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The Relationship between Liquidity Risk Management and Commercial Bank Performance: Evidence from the Western Balkans

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Abstract

The current study examines the relationship between liquidity risk management and the performance of commercial banks in the Western Balkans between 2015 to 2020. This relationship is examined by using secondary data from the financial statements. Financial performance is measured by return on assets, equity and net interest margin. Liquidity risk is represented by the quick ratio, current ratio, loan-to-deposits ratio, loan-to-assets ratio, cash and investment-to-deposit ratio, capital adequacy and interest coverage ratio. The Ordinary Least Squares model was used to process the data. The study's findings show that return on assets has a negative relationship with the current ratio but a positive relationship with loans-to-total deposits, cash plus investments-to-total deposits and capital adequacy ratio. Return on equity has a negative relationship with the quick ratio and interest coverage ratio but a positive relationship with the current ratio, loans-to-total assets and cash plus investments-to-deposits ratio. Net interest margin is negatively related to loans-to-total deposits, capital adequacy interest coverage ratio and positively related to loans-to-total assets. These findings have implications for Western Balkan banks' variables use to manage liquidity risk. The findings of the study are significant as they can be use to enhance liquidity risk management by influencing performance indicators for Western Balkans bank.

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1. Introduction

Increasing return on assets and equity while maximizing operating profit is the core goal of every successful company especially in the banking sector. They increase their profitability and consequently their performance by expanding their investment opportunities. In order to decrease the possibility of failure and enhance performance, firms also try to control risk. The Basel Committee defines liquidity as the ability of a bank to meet its financial obligations immediately while conducting business. The qualitative components of a bank's financial strength are represented by liquidity. (www.bis.org). According to this concept, liquidity risk might develop when a financial organization lacks the capital to meet its obligations without effecting other financial organizations. .

On the other hand, banks may find it difficult to raise enough cash or to increase liquidity at a high cost for immediate liquidity needs. Liquidity risk is the low financial ability of a company to meet its liabilities as they remain unpaid or become unpaid without having a negative effect on its operations. Liquidity management is basically a cost-benefit exchange which helps a company satisfy its obligations and increase its stability by reducing the probability of an unfavorable financial disaster (Kumar & Yadav, 2013). Leykun (2016) stated that liquidity risk describes the level of security in terms of liquid assets that a bank maintains for its regular commercial and financial operations. Since liquidity risk comprises the capability of a commercial bank to finance its assets at a given point in time without risking additional costs that threaten its health. Its management remains an essential task of banks (Alali, 2019).

According to various researchers, the relationship between liquidity risk management and a bank's performance can be assessed using some common financial ratios such as net interest margin, return on assets,

return on equity, current ratio, quick ratio, cash ratio, capital adequacy ratio and loan-to-deposit ratio etc. The results are quite different. Some researchers found that decreasing liquidity risk improves a bank's performance (Bordeleau & Christopher, 2010; Lartey, Antwi, & Boadi, 2013) while others have found the opposite results to be correct (Konadu, 2009). Additionally, several research have shown no relationship between performance and liquidity risk (Lamberg & Valming, 2009).

The Western Balkans are geographically desirable for economics expansion and have relatively educated populations making the region appropriate for economic growth and enhancing macroeconomic stability. The banking sector in these countries has led to significant changes through consolidation, privatization and liberalization. After 2000, a complete transformation of the banking sector took place in European region replacing the former socialist banking system with a private one. A high percentage of banking assets in the transition countries are held by foreign banks which highlights the difference between many developing and new countries.

The Western Balkan countries' financial sectors which depends on banks differ in size and structure. The region's financial sector assets are about equivalent to 93% of Gross Domestic Product (GDP) in terms of size. In the Western Balkans, banks dominate the financial industry with little activity in the capital markets, little adoption of insurance products and few non-bank financial organizations. Banking assets make up 90% of the entire financial sector. Despite recent growth in the stock of securities, the banking sector in Kosovo remains the least significant with assets in the financial system comprising about 70 percent (CBK, 2021).

The majority of the region' banks are foreign banks. In five Western countries, foreign banks hold more than 80% of the total banking assets. This ratio varies from country to country with Serbia being an exception where domestic banks predominate over foreign ones (state-owned commercial banks control about 20% of the banking sector and the share of foreign banks is 75%). The countries in the region show different degrees of concentration in Northern Macedonia, Kosovo and Albania the three largest banks hold about two-thirds of the region's total assets. In Serbia, Montenegro and Bosnia and Herzegovina, the degree of concentration is moderate with the three largest banks holding about four-fifths of the region's total assets.

