

Macroeconomic and Firm Specific Factors Affecting Stock Market Liquidity in Nepal

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Abstract

This study examines the macroeconomic and firm-specific factors affecting stock market liquidity in Nepal. Turnover ratio and illiquidity ratio are selected as the dependent variables. The selected independent variables are firm size, earnings per share, GDP growth rate, inflation rate, interest rate and leverage. The study is based on secondary data of 12 commercial banks with 120 observations for the period from 2014/15 to 2023/24. The data were collected from Banking and Financial Statistics published by Nepal Rastra Bank and annual reports of the selected commercial banks. The correlation coefficients and regression models are estimated to test the significance and importance of the macroeconomic and firm-specific factors affecting stock market liquidity in Nepal.

The study showed that firm size has a positive impact on illiquidity ratio and turnover ratio. It indicates that larger the firm size, higher would be the illiquidity ratio and turnover ratio. Similarly, earning per share has a positive impact on illiquidity ratio and turnover ratio. It indicates that increase in earnings per share leads to increase in illiquidity ratio and turnover ratio. However, inflation rate has a negative impact on illiquidity ratio and turnover ratio. It indicates that increase in inflation rate leads to decrease in illiquidity ratio and turnover ratio. Likewise, interest rate has a negative impact on illiquidity ratio and turnover ratio. It indicates that increase in interest rate leads to decrease in illiquidity ratio and turnover ratio. In contrast, GDP growth rate has a positive impact on illiquidity ratio and turnover ratio. It indicates that higher the GDP growth rate, higher would be the illiquidity ratio and turnover ratio. However, leverage has a negative impact on liquidity ratio and turnover ratio. It indicates that increase in leverage leads to decrease in illiquidity ratio and turnover ratio.

Keywords: illiquidity ratio, GDP growth rate, inflation rate, turnover ratio, firm size, earnings per share, interest rate, leverage

1. Introduction

Stock market liquidity is an essential market characteristic whose presence ensures smooth functioning of the market, whereas its absence causes uneasiness in the market. Brennan et al. (2012) stated that stock market liquidity as the ability of the market to absorb a huge volume of securities at a lower execution cost within a short period without having a significant effect on security prices. Stock liquidity plays a central role in ensuring the smooth functioning of capital markets by facilitating efficient price discovery, minimizing transaction costs, and strengthening investor confidence (El Wassal, 2013). Stock market liquidity refers to how easily stocks can be bought or sold in a market without causing a big change in their price. It is an important indicator of how well financial markets work and their overall health. It shows how quickly investors can turn their stocks into cash and at low costs. A liquid market has high trading activity, narrow bid-ask spreads, and little price fluctuation during transactions. Liquidity is vital for attracting investors to the stock market.

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When markets are liquid, they lower transaction costs and price uncertainty, encouraging participation from both institutional and individual investors. This also helps with the price discovery process, where the market reflects all available information in stock prices. Several factors affect stock market liquidity, such as market depth, the number and behavior of investors, the availability of market information, trading rules, the structure of financial markets, and macroeconomic stability (Ma et al., 2016).

Nowicki *et al.* (2024) investigated how macroeconomic variables affect the financial liquidity of companies, using data from 5,327 Polish firms between 2003 and 2021. Using panel data analysis and pooled OLS regression, the study found that most macroeconomic indicators such as GDP per capita, foreign trade balance, CPI, and money supply positively influence corporate liquidity. However, the consumption-to-GDP ratio showed a negative impact on corporate liquidity. Similarly, Salamat *et al.* (2021) identified that an internal (firm-specific) and external (macroeconomic) determinants of stock price fluctuations are vital for investors seeking to invest their money in a firm's stocks.

Phuong *et al.* (2023) examined the impact of macro factors on the market capitalization of countries around the world. The study employed inflation, interest rates, exchange rates, GDP growth and foreign direct investment as a proxy for macroeconomic factors. The results from the generalized method of moments (GMM) showed that inflation, interest rates and foreign direct investment are important factors that significantly affect the capitalization of the stock market. Similarly, Mendelson *et al.* (2006) indicated that market liquidity portrays the presence of willing buyers and sellers who agree to exchange a certain quantity of securities at the stated price without any time delay. As such, stock liquidity holds significant implications for capital allocation efficiency, the cost of capital, market stability, and financial performance across the economy. There is an interconnected roles of macro-level economic conditions and micro-level firm characteristics in shaping stock liquidity in emerging and developed markets alike, offering valuable insights for policymakers aiming to enhance market resilience, investors seeking to optimize portfolio strategies, and corporate managers striving to improve firm valuation and access to capital (Aduda *et al.*, 2012).

Tahir *et al.* (2023) assessed the financial and non-financial factors affecting the liquidity of Islamic banks in Pakistan from 2009 to 2020, focusing on the role of Sharia board governance. Using a fixed-effect model on panel data, the study found that total assets and profitability positively influence bank liquidity, while deposits and capital adequacy have a negative effect. Further, Al Salamat *et al.* (2016) assessed the macroeconomic and firm-specific determinants of stock liquidity in the context of Jordan over the period 2007-2014. Using unbalance cross-sectional and time series data, the study showed that stock liquidity is positively affected by earning per share, interest rate, GDP, leverage, and the size of the firm while negatively affected by the ratio of the market value per share to the book value per share, inflation rate, and return on assets.

