

# Macroeconomic and Firm-Specific Determinants of Stock Liquidity in Nepal

Kishan Sharma, Pawan Chand, Prashant Guragain, Ritu Yadav and Sachindra Jha\*

---

## Abstract

This study examines the macroeconomic and firm-specific determinants of stock liquidity in Nepalese commercial banks. Turnover ratio and Amihud 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 10 Nepalese commercial banks with 100 observations for the period from 2014/15 to 2023/24. The data were collected from Banking and Financial Statistics published by Nepal Rastra Bank, Economic Review Report and annual reports of the selected commercial banks. The correlation coefficients and regression models are estimated to test the significance and importance of macroeconomic and firm-specific factors on stock liquidity in Nepalese commercial banks.

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

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

---

## 1. Introduction

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). The level of liquidity in a stock is not static; rather, it is shaped by a complex interaction between macroeconomic variables such as prevailing interest rates, inflationary pressures, gross domestic product (GDP) growth, and the stance of monetary policy and firm-specific factors, including the size of the company, its profitability, financial leverage, ownership structure, and the robustness of its corporate governance. These diverse factors not only determine the frequency and volume of trading in a given stock but also influence broader investment decisions and risk perceptions. 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 the interconnected roles of macro-level economic conditions and micro-level firm characteristics

---

\* Mr. Sharma, Mr. Chand, Mr. Guragain, Ms. Yadav and Mr. Jha are Freelance Researchers, Kathmandu, Nepal.

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).

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 the 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 are based on the fixed effects regression models and pooled OLS models which showed stock returns in Sri Lanka and UK were influenced by both firm-specific and macroeconomic factors. Macroeconomic factors like inflation, GDP, and exchange rate significantly impact the stock return. Igbinosa and Uhumwango (2019) analyzed macro-economic variables and stock market liquidity in African markets for the period of 2006 to 2016. The results revealed that macroeconomic variables significantly impact stock market liquidity in Africa, including money supply, inflation, exchange rate, and credit to the private sector. However, economic growth showed a positive impact on stock market liquidity. 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 did not have a statistically significant effect on return on assets (ROA), both inflation rate and GDP growth rate exhibited a significant impact, suggesting that macroeconomic stability and economic expansion are key drivers of firm profitability. This implies 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. Furthermore, the analysis of firm-specific characteristics revealed that firm size, leverage, and liquidity were significant determinants of ROA, indicating that larger firms with better liquidity management and optimal leverage levels tend to perform better in terms of asset returns. These findings emphasize the importance of both external economic conditions and internal financial strategies in shaping corporate profitability.

Demir (2019) investigated 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. Conversely, interest rates and crude oil prices were found to have a negative impact on the stock market index, suggesting that higher borrowing costs and rising energy prices can dampen investment activity and corporate profitability. Notably, the findings also highlighted that portfolio investment inflows, owing to their relatively higher liquidity compared to other forms of capital, exert a slightly greater influence on the stock market, underscoring the sensitivity of equity markets to short-term, liquid capital movements. This suggests that while long-term investments such as FDI are important for structural growth, the immediate dynamics of the stock market are more responsive to fluctuations in liquid financial flows. Al-Homaidi *et al.* (2019) investigated the determinants of liquidity of Indian listed commercial banks. The study has applied both GMM and pooled, fixed and random effect models to a panel of 37 commercial banks listed on the Bombay Stock Exchange (BSE) for the period 2008-2009. The results indicated that certain bank-specific factors, namely bank size, capital adequacy ratio (CAR), deposit ratio, operational efficiency ratio, and return on assets (ROA), have a 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. These factors likely enhance a bank's ability to attract deposits and manage short-term obligations effectively. On the other hand, the study found that asset quality ratio, asset management ratio, return on equity (ROE), and net interest margin (NIM) exert a significant negative impact on liquidity, implying that banks with higher proportions of non-performing assets, aggressive asset utilization, higher shareholder returns, or wider interest margins may be more focused on profitability at the expense of maintaining liquidity buffers. This contrast highlights the trade-off between profitability and liquidity in banking operations. O'Connell (2022) examined the effect of bank-specific, industry-specific and macroeconomic determinants of bank profitability amongst domestic UK commercial banks. The results showed that banks that increase their holdings of short-term liquid assets over the period of analysis have seen higher levels of profitability.