2. Literature Review

Several research from different regions have been conducted to determine the relationship between banks' performance and have mixed results (Chowdhury & Zaman, 2018). The performances of these banks is influenced by a variety of liquidity risk determinants that vary among economies and countries. Without considering macroeconomic factors as determinants of this risk, some other studies have focused more on bank characteristics to measure the impact of specific factors on liquidity risk. Abbas and Mourouj (2015); Ajibike and Aremu (2015); Alshatti (2015); Gadou (2022); Marozva (2015); Saleh and Abu Afifa (2020); Zaghdoudi and Hakimi (2017) have found that liquidity risk increases the financial performance of banks. Most studies focus on a single location and use return on assets, return on equity, return on capital employed and net interest margin as variables to represent bank financial performance. The research's findings imply that as liquidity risk rises, banks' financial performance rises as well. On the other hand, a number of the research by Gweyi, Olweny, and Oloko (2018); Laminfoday (2018); Ndoka, Islami, and Shima (2017); Samilogu and Akgun (2016) found that liquidity risk is one of the most important factors affecting the bank's financial performance having the opposite effect. However, their analysis do not show any relationship between liquidity risk and the bank's financial performance (DeYoung & Jang, 2016; Ferrouhi, 2014; Khalid, Rashed, & Hossain, 2019). According to these studies, the impact of liquidity risk on bank performance is limited. Furthermore, macro-economic factors have been identified in various studies as determinants of liquidity risk excluding certain factors. The macroeconomic factors include the whole country's progress factors such as a country's GDP, inflation, interest rates or political conditions.

Ghenimi and Omri (2015) used panel data from 44 banks between 2006 and 2013 to analyse the factors affecting liquidity risk for Islamic and conventional banks in the Gulf. Return on assets, return on equity, net interest margin, credit rating, bank size, and macroeconomic variables such as inflation rate and GDP were used as bank-specific variables. Chen, Shen, Kao, and Yeh (2018) used an unbalanced panel of commercial banks in 12 advanced economies between 1994 to 2006 to examine the impact of liquidity risk on financial performance. Other factors include microeconomic factors that differ between banks and countries are adequate capital, asset quality, capital structure, bank size, management efficiency and liquidity management etc. Wójcik-Mazur and Szajt (2015) in their study on the liquidity risk of banks in European Union countries examined the impact of internal factors and concluded that these factors influence the liquidity risk despite the form of the approved measure of liquidity risk and the country in which they operate. They concluded that GDP growth is negatively related to liquidity risk from the analysis of macroeconomics factors.

Zaghdoudi and Hakimi (2017) analyzed the impact of liquidity risk management on the financial performance of Tunisian banks during the period from 1985 to 2015 identified four types of liquidity risk determinants. Determinants that indicate that liquidity risk depends on internal factors of banks (lending activity, level of capitalization and size of the bank), determinants related to the entire banking industry (banking market structure), determinants associated with the international environment (international financial crises) and macroeconomic determinants (economic growth and inflation).

In their study, Ashraf, Haider, and Sarwar (2017) examined the impact of liquidity management on the profitability of Pakistan's banking sector. The Quick Ratio, Current Ratio, Cash Ratio, Interest Coverage Ratio and Capital Adequacy Ratio were used to analyze the period from 2006 to 2015 and evaluate the impact of liquidity risk management on profitability.

Al-Homaidi, Tabash, Farhan, and Almaqtari (2019) analyzed liquidity indicators in Indian commercial banks from 2008 to 2017. Liquidity determinants were used as expressions of liquidity. At the same time, independent variables were divided into specific factors (return on assets, return on equity, net interest margin, bank size, capital adequacy, asset management ratio and asset quality ratio) and macroeconomic factors (GDP, inflation, exchange rate and interest rate). Tran et al. (2019) collected data from 171 banks in 9 countries in Southeast Asia from 2004 to 2016 analyzing the impact of liquidity risk on the performance of banks in these countries. Like some other authors, they also used GDP growth and inflation as macroeconomic factors that measure the impact of liquidity risk on performance.

Mohammad, Asutay, Dixon, and Platonova (2020) examined the factors that determine the exposure of liquidity risk to commercial banks using a panel data regression model with random effects technique, taking into account bank-specific factors (long-term debt, liquid assets, bank size and ownership of bank) and macroeconomic factors (GDP, economic growth and government efficiency etc).