Menike *et al.* (2015) examined the relationship between macroeconomic and firm-specific determinants of stock return of Sri Lanka and United Kingdom. The results revealed stock returns in Sri Lanka and UK are influenced by both firm-specific and macroeconomic factors. Similarly, Mitra *et al.* (2023) analyzed how macroeconomic factors, specifically GDP growth, affect the performance of Indian manufacturing firms from 2004-05 to 2021-22. Using a two-step GMM model, firm performance is measured by return on assets, return on equity, and Tobin's Q. The study showed a positive relationship between GDP growth

and firm performance. Firm size, age, leverage, sales growth, and operating profit also significantly influence performance. However, economic growth revealed a positive impact on stock market liquidity. Likewise, Cheong *et al.* (2021) investigated how macroeconomic and firm-specific factors affect corporate profitability in Singapore and Hong Kong across three periods: before, during, and after the global financial crisis. The study revealed that firm size, leverage, liquidity, sales growth, past profitability, GDP growth, and inflation all have significant impact on corporate profitability.

Egbunike and Okerekeoti (2018) examined the interrelationship between macroeconomic factors, firm characteristics and financial performance of manufacturing firms in Nigeria. The results showed that while interest rate and exchange rate have no statistically significant effect on return on assets (ROA), both inflation rate and GDP growth rate exhibited a significant impact on return on assets, suggesting that macroeconomic stability and economic expansion are key drivers of firm profitability. Boloupremo (2020) investigated how market liquidity affects stock returns on the Nigerian Stock Exchange from 1985 to 2015. Using a vector auto-regression model, the study revealed that higher liquidity measured by trading volume and turnover leads to higher stock returns. It indicates a positive relationship between liquidity and returns in Nigeria. Similarly, Demir (2019) assessed the impacts of some prominent macroeconomic factors on the Turkish Stock Market Index, BIST-100. The study revealed that economic growth, the relative value of the domestic currency, portfolio investments, and foreign direct investment (FDI) contribute positively to the rise in the stock market index, indicating that favorable macroeconomic conditions and capital inflows enhance investor confidence and market performance.

Al-Homaidi *et al.* (2019) analyzed the determinants of liquidity of Indian listed commercial banks. The study indicated that certain bank-specific factors, namely bank size, capital adequacy ratio, deposit ratio, operational efficiency ratio, and return on assets have significant positive impact on bank liquidity, suggesting that larger and well-capitalized banks with efficient operations and strong profitability are better positioned to maintain higher levels of liquid assets. Further, Egbunike *et al.* (2018) assessed the interrelationship between macroeconomic factors, firm characteristics and financial performance of manufacturing firms in Nigeria. The study conclude that firms are more sensitive to changes in the overall economic environment, particularly in terms of price stability and economic output, than to monetary indicators like interest and exchange rates.

In the context of Nepal, Kaphle (2025) examined the factors affecting the financial influence of Standard Chartered Bank (SCB) and Nabil Bank, two senior banks listed on the Nepal Stock Exchange. The study stated that there is a positive relationship between market price per share and key financial activities such as earnings per share and dividends per share. Similarly, Ghimire and Agarwal (2025) assessed the determinants influencing liquidity in Nepalese commercial banks. The study revealed that capital adequacy ratio, deposit ratio, and net interest margin positively and significantly influence liquidity. Conversely, non-performing loans exhibit a strong negative relationship with liquidity. Likewise, Gurung (2025) analyzed the factors affecting the performance of Nepal's stock market using ARDL time-series analysis. The study found that macroeconomic indicators (like GDP and interest rates), firm-specific factors (like total assets and ROE), market size, and events (like political instability and policy changes) all influence the stock market index.

The above discussion shows that empirical evidences vary greatly across the studies

on the macroeconomic and firm-specific determinants of stock liquidity. Though there are above mentioned empirical evidences in the context of other countries and in Nepal, no such findings using more recent data exist in the context of Nepal. Therefore, in order to support one view or the other, this study has been conducted.

The major objective of this study is to examine the macroeconomic and firm-specific factors affecting stock market liquidity in Nepal. Specifically, it examines the relationship of firm size, earnings per share, GDP growth rate, inflation rate, interest rate and leverage on stock liquidity in Nepalese commercial banks.

The remainder of this study is organized as follows: Section two describes the sample, data and methodology. Section three presents the empirical results and the final section draws the conclusion.

2. Methodological aspects

The study is based on the secondary data which were collected from 12 Nepalese commercial banks for the study period from 2014/15 to 2023/24, leading to a total of 120 observations. The data were collected from Bank Supervision Report published by Nepal Rastra Bank (NRB), Economic Survey Report, World Bank Data and annual reports of the selected commercial banks. This study is based on descriptive as well as causal comparative research designs. Table 1 shows the list of commercial banks selected for the study along with the study period and number of observations.