In the context of Nepal, Tiwary (2017) examined the impact of firm specific factors, industry specific factors and macroeconomic factors on profitability of Nepalese commercial banks. The results indicated that there is positive relationship of liquidity, assets quality, expense management, capital adequacy, bank size, market concentration, and money supply growth rate with ROE whereas negative relationship of GDP growth with ROE. Gyawali *et al.* (2015) investigated the impact of macroeconomic variables on stock return. The estimated regression model showed that GDP and gross consumption have positive impact on stock return whereas money supply and inflation indicated a negative impact on stock return. Joshi (2016) examined how the idiosyncratic and macroeconomic determinants of liquidity in Nepalese commercial banks. Using OLS estimates, the study showed positive impact of liquidity on Tobin's Q and GDP, whereas, it showed negative impact of liquidity on interest margin, profitability, loan growth, bank size and Treasury bill rates. Shrestha (2023) investigated the bank specific and macroeconomic determinants of credit risk in Nepalese commercial banks. The estimated regression analysis used in this study indicated that liquidity ratio has a positive impact on the credit risk. Bhatta *et al.* (2019) assessed the impact of deposit rate, lending rate, assets quality and liquidity on the financial performance of the Nepalese commercial banks. The OLS estimates showed that the liquidity is negatively related to earnings per share. Rijal (2017) analyzed the relationship of firm specific and macroeconomic variables with the stock price of 15 commercial banks and 15 insurance companies for the period of 5 years from 2009/10 to 2013/14. Using multiple regression model, the study showed that dividend per share and GDP have positive and significant impact on MPS and stock return. Gautam (2016) examined the determinants of the liquidity in Nepalese commercial banks. The study was based on the sample of 10 commercial banks in Nepal over the period from 2005 to 2014. Bank specific and macroeconomic variables were analyzed by using least square regression model. The study found that bank size, capital adequacy, and inflation positively impact the liquidity, while non-performing loans, profitability, and GDP growth negatively affect the liquidity. Capital adequacy, non-performing loans, and profitability significantly influence liquidity, whereas bank size, GDP growth, and inflation have an insignificant impact.

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 the study is to examine the macroeconomic and firm-specific determinants of stock liquidity in Nepalese commercial banks. Specifically, it examines the relationship of firm size, earnings per share, GDP growth rate, inflation rate, interest rate and

leverage on turnover ratio and Amihud illiquidity ratio of 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 10 Nepalese commercial banks for the study period from 2014/15 to 2023/24, leading to a total of 100 observations. The main sources of data collected from the 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	Global IME Bank Limited	2014/15-2023/24	10
2	NIC Asia Bank Limited	2014/15-2023/24	10
3	Kumari Bank Limited	2014/15-2023/24	10
4	Prabhu Bank Limited	2014/15-2023/24	10
5	Himalayan Bank Limited	2014/15-2023/24	10
6	Nepal Bank Limited	2014/15-2023/24	10
7	Agricultural Development Bank Limited	2014/15-2023/24	10
8	Siddhartha Bank Limited	2014/15-2023/24	10
9	Everest Bank Limited	2014/15-2023/24	10
10	NMB Bank Limited	2014/15-2023/24	10
<b>Total number of observations</b>			<b>100</b>

Thus, the study is based on 100 observations.

### *The model*

The model estimated in this study assumes that stock liquidity depends upon macroeconomic and firm-specific determinants. The selected dependent variables are turnover ratio and Amihud 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 form:

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

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

Where,

ILR = Amihud illiquidity ratio, 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 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 growth rate, in percent.

INF = Inflation rate, in percent.

INT = Interest rate, in percent.

LEV = Leverage, in percent.