Zhang and Zhao (2021) provide a pragmatic analysis of the indicators influencing the liquidity risk of commercial banks. They begin by categorizing the variables that affect commercial banks' liquidity risk into internal and external levels before conducting descriptive analysis of the variables at each level. The GDP rate, inflation rate and general interest rate were used as external factors while total assets, liquidity ratio, capital adequacy ratio, cost or income ratio and return on assets were used as internal factors.

Ahamed (2021) also examines the internal factors (bank size, return on equity, capital adequacy and growth of outstanding credit to assets) and external factors (macroeconomic) that affect the liquidity risk in commercial banks including the level of inflation, GDP growth and domestic credit.

Table 1. Variable description.

Symbols	Expressed as	Interpretation	Literature
Bank performance			
ROA	Return On Assets	The ratio of net profit to total assets	Khalid et al. (2019); Hacini, Boulenfad, and Dahou (2021), Huong, Nga, and Oanh (2021)
ROE	Return o On Equity	The ratio of net profit to total equity	Kaddumia and Al-Kilani (2020); Huong et al. (2021); Zhang and Zhao (2021); Ahamed (2021)
NIM	Net Interest Margin	The ratio of Interest Income minus Interest Expenses to Total Earnings	Nuriyeva (2014); Nkegbe and Ustarz (2015); Salim and Bilal (2016)
Risk Liquidity management			
QR	Current ratio	The quick assets to current liabilities	Chowdhury and Zaman (2018); Kohlscheen, Murcia, and Contreras (2018); Kaddumia and Al-Kilani (2020).
CUR	Current Ratio	The ratio of current assets to total liabilities	Salim and Bilal (2016); Kamande (2017); Onyango and Olando (2020)
CITD	Cash + Investments to Total Deposit ratio	The ratio of money to total deposits	Mwangi (2014); Salim and Bilal (2016); Kaddumia and Al-Kilani (2020).
ICR	Interest Coverage Ratio	The ratio of profit before interest and tax / Total interest expenses	Salim and Bilal (2016); Chowdhury and Zaman (2018).
CAR	Capital Adequacy Ratio	The ratio of capital held /Total risk-weighted assets	Song'e (2015); Salim and Bilal (2016); Zaghdoudi and Hakimi (2017).
LTA	Loans to Total Assets ratio	The ratio of the bank's loans /total assets	Petria, Capraru, and Ihnatov (2015); Salim and Bilal (2016); Kaddumia and Al-Kilani (2020).
LTD	Loan to Total Deposits ratio	The ratio of the total loans to total deposits	Kaddumia and Al-Kilani (2020).

3. Methodology

In the Western Balkan, this study examines the relationship between liquidity risk management and bank performance. It is based on secondary information gathered from 47 particular commercial banks' annual

reports for 2015 through 2020. Statistical Package for the Social Sciences (SPSS) analyzed the collected data. Different models were used to examine the relationship between liquidity risk management and bank performance (Chowdhury & Zaman, 2018; Kaddumia & Al-Kilani, 2020; Salim & Bilal, 2016; Zaghdoudi & Hakimi, 2017). In our model, Return On Assets (ROA), Return On Equity (ROE) and Net Interest Margin (NIM) were used as variables expressing financial performance. In contrast, the independent variables were used as indicators of liquidity risk: Quick Ratio (QR), Current Ratio (CUR), Cash plus Investments in Securities to Total Deposits (CITD), Interest Coverage Ratio (ICR), Capital Adequacy Ratio (CAR), Loans to Total Assets (LTA) and Loans to Total Deposits (LTD). The econometric model can be written as follows:

$$ROA = a + \beta 1\ QR + \beta 2\ CuR + \beta 3\ CITD + \beta 4\ ICR + \beta 5\ CAR + \beta 6\ LTA + \beta 7\ LTD + \epsilon \quad (1)$$

$$ROE = a + \beta 1\ QR + \beta 2\ CuR + \beta 3\ CITD + \beta 4\ ICR + \beta 5\ CAR + \beta 6\ LTA + \beta 7\ LTD + \epsilon \quad (2)$$

$$NIM = a + \beta 1\ QR + \beta 2\ CuR + \beta 3\ CITD + \beta 4\ ICR + \beta 5\ CAR + \beta 6\ LTA + \beta 7\ LTD + \epsilon \quad (3)$$

Table 1 provides a summary of the definition of the independent and dependent variables as follows:

4. Research Results and Statistical Analysis of Results

The following findings are based on descriptive statistics of the banks that have been active in Western Balkan countries over time:

Table 2. Descriptive statistics.