Table 1

List of commercial banks selected for the study along with study period and number of observations

S.N.	Name of commercial banks	Study Period	Observations
1	Agricultural Development Bank Limited	2014/15-2023/24	10
2	Everest Bank Limited	2014/15-2023/24	10
3	Global IME Bank Limited	2014/15-2023/24	10
4	Himalayan Bank Limited	2014/15-2023/24	10
5	Kumari Bank Limited	2014/15-2023/24	10
6	Nabil Bank Limited	2014/15-2023/24	10
7	NBM Bank Limited	2014/15-2023/24	10
8	Nepal Bank Limited	2014/15-2023/24	10
9	NIC Asia Bank Limited	2014/15-2023/24	10
10	NMB Bank Limited	2014/15-2023/24	10
11	Prabhu Bank Limited	2014/15-2023/24	10
12	Siddhartha Bank Limited	2014/15-2023/24	10
Total number of observations			120

Thus, the study is based on 120 observations.

The model

The models estimated in this study assumes that stock liquidity depends upon macroeconomic and firm-specific determinants. The selected dependent variables are turnover ratio and illiquidity ratio. Similarly, the selected independent variables are firm size, earnings per share, GDP growth rate, inflation rate, interest rate and leverage. Therefore, the

model takes the following from:

$$ILR_{it} = \beta_0 + \beta_1 FSIZE + \beta_2 EPS + \beta_3 GDP + \beta_4 INF + \beta_5 INT + \beta_6 LEV + e_{it}$$

$$TR_{it} = \beta_0 + \beta_1 FSIZE + \beta_2 EPS + \beta_3 GDP + \beta_4 INF + \beta_5 INT + \beta_6 LEV + e_{it}$$

Where,

ILR = Illiquidity ratio measured as the ratio of total assets to total debts of the banks, in percentage.

TR = Turnover ratio as measured by the ratio of daily trading volume to total outstanding shares, in percentage.

FSIZE = Firm size as measured by the ratio of total assets of the banks, Rs. in billions.

EPS = Earnings per share as measured by the ratio of net profit to total outstanding shares, in Rs.

GDP = GDP measured as the annual percentage increase in the total value of goods and services produced in the economy, in percentage.

INF = Inflation rate as measured by the annual percentage change in the general price level of goods and services in the economy, in percentage.

INT = Interest rate as measured by the central bank's benchmark interest rate, in percentage.

LEV = Leverage as measured by the ratio of total debt to total assets of the banks, in percentage.

The following section describes the independent variables used in this study along with the hypothesis formulation:

Firm size

Larger companies typically have more liquid stocks than smaller ones. This is primarily because large firms are typically more visible to investors, covered more extensively by analysts, and included in major stock indices, which enhances investor interest and trading activity (Chabachib *et al.*, 2020). Pattiruhu and Paaïs (2020) revealed that larger firms usually have higher market capitalizations and issue more shares, resulting in greater trading volumes and narrower bid-ask spreads, both indicators of higher liquidity. According to Cheng (2007), smaller firms often suffer from limited investor awareness, lower trading frequency, and higher transaction costs, leading to reduced stock liquidity. Therefore, firm size acts as a crucial firm-specific determinant of stock liquidity, influencing how easily a stock can be bought or sold in the market without significantly affecting its price. Based on it, this study develops the following hypothesis:

H₁: There is positive relationship between firm size and stock liquidity.

Earnings per share

Arar *et al.* (2018) examined the relationship between earnings management and stock price liquidity. The study found a positive relationship between earnings management and stock price liquidity. Similarly, Anwar (2019) assessed the effect of return on equity, earning per share and price earnings ratio on stock prices. The study revealed that a higher

EPS indicates strong company profitability, which can attract more investors, increase trading activity, and thus improve stock liquidity. According to Liem and Basana (2012), EPS alone may not fully capture a firm's financial health, as it can be influenced by accounting practices or one-time events. Therefore, while a positive relationship generally exists between EPS and stock liquidity, it is most meaningful when EPS is consistent, credible, and considered alongside other financial metrics and market conditions. Based on it, this study develops the following hypothesis:

H₂: There is positive relationship between earnings per share and stock liquidity.

GDP growth rate

GDP growth rate serves as a key macroeconomic determinant of stock liquidity, reflecting the broader economic environment's influence on market dynamics (Zhu *et al.*, 2004). Abdul-Khaliq (2013) investigated the impact of stock market liquidity on economic growth in Jordan. The study revealed that strong economic growth tends to enhance investor confidence, increase trading activity, and improve overall market participation. When a country's GDP is growing, it signals a healthy and expanding economy, which often translates into better corporate earnings, higher consumer spending, and increased investment flows. These favorable economic conditions encourage both domestic and foreign investors to engage more actively in the stock market, thereby boosting the demand for and trading of stocks. This increased trading volume enhances stock liquidity by reducing transaction costs (Florackis *et al.*, 2014). Moreover, economic growth often leads to improved financial sector development, better regulatory environments, and the expansion of capital markets, all of which further contribute to higher liquidity levels (Chikwira and Mohammed, 2023). Based on it, this study develops the following hypothesis:

H₃: There is a positive relationship between GDP growth rate and stock liquidity.