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

#### *Firm size*

Larger firms tend to have more liquid stocks compared to smaller firms. 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). Additionally, Pattiruhu and Paais (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. They also tend to be perceived as more stable and less risky, further attracting institutional investors and long-term traders who contribute to market depth. 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:

H<sub>1</sub>: 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. Moreover, 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. When a firm consistently reports high or growing EPS, it signals financial strength and stability, which enhances investor confidence and can lead to more active buying and selling of its shares. This increased market interest tends to reduce bid-ask spreads and boost trading volumes. 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:

H<sub>2</sub>: 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:

H<sub>3</sub>: 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 Eldomyaty *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. This reduction in stock market participation typically results in lower trading volumes and wider bid-ask spreads, indicating reduced liquidity. Additionally, inflation can lead to higher interest rates as central banks tighten monetary policy, further discouraging equity investments and tightening financial conditions. 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. As a result, persistent or unexpected inflation tends to have an adverse effect on stock liquidity, emphasizing the importance of macroeconomic stability in fostering active and efficient capital markets. Based on it, this study develops the following hypothesis:

H<sub>4</sub>: There is 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. 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. In such cases, liquidity can suffer due to a reduction in trading volumes and investor participation. Eldomiaty *et al.* (2020) showed that inflation rates and interest rates have negative effect on stock liquidity. Based on it, this study develops the following hypothesis:

H<sub>5</sub>: 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. 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:

H<sub>6</sub>: 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 2014/15-2023/24.

Table 2

#### **Descriptive statistics**

This table shows the descriptive statistics of dependent and independent variables of 10 Nepalese commercial banks for the study period of 2014/15 to 2023/24. The dependent variables are ILR (Amihud illiquidity ratio, 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 growth rate, in percent), INF (Inflation rate, in percent), INT (Interest rate, in percent) and LEV (Leverage, in percent).

Variables	Minimum	Maximum	Mean	Std. Deviation
ILR	0.01	4.85	0.20	0.50
TR	0.01	41.09	7.70	7.77
FSIZE	37.37	589.78	199.57	114.29
EPS	3.09	111.77	24.55	15.03
INF	3.60	8.80	6.22	1.87
INT	8.43	12.53	10.73	1.43
GDP	21.19	36.29	28.31	5.54
LEV	52.17	94.47	88.30	12.04

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 10 Nepalese commercial banks for the study period of 2014/15 to 2023/24. The dependent variables are ILR (Amihud illiquidity ratio, 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 growth rate, in percent), INF (Inflation rate, in percent), INT (Interest rate, in percent) and LEV (Leverage, in percent).

Variables	ILR	TR	FSIZE	EPS	INF	INT	GDP	LEV
ILR	1							
TR	-0.240*	1						
FSIZE	0.120	0.101	1					
EPS	0.012	0.027	-0.127	1				
INF	-0.164	-0.263**	0.046	-0.310**	1			
INT	-0.204*	-0.197	-0.178	0.142	-0.141	1		
GDP	0.070	0.152	0.151	-0.017	0.116	-0.233*	1	
LEV	-0.148	-0.156	0.575**	-0.047	-0.038	-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 Amihud illiquidity ratio. It indicates that larger the firm size, higher would be the Amihud illiquidity ratio. Similarly, there is a positive relationship between earning per share and Amihud illiquidity ratio. It indicates that increase in earnings per share leads to increase in Amihud illiquidity ratio. However, there is a negative relationship between inflation rate and Amihud illiquidity ratio. It indicates that increase in inflation rate leads to decrease in Amihud illiquidity ratio. Likewise, there is a negative relationship between interest rate and Amihud illiquidity ratio. It indicates that increase in interest rate leads to decrease in Amihud illiquidity ratio. In contrast, there is a positive relationship between GDP growth rate and Amihud illiquidity ratio. It indicates that higher the GDP growth rate, higher would be the Amihud illiquidity ratio. However, there is a negative relationship between leverage and Amihud illiquidity ratio. It indicates that increase in leverage leads to decrease in Amihud 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 Amihud 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 Amihud illiquidity ratio

The results are based on panel data of 10 Nepalese commercial banks with 100 observations for the study period from 2014/15 to 2023/24 by using the linear regression model and the model is  $ILR_{it} = \beta_0 + \beta_1 FSIZES + \beta_2 EPS + \beta_3 GDP + \beta_4 INF + \beta_5 INT + \beta_6 LEV + e_{it}$  where, the dependent variable is ILR (Amihud illiquidity ratio, in percentage). The selected independent variables are FSIZES (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 growth rate, in percent), INF (Inflation rate, in percent), INT (Interest rate, in percent) and LEV (Leverage, in percent).