Variables	Minimum	Maximum	Mean	Std. Deviation
ROA	-0.104	0.402	0.008	0.038
ROE	-0.478	3.111	0.079	0.272
NIM	0.002	0.051	0.029	0.009
QR	0.127	12.497	0.558	0.879
CuR	1.021	16.562	1.355	1.134
LTD	-17.772	94.410	23.815	13.391
LTA	0.000	0.884	0.582	0.161
CITD	0.115	11.824	0.542	0.826
CAR	0.035	0.920	0.156	0.107
ICR	0.000	4.294	0.804	0.438

Note: QR (Quick ratio); CuR (Current Ratio); LTD (Loan to Total Deposit Ratio); LTA (Loan to Total Asset Ratio); CITD (Cash + Investments to Total Deposit Ratio); CAR (Capital Adequacy Ratio); ICR (Interest Coverage Ratio).

This section presents the results of descriptive statistics for the dependent variables (ROA, ROE and NIM) and the independent variables (QR, CuR, LTD, LTA, CITD, CAR and ICR). The mean, standard deviation, minimum and maximum values are presented in Table 2. These figures describe the data used to understand the study variables. The descriptive statistics of each variable were calculated based on the observations collected for the period 2015 to 2020.

Table 2 shows that the Return on Equity of banks in the Western Balkans ranges from a minimum of -0.104 to a maximum of 0.402 with a mean of 0.083 and a standard deviation of 0.038. It also shows that ROE ranges from a minimum of -0.478 to a maximum of 3.111 with a mean of 0.079 and a standard deviation of 0.272. NIM ranges from a minimum of 0.002 to a maximum of 0.051 with a mean of 0.029 and a standard deviation of 0.009.

The correlation results and regression analysis are shown in Table 3. The correlation results in this table show that the correlations of QR, CuR, CITD, CAR and ICR are significant at 1% while the correlations of LTD and LTA are not significant (LTD = 0.043 and LTA = 0.098). The results show a negative correlation between QR, CuR, CITD, CAR and ICR with return on equity. At the same time, there is a positive correlation between LTD and LTA with Return on Equity.

The relationship between the independent variable indicating liquidity risk and return on assets is evident in the regression analysis of Table 3. The R-squared is 0.520, means that the model's independent variable may describe and interpret 52% of the total variance of ROA as the dependent variable. The regression model is significant at 1% because the significance of the F value (0.000) is less than 1%. In this case, one variable in the model has a negative effect on ROA at 1% and two other variables positively affect ROA at 1%. However, another variable has a positive impact on ROA at 5%. The Current Ratio (CuR) has a negative impact on the financial performance of banks in the Western Balkans (ROA). In contrast, the Loan to Total Assets Ratio (LTD), the Cash and Investments to Total Deposits Ratio (CITD) and the Capital Adequacy Ratio (CAR) have positive impact on the financial performance of banks in the Western Balkans (ROA). The Quick Ratio (QR), Loans to Total Assets (LTA) and Interest Coverage Ratio (ICR) variables do not affect the financial performance of banks in the Western Balkans (ROA). Table 3 summarizes the results as follows:

Table 3. Summary of correlations and regression for Western Balkan Countries' banks – ROA.

	Dep. var. : ROA					
	Ind. var.	**Correlation**	**Sig.**	**Coeff. Variable**	**T-Value**	**Sig.**
Model 1	QR	-0.238**	0.001	QR	−0.265	0.791
	CuR	-0.240**	0.001	CuR	−4.683	0.000
	LTD	0.043	0.548	LTD	9.668	0.000
	LTA	0.098	0.169	LTA	−1.515	0.131
	CITD	-0.235**	0.001	CITD	2.139	0.034
	CAR	-0.246**	0.000	CAR	3.019	0.003
	ICR	-0.331**	0.001	ICR	−1.141	0.255
	R square	**F-Value**				
	0.520[a]	29.73	0.000[b]	Const.	-0.251	0.781

Note:
** - Correlation is significant at the 0.05 level (2-tailed).
a. Predictors: (Constant), ICR, LTD, LTA, CAR, QR, CuR, CITD
b. Predictors: (Constant), ICR, LTD, LTA, CAR, QR, CuR, CITD.
Note: QR (Quick ratio); CuR (Current Ratio); LTD (Loan to Total Deposit Ratio); LTA (Loan to Total Asset Ratio); CITD (Cash + Investments to Total Deposit Ratio); CAR (Capital Adequacy Ratio); ICR (Interest Coverage Ratio).