Inflation rate

Al Oshaibat and Majali (2016) examined the relationship between stock returns and inflation, interest rates, share liquidity and remittances of workers in the Amman stock exchange. The results showed that higher inflation tends to create economic uncertainty, reduce investor confidence, and increase the cost of capital which can lower trading activity in the stock market. According to Eldomiaty *et al.* (2020), when inflation rises, purchasing power declines, and both individual and institutional investors may become more cautious, shifting their funds to safer assets such as bonds, real estate, or commodities. Similarly, Kisman and Sawitri (2019) analyzed the effect of liquidity ratio, solvability, asset growth and inflation on stock return with profitability as intervening variable at building construction sector in Indonesian Stock Exchange. The study showed that high inflation also complicates the valuation of future corporate earnings, making stock prices more volatile and unpredictable, which may deter frequent trading and reduce liquidity. Based on it, this study develops the following hypothesis:

H₄: There is a negative relationship between inflation rate and stock liquidity.

Interest rate

Al Oshaibat and Majali (2016) assessed the association of stock returns with inflation, interest rates, share liquidity and remittances of workers in the Amman stock exchange. The results showed that there is a negative relationship between interest rate and

stock liquidity. Similarly, Fransisca and Herijawati (2022) revealed that if interest rates rise sharply or unpredictably, especially due to inflationary pressures or central bank tightening, it may negatively affect liquidity by increasing the cost of borrowing, reducing disposable income, and causing investors to become more risk-averse, shifting away from equities. Likewise, Eldomiati *et al.* (2020) showed that inflation rates and interest rates have negative impact on stock liquidity. Based on it, this study develops the following hypothesis:

H₅: There is a negative relationship between interest rate and stock liquidity.

Leverage

Adrian and Shin (2010) revealed a negative relationship between leverage and stock liquidity, as higher leverage tends to increase risk and deter investors, reducing liquidity. Similarly, Zaitoun and Alqudah (2020) revealed that a firm with low leverage and a strong balance sheet is typically viewed as less risky, attracting more investors and facilitating higher trading activity, which enhances liquidity. Likewise, Dang *et al.* (2019) stressed that the firms with moderate leverage may have a balanced risk-return profile that appeals to investors, leading to improved stock liquidity, as long as their debt levels do not exceed a threshold where investor confidence is compromised. Based on it, this study develops the following hypothesis:

H₆: There is a negative relationship between leverage and stock liquidity.

3. Results and discussions

Descriptive statistics

Table 2 presents the descriptive statistics of selected dependent and independent variables during the period of 2014/15 to 2023/24.

Table 2

Descriptive statistics

This table shows the descriptive statistics of dependent and independent variables of 12 Nepalese commercial banks for the study period of 2014/15 to 2023/24. The dependent variables are ILR (Illiquidity ratio measured as the ratio of total assets to total debts of the bank, in percentage) and TR (Turnover ratio as measured by the ratio of daily trading volume to total outstanding shares, in percentage). The selected independent variables are FSIZE (Firm size as measured by the total assets of the banks, Rs. in billions), EPS (Earnings per share as measured by the ratio of net profit to total outstanding shares, in Rs.), GDP (GDP measured as the annual percentage increase in the total value of goods and services produced in the economy, in percentage), INF (Inflation rate measured as the annual percentage change in the general price level of goods and services in the economy, in percentage), INT (Interest rate measured as the central bank's benchmark interest rate, in percentage) and LEV (Leverage measured as the ratio of total debt to total assets of the banks, in percentage).

Variables	Minimum	Maximum	Mean	Std. Deviation
ILR	0.03	5.86	0.62	0.87
TR	0.01	41.09	7.78	7.79
FSIZE	38.37	589.89	196.57	118.33
EPS	3.09	111.78	25.95	15.26
INF	3.61	9.93	6.29	1.89
INT	8.43	17.53	10.73	1.83
GDP	21.19	36.29	28.31	6.97
LEV	51.28	96.37	87.30	11.55

Source: SPSS Output

Correlation analysis

Having indicated the descriptive statistics, Pearson's correlation coefficients are computed and results are presented in Table 3.

Table 3

Pearson's correlation coefficients matrix

This table shows the correlation coefficients of dependent and independent variables of 12 Nepalese commercial banks for the study period of 2014/15 to 2023/24. The dependent variables are ILR (Illiquidity ratio measured as the ratio of total assets to total debts of the bank, in percentage) and TR (Turnover ratio as measured by the ratio of daily trading volume to total outstanding shares, in percentage). The selected independent variables are FSIZE (Firm size as measured by the total assets of the banks, Rs. in billions), EPS (Earnings per share as measured by the ratio of net profit to total outstanding shares, in Rs.), GDP (GDP measured as the annual percentage increase in the total value of goods and services produced in the economy, in percentage), INF (Inflation rate measured as the annual percentage change in the general price level of goods and services in the economy, in percentage), INT (Interest rate measured as the central bank's benchmark interest rate, in percentage) and LEV (Leverage measured as the ratio of total debt to total assets of the banks, in percentage).