Model	Intercept	Regression coefficients of						Adj. R <sub>bar</sub> <sup>2</sup>	SEE	F-value
		FSIZES	EPS	INF	INT	GDP	LEV			
1	0.326 (2.731)**	0.010 (1.189)						0.004	0.497	1.415
2	0.154 (0.401)		0.004 (0.115)					0.010	0.501	0.013
3	0.075 (0.434)			-0.044 (1.604)				0.017	0.494	2.691
4	0.375 (3.768)**				-0.001 (2.056)*			0.032	0.490	4.226
5	0.141 (1.457)					0.002 (0.686)		0.005	0.499	0.471
6	0.368 (2.919)**						-0.125 (1.473)	0.012	0.495	2.169
7	0.340 (0.823)	0.013 (1.178)	0.001 (0.035)					0.006	0.499	0.701
8	0.018 (0.363)	0.017 (1.204)	0.019 (0.509)	-0.050 (1.771)				0.016	0.494	1.523
9	0.012 (0.025)	0.013 (1.566)	0.026 (0.704)	-0.044 (1.571)	-0.001 (2.171)*			0.053	0.485	2.366
10	0.012 (0.025)	0.013 (1.577)	0.025 (0.684)	-0.043 (1.531)	-0.001 (2.171)*	0.001 (0.255)		0.043	0.487	1.887
11	0.012 (0.025)	0.007 (0.637)	0.025 (0.685)	-0.039 (1.381)	-0.001 (2.104)*	0.002 (0.626)	-0.130 (1.208)	0.048	0.486	1.823

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. Amihud illiquidity ratio is the dependent variable.

Table 4 shows that the beta coefficients for firm size are positive with Amihud illiquidity ratio. It indicates that firm size has a positive impact on Amihud illiquidity ratio. This finding is similar to the findings of Chabachib *et al.* (2020). Similarly, the beta coefficients for earnings per share are positive with Amihud illiquidity ratio. It indicates that earnings per share has a positive impact on Amihud illiquidity ratio. This finding is consistent with the findings of Arar *et al.* (2018). However, the beta coefficients for inflation rates are negative with Amihud illiquidity ratio. It indicates that inflation rates have negative impact on Amihud 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 Amihud illiquidity ratio. It indicates that interest rate has a negative impact on Amihud 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 Amihud illiquidity ratio. It indicates that GDP growth rate has a positive impact on Amihud illiquidity ratio. This finding is similar to the findings of Abdul-Khaliq (2013). However, the beta coefficients for leverage are negative with Amihud illiquidity ratio. It indicates that leverage has a negative impact on Amihud illiquidity ratio. This finding is similar to 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 10 Nepalese commercial banks with 100 observations for the study period from 2014/15 to 2023/24 by using the linear regression model and the model is  $TR_{it} = \beta_0 + \beta_1 FSIZE + \beta_2 EPS + \beta_3 GDP + \beta_4 INF + \beta_5 INT + \beta_6 LEV + e_{it}$  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 growth rate, in percent), INF (Inflation rate, in percent), INT (Interest rate, in percent) and LEV (Leverage, in percent).