The correlation results shown in Table 4 which indicate the correlation of ICR is significant at 1% while the correlation of CAR is significant at 5%. The correlation of QR, CuR, LTD, LTA and CITD is not significant (QR (-0.075), CuR (-0.076), LTD (-0.019), LTA (0.067) and CITD (-0.072). The results show negative correlation between QR, CuR, LTD, CITD, CAR and ICR with RO. In contrast, a positive correlation exists between LTA and ROE as a measure of financial performance.

Table 4 shows the regression analysis for ROE and its relationship with liquidity risk indicators. The R-squared of 0.542 means that the model's independent variables describe and interpret 54% of the total variance of ROE. The regression model is significant at 1% because the significance of the F value (0.000) is less than 1%. In this case, at least two variables in the model have a negative impact on ROE at 1% and the two other variables have a positive effect on ROE at 1%. However, another variable has a positive influence on ROE at 5%.

Quick Ratio (QR) and Interest Coverage Ratio (ICR) have a significant negative influence on the financial performance of Western Balkan banks (ROE). On the other hand, the Current Ratio (CuR), Loan to Total Assets Ratio (LTA) and Cash and Investments to Total Deposits Ratio (CITD) have significant positive influence on the financial performance of Western Balkan banks (ROE). Loan-to-deposit ratio (LTD) and capital adequacy ratio (CAR) have no impact on the financial performance of Western Balkan banks (ROE). Table 4 summarizes the results as follows:

Table 4. Summary of correlations and regression for Western Balkan Countries' banks – ROE.

	Dep. var. : ROA					
	Ind. var.	**Correlation**	**Sig.**	**Coeff. variable**	**T-Value**	**Sig.**
Model 2	QR	-0.075	0.292	QR	−3.357	0.000
	CuR	-0.076	0.276	CuR	1.510	0.000
	LTD	-0.019	0.788	LTD	−0.001	0.187
	LTA	0.067	0.344	LTA	0.363	0.035
	CITD	-0.072	0.312	CITD	2.025	0.018
	CAR	-0.143*	0.043	CAR	−0.205	0.2679
	ICR	-0.241**	0.001	ICR	−1.619	0.000
	R square	**F-Value**				
	0.542[a]	32.47	0.000[b]	Const.	-0.036	0.672

Note:
** - Correlation is significant at the 0.05 level (2-tailed).
* - Correlation is significant at the 0.10 level (2-tailed).
a. Predictors: (Constant), ICR, LTD, LTA, CAR, QR, CuR, CITD
b. Predictors: (Constant), ICR, LTD, LTA, CAR, QR, CuR, CITD.
Note: QR (Quick ratio); CuR (Current Ratio); LTD (Loan to Total Deposit Ratio); LTA (Loan to Total Asset Ratio); CITD (Cash + Investments to Total Deposit Ratio); CAR (Capital Adequacy Ratio); ICR (Interest Coverage Ratio).

Table 5's correlation data demonstrate that the correlations between QR, CuR, LTD, LTA, CITD and CAR are significant at the 1% level.

In contrast to the negative correlations between QR, CuR, LTD, CITD, CAR and ICR, the data demonstrate a positive correlation between LTA and net interest margin.

A summary of the regression analysis is also provided in Table 5. The model's R-squared is 0.519 if the independent variables are assumed to be able to understand and explain 51.9 percent of the total variance of net interest margin as the dependent variable.

The regression model is significant at 1%, according to the F-Sig. Value of (0.000) which is less than 1%. In this case, the model has five variables that negatively influence NIM at 1% and only one variable with a positive effect.

To conclude it was observed that the financial performance of banks in the Western Balkans has negative impact on the ratio of loans to total deposits (LTD), capital adequacy and interest coverage (NIM). Unlike Quick Ratio (QR), Current Ratio (CuR) and Cash plus Investments to Total Deposits (CITD) which do not have a significant impact on the financial performance of banks in the Western Balkans (NIM). Loans to Total Assets (LTA) have a significant positive impact on the performance of these banks.