Variables	ILR	TR	FSIZE	EPS	INF	INT	GDP	LEV
ILR	1							
TR	-0.241*	1						
FSIZE	0.123	0.102	1					
EPS	0.013	0.028	-0.127	1				
INF	-0.165	-0.264**	0.046	-0.311**	1			
INT	-0.205*	-0.198	-0.179	0.142	-0.141	1		
GDP	0.071	0.153	0.153	-0.016	0.116	-0.234*	1	
LEV	-0.149	-0.158	0.576**	-0.047	-0.039	-0.169	0.344**	1

Note: The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent levels respectively.

Table 3 shows that there is a positive relationship between firm size and illiquidity ratio. It indicates that larger the firm size, higher would be the illiquidity ratio. Similarly, there is a positive relationship between earning per share and illiquidity ratio. It indicates that increase in earnings per share leads to increase in illiquidity ratio. However, there is a negative relationship between inflation rate and illiquidity ratio. It indicates that increase in inflation rate leads to decrease in illiquidity ratio. Likewise, there is a negative relationship between interest rate and illiquidity ratio. It indicates that increase in interest rate leads to decrease in illiquidity ratio. In contrast, there is a positive relationship between GDP growth rate and illiquidity ratio. It indicates that higher the GDP growth rate, higher would be the illiquidity ratio. However, there is a negative relationship between leverage and illiquidity ratio. It indicates that increase in leverage leads to decrease in illiquidity ratio.

Similarly, there is a positive relationship between firm size and turnover ratio. It indicates that larger the firm size, higher would be the turnover ratio. Similarly, there is a positive relationship between earning per share and turnover ratio. It indicates that increase in earnings per share leads to increase in turnover ratio. However, there is a negative relationship between inflation rate and turnover ratio. It indicates that increase in inflation rate leads to decrease in turnover ratio. Likewise, there is a negative relationship between interest rate and turnover ratio. It indicates that increase in interest rate leads to decrease in turnover ratio. In contrast, there is a positive relationship between GDP growth rate and turnover ratio. It indicates that higher the GDP growth rate, higher would be the turnover ratio. However, there

is a negative relationship between leverage and turnover ratio. It indicates that increase in leverage leads to decrease in turnover ratio.

Regression analysis

Having analyzed the Pearson's correlation coefficients, the regression analysis has been carried out and the results are presented in Table 4. More specifically, it presents the regression results of firm size, earnings per share, GDP growth rate, inflation rate, interest rate and leverage on illiquidity ratio of Nepalese commercial banks.

Table 4

Estimated regression results of firm size, earnings per share, GDP growth rate, inflation rate, interest rate and leverage on illiquidity ratio

The results are based on panel data of 12 Nepalese commercial banks with 120 observations for the study period from 2014/15 to 2023/24 by using the linear regression model and the model is $ILR_{it} = \beta_0 + \beta_1 FSIZE + \beta_2 EPS + \beta_3 GDP + \beta_4 INF + \beta_5 INT + \beta_6 LEV + e_{it}$ where, the dependent variable is ILR (Illiquidity ratio measured as the ratio of total assets to total debts of the bank, in percentage). The selected independent variables are FSIZE (Firm size as measured by the total assets of the banks, Rs. in billions), EPS (Earnings per share as measured by the ratio of net profit to total outstanding shares, in Rs.), GDP (GDP measured as the annual percentage increase in the total value of goods and services produced in the economy, in percentage), INF (Inflation rate measured as the annual percentage change in the general price level of goods and services in the economy, in percentage), INT (Interest rate measured as the central bank's benchmark interest rate, in percentage) and LEV (Leverage measured as the ratio of total debt to total assets of the banks, in percentage).

Model	Intercept	Regression coefficients of						Adj. R _{bar} ²	SEE	F-value
		FSIZE	EPS	INF	INT	GDP	LEV			
1	0.327 (2.732)**	0.010 (1.188)						0.005	0.498	1.416
2	0.154 (0.401)		0.005 (0.117)					0.010	0.501	0.013
3	0.075 (0.434)			-0.044 (1.605)				0.017	0.494	2.691
4	0.376 (3.778)**				-0.001 (2.058)*			0.032	0.490	4.226
5	0.144 (1.468)					0.002 (0.687)		0.005	0.499	0.471
6	0.368 (2.929)**						-0.125 (1.475)	0.012	0.495	2.169
7	0.341 (0.823)	0.014 (1.178)	0.001 (0.036)					0.007	0.489	0.701
8	0.019 (0.363)	0.018 (1.204)	0.019 (0.509)	-0.051 (1.781)				0.016	0.496	1.524
9	0.013 (0.026)	0.014 (1.566)	0.027 (0.704)	-0.045 (1.571)	-0.002 (2.171)*			0.056	0.484	2.367
10	0.001 (0.002)	0.008 (0.637)	0.025 (0.684)	-0.043 (1.531)	-0.001 (2.063)*	0.001 (0.255)		0.045	0.487	1.888
11	0.086 (0.164)	0.008 (0.637)	0.027 (0.685)	-0.049 (1.381)	-0.002 (2.104)*	0.003 (0.626)	-0.140 (1.208)	0.049	0.486	1.825

Notes:

- i. Figures in parenthesis are t-value
- ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.
- iii. Illiquidity ratio is the dependent variable.