Model	Intercept	Regression coefficients of						Adj. R <sub>bar</sub> <sup>2</sup>	SEE	F-value
		FSIZE	EPS	INF	INT	GDP	LEV			
1	1.370 (0.225)	2.031 (2.308)*						0.040	9.908	5.325
2	6.490 (0.801)		7.018 (2.695)**					0.057	9.820	7.261
3	9.260 (3.632)**			-0.117 (2.504)*				0.049	9.865	6.272
4	10.960 (1.758)				-1.148 (2.002)**			0.005	10.141	0.467
5	9.930 (3.581)**					4.487 (3.153)**		0.031	9.940	4.250
6	17.240 (15.101)**						-0.123 (3.254)**	0.085	9.674	10.590
7	18.140 (1.898)	1.883 (2.194)*	6.645 (2.593)**					0.091	9.642	6.174
8	38.009 (3.758)**	3.105 (3.647)**	7.332 (3.071)**	-0.186 (4.113)**				0.215	8.961	10.404
9	43.337 (3.710)**	3.102 (3.641)**	7.453 (3.114)**	-0.186 (4.105)**	-0.005 (0.008)			0.214	8.969	7.999
10	49.275 (4.205)**	2.767 (3.270)**	7.978 (3.393)**	-0.185 (4.172)**	-0.122 (0.190)	4.379 (2.862)**		0.248	8.755	7.734
11	37.200 (2.965)**	1.796 (1.944)	7.680 (3.337)**	-0.157 (3.500)**	-0.196 (0.300)	4.348 (2.840)**	-0.092 (2.358)*	0.282	8.556	7.675

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 similar to the findings of Zaitoun and Alqudah (2020).

#### 4. Summary and conclusion

The significance of macroeconomic and firm-specific determinants of stock 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 determinants of stock liquidity in Nepalese commercial banks. This study is based on the secondary data of 10 Nepalese commercial banks, leading to a total of 100 observations.

The major conclusion of this study is that firm size, earnings per share and GDP growth rate have positive impact on Amihud illiquidity ratio and turnover ratio. It indicates that higher the firm size, earnings per share and GDP growth rate, higher would be the Amihud illiquidity ratio and turnover ratio. In contrast, inflation rate, interest rate and leverage have negative impact on Amihud illiquidity ratio and turnover ratio. It indicates that higher the inflation rate, interest rate and leverage, lower would be the Amihud 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 Amihud 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 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), 161-165.
- 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(01), 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.
- Bhatta, B., B. Gayawali, B. Chhetri, C. Shakya, and D. Thapa 2019. Impact of deposit rate, lending rate, assets quality and liquidity on the financial performance of Nepalese commercial banks: *The Nepalese Journal of Management* 6(3), 168-181.
- 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.
- 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.
- Eldomiaty, 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 Herijawati, E. 2022. The influence of interest rate, exchange rate, profitability, and liquidity on stock prices. *eCo-Buss* 5(2), 416-428.
- Gautam, R., 2016. The determinants of banks liquidity: Empirical evidence on Nepalese commercial banks. *Journal of Interdisciplinary Studies* 2(2), 69-78.
- Gyawali, A., A. Thapa, A. K. Sapkota, A. Guvaju, and A. Panthee 2015. Impact of macroeconomic variables on stock return: A case of Nepal: *The Nepalese Journal of Management* 2(2), 56-65.
- Igbinosa, S. O., and M. Uhunmwangho, 2019. Macroeconomic aggregates and stock market liquidity:

- Evidence from African stock markets. *International Journal of Economics and Financial Management* 4(1), 18-27.
- Joshi, A., 2016. Idiosyncratic and macroeconomic determinants of liquidity: A case of Nepalese commercial banks: *The Nepalese Journal of Management* 3(3), 126-139.
- 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.
- 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.
- O'Connell, M., 2022. Bank-specific, industry-specific and macroeconomic determinants of bank profitability: evidence from the UK. *Studies in Economics and Finance* 40(1), 155-174.
- 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.
- Rijal, P., 2017. Impact of firm specific and macroeconomic variables on stock market prices of Nepalese commercial banks and insurance companies. *The Nepalese Journal of Management* 4(3), 90-105.
- Shrestha, S., 2023. Bank specific and macroeconomic determinants of credit risk in Nepalese commercial banks: *The Nepalese Journal of Management* 10(3), 172-188.
- Tiwary, S., 2017. Impact of firm specific factors, industry specific factors and macroeconomic factors on profitability of Nepalese commercial banks: *The Nepalese Journal of Management* 4(3), 145-163.
- 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.