Table 5. Summary of correlations and regression for Western Balkan Countries' banks – NIM.

	Dep. var: NIM					
Model 3	**Ind. var.**	**Correlation**	**Sig.**	**Coeff. variable**	**T-Value**	**Sig.**
	QR	−0.264**	0.000	QR	−1.563	0.119
	CuR	-0.224**	0.001	CuR	0.700	0.484
	LTD	−0.630**	0.000	LTD	−12.231	0.000
	LTA	0.284**	0.000	LTA	3.537	0.001
	CITD	-0.266**	0.000	CITD	1.473	0.142
	CAR	−0.226**	0.001	CAR	−2.137	0.034
	ICR	−0.084	0.235	ICR	−2.003	0.047
	R square	**F-Value**				
	0.519[a]	29.59	0.000[b]	Const.	10.631	0.000

Note:
** - Correlation is significant at the 0.05 level (2-tailed).
a. Predictors: (Constant), ICR, LTD, LTA, CAR, QR, CuR, CITD.
b. Predictors: (Constant), ICR, LTD, LTA, CAR, QR, CuR, CITD.
Note: QR (Quick ratio); CuR (Current Ratio); LTD (Loan to Total Deposit Ratio); LTA (Loan to Total Asset Ratio); CITD (Cash + Investments to Total Deposit Ratio); CAR (Capital Adequacy Ratio); ICR (Interest Coverage Ratio).

5. Conclusion

Examining the problem in the Western Balkans from the years 2015 to 2020 in terms of the importance of liquidity management risk and its impact on financial performance. Return on assets, return on equity and net interest margin all gauge a company's financial performance is the focus of the study. The Quick Ratio, Current Ratio, Loan-To- Asset Ratio, cash plus investments-to-deposits ratio, Equity Ratio and Interest Coverage Ratio are all used to evaluate liquidity risk.

Several findings were drawn from this study. The findings reveal that only the current ratio substantially negative impact on the return on assets. On the other hand, the loans-to-total deposits ratio, the cash plus investments-to-deposits ratio and the capital adequacy ratio have significant positive impacts. The Quick Ratio, the Loans-to-Total Assets ratio and the Interest Coverage Ratio do not affect the return on assets.

The Quick Ratio and Interest Coverage Ratio have positive relationship with Return on Equity. In contrast, the Current Ratio, Loans-To-Total Assets Ratio and the cash plus investments-to-deposit ratio have a negative relationship with Return on Equity. The Loans-To-Total Deposits and Capital Adequacy Ratio does not affect the return on equity.

The Loans-To-Deposit Ratio, Capital Adequacy Ratio and Interest Coverage Ratio are all liquidity risk characteristics that have negative impact on the net interest margin. In contrast, Loans-To-Total Assets have significant positive impact. The Quick Ratio, Current Ratio and Cash plus Investments- To- Deposits ratio do not affect the net interest margin.

Several suggestions can be made based on the study's findings. Banks should be aware of the negative effects of various aspects on their performance especially the Quick Ratio and Interest Coverage Ratio which have negative impact on both ROE and NIM as well as the Current Ratio which has a significant negative effect on ROA. Thus, to increase profitability, banks should pay special attention to the influence of the Interest Coverage Ratio as a measure of their ability to pay debts and the liquidity ratio as a measure of their ability to do so.

The study is essential as it gives a comprehensive view of the factors influencing banks' financial performance. In the light of these factors, it can be concluded that banks that successfully manage their liquidity risk reach an appropriate level of liquidity which has a beneficial impact on their performance.

References

Abbas, K., & Mourouj, T. (2015). The impact of bank liquidity risk management on banking financial performance an applied study in a sample of private banks. *Journal of Administration and Economics*, *5*(20), 73-100.

Ahamed, F. (2021). Determinants of liquidity risk in the commercial banks in Bangladesh. *European Journal of Business and Management Research*, *6*(1), 164-169.Available at: https://doi.org/10.24018/ejbmr.2021.6.1.729.

Ajibike, J. O., & Aremu, O. S. (2015). The impact of liquidity on Nigerian bank performance: A dynamic panel approach. *Journal of African Macroeconomic Review*, *5*(2), 23-41.

Al-Homaidi, E. A., Tabash, M. I., Farhan, N. H., & Almaqtari, F. A. (2019). The determinants of liquidity of Indian listed commercial banks: A panel data approach. *Cogent Economics & Finance*, *7*(1), 1616521.Available at: https://doi.org/10.1080/23322039.2019.1616521.

