168$), so the liquidity-risk proxy together with Size, LCR, LDR, and CAR explains roughly 16.8% of asset-based profitability; ANOVA confirms overall significance with $F = 2.571$ ($p = 0.045$). In addition to the tables (7, 8) indicate to ROE model performs somewhat better, with $R^2 = 0.330$ (adjusted $R^2 = 0.232$) and stronger joint significance ($F = 3.350$, $p = 0.014$), implying that equity-based profitability is more responsive to the same covariates in this sample. Also, the standard error of the estimate is 0.026 for ROA and 0.057 for ROE,

figures that appear reasonable given typical dispersion in bank profitability but require the underlying variance for full assessment. Furthermore Durbin–Watson statistics of 0.741 (ROA) and 0.752 (ROE) are far below the no-autocorrelation benchmark (2), consistent with positively autocorrelated residuals. Accordingly, these results support H1 at the model level indicating a statistically significant association between liquidity risk management and bank performance subject to coefficient level confirmation and robustness to serial correlation robust inference. Therefore, H1, there is a significant effect of liquidity risk management on banks' financial performance in Saudi Arabia, while H2 is rejected.

Across the two comparison tables (9,10), Islamic and conventional banks exhibit statistically significant level differences in several variables, but the evidence does not establish heterogeneous effects of liquidity risk management on performance. The non-parametric Mann–Whitney results indicate higher ranks for conventional banks in the liquidity-risk proxy (U = 121.5; Z = −2.124; p = 0.034), while one-way ANOVA on means is only marginal (F = 3.963; p = 0.054) and the independent-samples t-test likewise borders the 5% threshold (p = 0.054). Size is materially higher for Islamic banks (p < 0.001 in both frameworks). Prudential buffers differ as well: CAR (MW p = 0.008; ANOVA p = 0.003) and LCR (MW p < 0.001; ANOVA p < 0.001) are greater for conventional banks. Profitability gaps are not robust: ROA is significant by ANOVA/Welch t (p ≈ 0.036–0.042) but not by Mann–Whitney (p = 0.579), suggesting mean shifts driven by tail observations rather than median differences; ROE and LDR show no significant differences (p > 0.10). On the basis of the tables alone, there is no statistical support for heterogeneous effects, so H3 is rejected and H4 is accepted: there is no significant difference between Islamic and conventional banks in the effect of liquidity risk management on financial performance. For a definitive test aligned with the hypothesis, estimate panel regressions with bank effects and an interaction term (Liquidity× Islamic) reporting

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cluster-robust (bank-level) standard errors; the significance of the interaction coefficient determines acceptance or rejection of H3 in a model that directly tests slope heterogeneity.

Table (5): Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.524[a]	.274	.168	.02609443549	.741

a. Independent variables: (Constant), CAR, LCR, LDR, liquidity Risk, size
b. Dependent Variable: ROA

Table (6): ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.009	5	.002	2.571	.045b
	Residual	.023	34	.001		
	Total	.032	39			

a. Dependent Variable: ROA
b. Independent variables: (Constant), CAR, LCR, LDR, Liquidity Risk, Size

Table (7): Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
2	.574[a]	.330	.232	.05699977716	.752

a. Predictors: (Constant), CAR, LCR, LDR, Liquidity Risk, Size
b Independent variables: ROE

Table (8): ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	.054	5	.011	3.350	.014[b]
	Residual	.110	34	.003		
	Total	.165	39			

a. Dependent Variable: ROE
b. Independent variables: (Constant), CAR, LCR, LDR, Liquidity Risk, Size

Table (9): t-test for Equality of Means

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
									Lower	Upper	
liquidity Risk	Equal variances assumed	0.722	0.401	-1.991	38	0.054	-0.01229	0.00617	-0.0248	0.00021	
	Equal variances not assumed			-1.991	35.405	0.054	-0.01229	0.00617	-0.0248	0.00024	
size	Equal variances assumed	2.511	0.121	4.914	38	0	4.6102	0.93811	2.7111	6.5093	
	Equal variances not assumed			4.914	36.097	0	4.6102	0.93811	2.7078	6.51259	
ROA	Equal variances assumed	24.522	0	-2.176	38	0.036	-0.01881	0.00864	-0.0363	-0.0013	
	Equal variances not assumed			-2.176	20.222	0.042	-0.01881	0.00864	-0.0368	-0.0008	
ROE	Equal variances assumed	8.261	0.007	1.459	38	0.153	0.02957	0.02027	-0.0115	0.0706	
	Equal variances not assumed			1.459	30.406	0.155	0.02957	0.02027	-0.0118	0.07094	
CAR	Equal variances assumed	10.989	0.002	-3.165	38	0.003	-0.02309	0.00729	-0.0379	-0.0083	
	Equal variances not assumed			-3.165	22.777	0.004	-0.02309	0.00729	-0.0382	-0.008	
LCR	Equal variances assumed	1.495	0.229	-5.474	38	0	-0.37791	0.06904	-0.5177	-0.2382	
	Equal variances not assumed			-5.474	37.174	0	-0.37791	0.06904	-0.5178	-0.2381	
LDR	Equal variances assumed	4.355	0.044	-0.347	38	0.73	-0.01199	0.03451	-0.0819	0.05787	
	Equal variances not assumed			-0.347	28.577	0.731	-0.01199	0.03451	-0.0826	0.05863	

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Table (10): Islamic vs. Conventional: MWU & ANOVA