Table 4 shows that the beta coefficients for firm size are positive with illiquidity ratio. It indicates that firm size has a positive impact on illiquidity ratio. This finding is similar to the findings of Pattiruhu and Paais (2020). Similarly, the beta coefficients for earnings per share are positive with illiquidity ratio. It indicates that earnings per share has a positive impact on illiquidity ratio. This finding is consistent with the findings of Arar *et al.* (2018). However, the beta coefficients for inflation rates are negative with illiquidity ratio. It indicates that inflation rates have negative impact on illiquidity ratio. This finding is similar to the findings

of Al Oshaibat and Majali (2016). Likewise, the beta coefficients for interest rate are negative with illiquidity ratio. It indicates that interest rate has a negative impact on illiquidity ratio. This finding is consistent with the findings of Fransisca and Herijawati (2022). In contrast, the beta coefficients for GDP growth rate are positive with illiquidity ratio. It indicates that GDP growth rate has a positive impact on illiquidity ratio. This finding is similar to the findings of Abdul-Khaliq (2013). However, the beta coefficients for leverage are negative with illiquidity ratio. It indicates that leverage has a negative impact on illiquidity ratio. This finding is consistent with the findings of Adrian and Shin (2010).

Table 5 presents the regression results of firm size, earnings per share, GDP growth rate, inflation rate, interest rate and leverage on turnover ratio of Nepalese commercial banks.

Table 5

Estimated regression results of firm size, earnings per share, GDP growth rate, inflation rate, interest rate and leverage on turnover ratio

The results are based on panel data of 12 Nepalese commercial banks with 120 observations for the study period from 2014/15 to 2023/24 by using the linear regression model and the model is $TR_{it} = \beta_0 + \beta_1 FSIZE + \beta_2 EPS + \beta_3 GDP + \beta_4 INF + \beta_5 INT + \beta_6 LEV + e_t$, where, the dependent variable is TR (Turnover ratio as measured by the ratio of daily trading volume to total outstanding shares, in percentage). The selected independent variables are FSIZE (Firm size as measured by the total assets of the banks, Rs. in billions), EPS (Earnings per share as measured by the ratio of net profit to total outstanding shares, in Rs.), GDP (GDP measured as the annual percentage increase in the total value of goods and services produced in the economy, in percentage), INF (Inflation rate measured as the annual percentage change in the general price level of goods and services in the economy, in percentage), INT (Interest rate measured as the central bank's benchmark interest rate, in percentage) and LEV (Leverage measured as the ratio of total debt to total assets of the banks, in percentage).

Model	Intercept	Regression coefficients of						Adj. R ²	SEE	F-value
		FSIZE	EPS	INF	INT	GDP	LEV			
1	1.380 (0.226)	2.023 (2.319)*						0.041	9.938	5.425
2	6.491 (0.803)		7.019 (2.698)**					0.058	9.820	7.361
3	9.270 (3.633)**			-0.118 (2.505)*				0.048	9.875	6.172
4	10.940 (1.759)				-1.149 (2.003)**			0.006	10.151	0.457
5	9.940 (3.591)**					4.488 (3.145)**		0.034	9.960	4.260
6	9.940 (3.591)**						-0.133 (3.256)**	0.087	9.684	10.580
7	18.150 (1.899)	1.883 (2.194)*	6.645 (2.593)**					0.093	9.652	6.184
8	38.019 (3.759)**	3.105 (3.647)**	7.332 (3.071)**	-0.186 (4.113)**				0.217	8.971	10.404
9	38.019 (3.759)**	3.102 (3.641)**	7.453 (3.114)**	-0.186 (4.105)**	-0.005 (0.008)			0.215	8.969	7.998
10	38.019 (3.759)**	2.767 (3.270)**	7.978 (3.393)**	-0.157 (3.500)**	-0.122 (0.190)	4.379 (2.862)**		0.249	8.855	7.735
11	38.201 (2.966)**	1.796 (1.944)	7.680 (3.337)**	-0.157 (3.500)**	-0.196 (0.300)	4.348 (2.840)**	-0.133 (3.256)**	0.283	8.606	7.676

Notes:

- i. Figures in parenthesis are t-value
- ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.
- iii. Turnover ratio is the dependent variable.