Alali, S. M. (2019). The impact of bank liquidity on the profitability of commercial banks: An applied study on Jordanian Commercial Banks for the period (2013/2017). *International Journal of Economics and Financial Issues*, *9*(5), 24-28.Available at: https://doi.org/10.32479/ijefi.8304.

Alshatti, A. S. (2015). The effect of the liquidity management on profitability in the Jordanian commercial banks. *International Journal of Business and Management*, *10*(1), 1-10.Available at: https://doi.org/10.5539/ijbm.v10n1p62.

Ashraf, M., Haider, Z., & Sarwar, M. B. (2017). Bank specific and macroeconomic determinants impact on banks profitability: Evidence from Asian countries. *International Journal of Sciences: Basic and Applied Research*, *33*(3), 187-199.

Bordeleau, É., & Christopher, G. C. (2010). The impact of liquidity on bank profitability. Staff Working Papers 10-38, Bank of Canada.

CBK. (2021). CITATION CBK \l 1052. Financial Stability Report No.17.

Chen, Y.-K., Shen, C.-H., Kao, L., & Yeh, C.-Y. (2018). Bank liquidity risk and performance. *Review of Pacific Basin Financial Markets and Policies*, *21*(01), 1850007.

Chowdhury, M. M., & Zaman, S. (2018). Effect of liquidity risk on performance of Islamic Banks in Bangladesh. *IOSR Journal of Economics and Finance*, *9*(4), 01-09.

DeYoung, R., & Jang, K. Y. (2016). Do banks actively manage their liquidity? *Journal of Banking & Finance*, *66*(C), 143-161.Available at: https://doi.org/10.1016/j.jbankfin.2015.11.013.

Ferrouhi, E. M. (2014). Bank liquidity and financial performance: Evidence from moroccan banking industry. *Business: Theory and Practice*, *15*(4), 351-361.Available at: https://doi.org/10.3846/btp.2014.443.

Gadou, L. M. A. (2022). Banking risk in selected MENA countries. *International Journal of Innovative Research and Scientific Studies*, *5*(4), 306–331.Available at: https://doi.org/10.53894/ijirss.v5i4.743.

Ghenimi, A., & Omri, M. A. B. (2015). Liquidity and financial stability conventional versus Islamic Banks. *International Journal of Economics and Empirical Research*, *3*(9), 419-432.

Gweyi, M., Olweny, T., & Oloko, M. (2018). Influence of credit risk on financial performance of deposit taking savings and credit co-operatives in Kenya.

Hacini, I., Boulenfad, A., & Dahou, K. (2021). The impact of liquidity risk management on the financial performance of Saudi Arabian Banks. *EMAJ: Emerging Markets Journal*, *11*(1), 67-75.Available at: https://doi.org/10.5195/emaj.2021.221.

Huong, T. T. X., Nga, T. T. T., & Oanh, T. T. K. (2021). Liquidity risk and bank performance in Southeast Asian countries: A dynamic panel approach. *Quantitative Finance and Economics*, *5*(1), 111-133.Available at: https://doi.org/10.3934/qfe.2021006.

Kaddumia, T., & Al-Kilani, Q. (2020). The effect of liquidity risk management on the Jordanian financial sector–the proxy of commercial banks. *International Journal of Innovation Creativity and Change*, *14*(1), 240-253.

Kamande, E. G. (2017). The effect of bank-specific factors on the financial performance of commercial banks in Kenya. South Eastern Kenya University, Digital Repository. Retrieved from: http://repository.seku.ac.ke/handle/123456789/3057.

Khalid, M. S., Rashed, M., & Hossain, A. (2019). The impact of liquidity risk on banking performance: Evidence from the emerging market. *Global Journal of Management and Business Research.*

Kohlscheen, E., Murcia, A., & Contreras, J. (2018). Determinants of bank profitability in emerging markets. Bank for International Settlements, BIS Working Paper No. 686.

Konadu, J. (2009). Liquidity and profitability: Empirical evidence from banks in Ghana. *Kwame Nkrumah University of Science and Technology.*

Kumar, M., & Yadav, G. C. (2013). Liquidity risk management in bank: A conceptual framework. *AIMA Journal of Management & Research*, *7*(2/4), 0974-0497.