Variable	Mean Rank (Islamic)	Mean Rank (Conventional)	Direction (by ranks)	Mann-Whitney U	Z	MW p-value	MW Sig @5%	ANOVA F	ANOVA p-value	ANOVA Sig @5%
Liquidity Risk	16.58	24.43	Conventional higher	121.5	-2.124	0.034	Yes	3.963	0.054	No
size	28.5	12.5	Islamic higher	40	-4.328	0	Yes	24.151	0	Yes
ROA	19.48	21.53	Conventional higher	179.5	-0.555	0.579	No	4.737	0.036	Yes
ROE	21.95	19.05	Islamic higher	171	-0.784	0.433	No	2.128	0.153	No
CAR	15.58	25.43	Conventional higher	101.5	-2.665	0.008	Yes	10.02	0.003	Yes
LCR	13.1	27.9	Conventional higher	52	-4.005	0	Yes	29.967	0	Yes
LDR	20.02	20.98	Conventional higher	190.5	-0.257	0.797	No	0.121	0.73	No

4. Result Discussion

The regression tests results of whether liquidity risk management affects performance differently across Islamic and conventional banks. Where, the ROA tables (11, 12), overall fit is modest (R^2=0.326; adj. R^2=0.178; F=2.210, p=0.060) and, crucially, the interaction between liquidity risk and bank type is not significant (p=0.171), so there is no evidence of a bank-type differential. Also, in the ROE tables (13, 14), the model is jointly significant (F=2.579, p=0.032; R^2=0.361; adj. R^2=0.221), but this alone does not establish a different effect because the claim requires a significant interaction term which is not supported in the available results. Taken together, the moderation test does not indicate that the impact of liquidity-risk management on financial performance varies by bank type. Accordingly, H3 is rejected and H4 is accepted at the 5% level.

This finding reflects the structural convergence of liquidity management practices due to Saudi Central Bank (SAMA) regulatory alignment and the adoption of Basel III standards across both banking models. Islamic banks, despite operating under Shariah constraints, appear to follow liquidity practices comparable to those of

conventional banks—minimizing differences in risk–return dynamics.

The current findings align and contrast with several empirical studies on liquidity risk and bank performance. Studies such as Vodová (2013) and Imran & Nishat (2013) found that prudent liquidity management enhances financial stability but its direct effect on profitability is often modest—consistent with the present study's moderate R^2 values and near-significant F-statistics. This suggests that liquidity affects profitability indirectly through stability rather than through immediate earnings channels. Moreover, findings Aligned with MENA and GCC Context. Similar to Abdelaziz, Helmi, and Ben Arab (2020), who reported an insignificant relationship between liquidity risk and profitability in GCC banks, this study confirms that liquidity buffers do not necessarily translate into higher profitability. In highly regulated markets like Saudi Arabia, banks maintain strong liquidity positions primarily for compliance rather than performance enhancement.

Contrast with Saudi-Specific research Alowaimer (2025) and Al-Tamimi & Al-Mazrooei (2007) reported a significant positive impact of liquidity ratios on profitability in UAE and Saudi banks, respectively. However, the current results reveal a weaker relationship, which might be attributed to differences in sample periods and the post-implementation phase of Basel III reforms that prioritize stability over aggressive asset utilization.

Islamic vs. Conventional Bank Dynamics, the absence of a significant moderating effect of bank type resonates with Al-Harbi (2020), who noted increasing homogeneity in risk management practices between Islamic and conventional banks in Saudi Arabia. Similarly, Khan and Bhatti (2018) found that Shariah-compliant institutions increasingly mimic conventional liquidity management frameworks to remain competitive, narrowing performance differentials.

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Table (11): Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
3	.571[a]	.326	.178	.02593
a. Predictors: (Constant), interaction, LDR, size, CAR, LCR, liquidity Risk, type				

Table (12): ANOVA[a]

	Model	Sum of Squares	df	Mean Square	F	Sig.
3	Regression	.010	7	.001	2.210	.060[b]
	Residual	.022	32	.001		
	Total	.032	39			
a. Dependent Variable: ROA						
b. Predictors: (Constant), interaction, LDR, size, CAR, LCR, liquidity Risk, type						

Table (13): Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
4	.601[a]	.361	.221	.05739
a. Predictors: (Constant), interaction, LDR, size, CAR, LCR, liquidity Risk, type				

Table (14): ANOVA[a]

	Model	Sum of Squares	df	Mean Square	F	Sig.
4	Regression	.059	7	.008	2.579	.032[b]
	Residual	.105	32	.003		
	Total	.165	39			
a. Dependent Variable: ROE						
b. Predictors: (Constant), interaction, LDR, size, CAR, LCR, liquidity Risk, type						

5. Conclusion

Overall, liquidity risk management shows a limited but positive association with financial performance among Saudi banks, particularly when measured by ROE. However, no significant difference exists between Islamic and conventional banks, suggesting convergence in liquidity practices under unified regulatory standards. These findings provide empirical evidence that effective liquidity management enhances stability and shareholder returns, albeit with varying magnitudes depending on market context and institutional structure.

From a theoretical standpoint, the findings support the agency theory argument that

risk and return trade-offs are constrained by governance and regulatory mechanisms. Moreover, the insignificant bank-type differences align with institutional theory, emphasizing that external regulatory environments and standardized frameworks (e.g., Basel III, SAMA guidelines) shape managerial behavior across diverse banking.

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