Table 5 shows that the beta coefficients for firm size are positive with turnover ratio. It indicates that firm size has a positive impact on turnover ratio. This finding is similar to the findings of Pattiruhu and Paais (2020). Similarly, the beta coefficients for earnings per share are positive with turnover ratio. It indicates that earnings per share has a positive impact on

turnover ratio. This finding is consistent with the findings of Anwar (2019). However, the beta coefficients for inflation rates are negative with turnover ratio. It indicates that inflation rates have negative impact on turnover ratio. This finding is similar to the findings of Kisman and Sawitri (2019). Likewise, the beta coefficients for interest rate are negative with turnover ratio. It indicates that interest rate has a negative impact on turnover ratio. This finding is consistent with the findings of Eldomiaty *et al.* (2020). In contrast, the beta coefficients for GDP growth rate are positive with turnover ratio. It indicates that GDP growth rate has a positive impact on turnover ratio. This finding is similar to the findings of Florackis *et al.* (2014). However, the beta coefficients for leverage are negative with turnover ratio. It indicates that leverage has a negative impact on turnover ratio. This finding is consistent with the findings of Dang *et al.* (2019).

4. Summary and conclusion

The significance of macroeconomic and firm-specific determinants of stock market liquidity lies in their combined influence on market efficiency, investor behavior, and corporate financing. Macroeconomic factors such as GDP growth rate, inflation, interest rates, exchange rates, and monetary policy, shape the broader economic environment in which financial markets operate. These variables affect investor confidence, capital flows, and overall trading activity, thereby playing a critical role in determining the ease with which stocks can be traded without impacting their prices. For instance, robust economic growth and low inflation typically promote higher liquidity by encouraging investment and increasing market participation, while economic instability or tight monetary conditions may reduce it.

This study attempts to examine the macroeconomic and firm-specific factors affecting stock market liquidity in Nepal. This study is based on the secondary data of 12 Nepalese commercial banks, leading to a total of 120 observations.

The major conclusion of this study is that firm size, earnings per share and GDP growth rate have positive impact on illiquidity ratio and turnover ratio. It indicates that higher the firm size, earnings per share and GDP growth rate, higher would be the illiquidity ratio and turnover ratio. In contrast, inflation rate, interest rate and leverage have negative impact on illiquidity ratio and turnover ratio. It indicates that higher the inflation rate, interest rate and leverage, lower would be the illiquidity ratio and turnover ratio. Similarly, the study also concluded that interest rate followed by leverage is the most influencing factor that explains the changes in illiquidity ratio in the context of Nepalese commercial banks. Likewise, the study also concluded that leverage followed by GDP growth rate is the most influencing factor that explains the changes in the turnover ratio in the context of Nepalese commercial banks.

References

- Abdul-Khaliq, S., 2013. The impact of stock market liquidity on economic growth in Jordan. *European Journal of Business and Management* 5(30), 154-158.
- Adrian, T., and H. S. Shin, 2010. Liquidity and leverage. *Journal of Financial Intermediation* 19(3), 418-437.
- Aduda, J., J. M. Masila, and E. N. Onsongo, 2012. The determinants of stock market development: The case for the Nairobi Stock Exchange. *International Journal of Humanities and Social Science* 2(9), 214-230.
- Al Oshaibat, S., and A. Majali, 2016. The relationship between stock returns and each of inflation, interest rates, share liquidity and remittances of workers in the Amman stock exchange. *Journal of*

Internet Banking and Commerce 21(2), 12-24.