Lamberg, S., & Valming, S. (2009). Impact of liquidity management of profitability: A study of the adaptation of liquidity. *Umea School of Business.*

Laminfoday, D. (2018). *The effect of liquidity risk management on the financial performance of commercial banks in Sierra Leone.* A Research Proposal was Submitted for the Degree of Magister of Business Administration Nairobi School of Business University of Nairobi.

Lartey, V. C., Antwi, S., & Boadi, E. K. (2013). The relationship between liquidity and profitability of listed Banks in Ghana. *International Journal of Business and Social Science*, *4*(3).

Leykun, F. (2016). Determinants of commercial banks' liquidity risk: Evidence from Ethiopia. *Research Journal of Finance and Accounting*, *7*(15), 47-61.

Marozva, G. (2015). Liquidity and bank performance. *International Business & Economics Research Journal*, *14*(3), 453-562.

Mohammad, S., Asutay, M., Dixon, R., & Platonova, E. (2020). Liquidity risk exposure and its determinants in the banking sector: A comparative analysis between Islamic conventional and hybrid banks. *Journal of International Financial Markets Institutions and Money*, *66*, 101196.Available at: https://doi.org/10.1016/j.intfin.2020.101196.

Mwangi, Y. (2014). *The effect of risk management on financial performance of commercial Banks in Kenya*. Master Thesis University of Nairobi.

Ndoka, S., Islami, M., & Shima, J. (2017). The impact of liquidity risk management on the performance of Albanian Commercial Banks during the period 2005-2015. *International Journal of Social Sciences and Education Research, 3*(1), 70-76.Available at: https://doi.org/10.24289/ijsser.283588.

Nkegbe, P. K., & Ustarz, Y. (2015). Banks performance in Ghana: Trends and determinants. *Ghana Journal of Development Studies, 12*(1-2), 33-52.Available at: https://doi.org/10.4314/gjds.v12i1-2.3.

Nuriyeva, Z. (2014). *Factors affecting the profitability of Azerbaijan Banking System*. Master's Thesis.

Onyango, W. A., & Olando, C. O. (2020). Analysis on influence of bank specific factors on non-performing loans among commercial Banks in Kenya. *Advances in Economics and Business, 8*(3), 105-121.Available at: https://doi.org/10.13189/aeb.2020.080301.

Petria, N., Capraru, B., & Ihnatov, I. (2015). Determinants of banks' profitability: Evidence from EU 27 banking systems. *Procedia Economics and Finance*(20), 518-524.Available at: https://doi.org/10.1016/s2212-5671(15)00104-5.

Saleh, I., & Abu Afifa, M. (2020). The effect of credit risk liquidity risk and bank capital on bank profitability: Evidence from an emerging market. *Cogent Economics & Finance, 8*(1), 1814509.

Salim, B. F., & Bilal, Z. O. (2016). The impact of liquidity management on financial performance in Omani banking sector. *International Journal of Accounting, Business and Economic Research, 14*(1), 545-565.

Samilogu, F., & Akgun, A. (2016). The relationship between working capital management and profitability: Evidence from Turkey. *Business & Economics Research Journal, 7*(2), 1-1.Available at: https://doi.org/10.20409/berj.2016217492.

Song'e, H. K. (2015). *The effect of liquidity management on the financial performance of deposit-taking SACCOs in Nairobi County*. A Research Project Submitted in Partial Fulfillment of the Requirements for the Award of Master of Business Administration, School of Business University of Nairobi.

Tran, T., Tu, T., Yen, T., Nguyen, Thuy, T. H., Nguyen, & Long, T. (2019). The determinants of liquidity risk of commercial banks in Vietnam. *Banks and Bank Systems, 14*(1), 94 -110.Available at: https://doi.org/10.21511/bbs.14(1).2019.09.

Wójcik-Mazur, A., & Szajt, M. (2015). Determinants of liquidity risk in commercial banks in the European union. *Argumenta Oeconomica, 2*(35), 25-47.Available at: https://doi.org/10.15611/aoe.2015.2.02.

Zaghdoudi, K., & Hakimi, A. (2017). The determinants of liquidity risk: Evidence from Tunisian Banks. *Journal of Applied Finance & Banking, 7*(2), 71-81.

Zhang, L., & Zhao, Q. (2021). *Analysis of factors affecting liquidity risk of listed commercial Banks in China-- based on the panel data model*. Paper presented at the International Conference on Environmental and Engineering Management.