- Al Salamat, W., M. Q. Momani, and K. Batayneh, 2021. Firm-specific, macroeconomic factors and stock price risk for Jordanian banks. *Banks and Bank Systems* 16(3), 166-174.
- Al-Homaidi, E. A., M. I. Tabash, N. H. Farhan, and F. A. Almaqtari, 2019. The determinants of liquidity of Indian listed commercial banks: A panel data approach. *Cogent Economics and Finance* 7(1), 1-20.
- Anwar, Y., 2019. The effect of return on equity, earning per share and price earnings ratio on stock prices. *The Accounting Journal of Binaniaga* 4(1), 57-66.
- Arar, S. S., E. Al-Sheikh, and A. S. Hardan, 2018. The relationship between earnings management and stock price liquidity. *International Journal of Business and Management* 13(4), 99-107.
- Boloupremo, T., 2020. Stock market liquidity and firm performance in the Nigerian stock exchange. *International Journal of Commerce and Finance* 6(1), 31-40.
- Brennan M. J., T. Chordia, A. Subrahmanyam, and Q. Tong, 2012. Sell-order liquidity and the cross-section of expected stock returns. *Journal of Financial Economics* 105(3), 523-541.
- Chabachib, M., I. Setyaningrum, H. Hersugondo, I. Shaferi, and I. D. Pamungkas, 2020. Does financial performance matter? Evidence on the impact of liquidity and firm size on stock return in Indonesia. *International Journal of Financial Research* 11(4), 546-555.
- Cheng, S. R., 2007. A study on the factors affecting stock liquidity. *International Journal of Services and Standards* 3(4), 453-475.
- Cheong, C., H. V. Hoang, and D. McMillan, 2021. Macroeconomic factors or firm-specific factors? An examination of the impact on corporate profitability before, during and after the global financial crisis. *Cogent Economic and Finance* 9(1), 1-24.
- Chikwira, C., and J. I. Mohammed, 2023. The impact of the stock market on liquidity and economic growth: Evidence of volatile market. *Economies* 11(6), 155-162.
- Dang, T. L., H. Ly Ho, C. Dzung Lam, T. Thao Tran, and X. V. Vo, 2019. Stock liquidity and capital structure: International evidence. *Cogent Economics and Finance* 7(1), 158-178.
- Demir, C., 2019. Macroeconomic determinants of stock market fluctuations: The case of BIST-100. *Economies* 7(1), 8-15.
- Egbunike, C. F., and C. U. Okerekeoti, (2018). Macroeconomic factors, firm characteristics and financial performance: A study of selected quoted manufacturing firms in Nigeria. *Asian Journal of Accounting Research* 3(2), 142-168.
- El Wassal, K. A., 2013. The development of stock markets: In search of a theory. *International Journal of Economics and Financial Issues* 3(3), 606-624.
- Eldomiatiy, T., Y. Saeed, R. Hammam, and S. AboulSoud, 2020. The associations between stock prices, inflation rates, interest rates are still persistent. Empirical evidence from stock duration model. *Journal of Economics, Finance and Administrative Science* 25(49), 149-162.
- Florackis, C., G. Giorgioni, A. Kostakis, and C. Milas, 2014. On stock market illiquidity and real-time GDP growth. *Journal of International Money and Finance* 44(1), 210-229.
- Fransisca, V., and E. Herijawati, 2022. The influence of interest rate, exchange rate, profitability, and liquidity on stock prices. *ECo-Buss* 5(2), 416-428.
- Ghimire S. R., and N. K. Agarwal, 2025. Firm-specific determinants of liquidity in Nepalese commercial banks. *Journal of Development Review* 10(1), 149-166.
- Gurung, R., 2025. Dynamics of Nepalese stock market performance: An analysis of macro-economic, firm-specific, size, and event factors. *Journal of Mathematics Instruction, Social Research and Opinion* 4(2), 227-242.
- Kaphle D. P., 2025. Impact of earning per share and dividend per share on market price of stock.

Journal of Balkumari College 14(1), 48-53.

- Kisman, Z., and N. N. Sawitri, 2019. Effect of liquidity ratio, solvability, asset growth and inflation on stock return with profitability as intervening variable at building construction sector in Indonesian Stock Exchange: A review of theories and evidence. *Archives of Business Research* 7(8), 226-236.
- Liem, P. F., and S. R. Basana, 2012. Price earnings ratio and stock return analysis (evidence from liquidity 45 stocks listed in Indonesia Stock Exchange). *Jurnal Manajemen dan Kewirausahaan* 14(1), 7-12.
- Ma, R., H. D. Anderson, & B. R. Marshall, 2016. International stock market liquidity: A review. *Managerial Finance* 42(2), 118-135.
- Mendelson, Y. H., and L. H. Pedersen, 2006. Liquidity and asset prices. *Foundations and Trends in Finance* 1(4), 269-364
- Menike, L. M. C. S., P. M. Dunusinghe, and A. Ranasinghe, 2015. Macroeconomic and firm specific determinants of stock returns: A comparative analysis of stock markets in Sri Lanka and in the United Kingdom. *Journal of Finance and Accounting* 3(4), 86-96.
- Mitra, G., V. Gupta, and V. Gupta, 2023. Impact of macroeconomic factors on firm performance: Empirical evidence from India. *Investment Management and Financial Innovations* 20(4), 1-12.
- Nowicki, J., P. Ratajczak, and D. Szutowski, 2024. Influence of macroeconomic factors on financial liquidity of companies: Evidence from Poland. *Risks* 12(7), 1-22.
- Pattiruhu, J. R., and M. Paais, 2020. Effect of liquidity, profitability, leverage, and firm size on dividend policy. *The Journal of Asian Finance, Economics and Business* 7(10), 35-42.
- Phuong, L. C. M., T. H. Quynh, H. L. Tuong Vi, and D. T. Kim Truc, 2023 Impact of macro factors on stock market capitalization. *Journal of Economics and Business* 3(2), 60-68.
- Salamat, W. A., Q. M. Mohammad, and K. Batayneh, 2021. Firm-specific, macroeconomic factors and stock price risk for Jordanian banks. *Banks and Bank Systems* 16(3), 1-33.
- Tahir, M., F. W. Lai, and S. Q. Ali Shah, 2023. Investigating bank-specific and macroeconomic factors affecting the liquidity position of Islamic banks in Pakistan. *Islamic Accounting and Finance* 1(1), 653-676.
- Zaitoun, M., and H. Alqudah, 2020. The impact of liquidity and financial leverage on profitability: The case of listed Jordanian Industrial Firms. *International Journal of Business and Digital Economy* 1(4), 29-35.
- Zhu, A., M. Ash, and R. Pollin, 2004. Stock market liquidity and economic growth: A critical appraisal of the Levine/Zervos model. *International Review of Applied Economics* 18(1), 63-71.