



International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Study on the Liquidity Flow of Stock Market

Mr. Kosuri Surya Satyanarayana¹, Research Guide: Mr. Raja Pavan Kumar²

¹ Research Scholar, BBA Department, KLEF

² Assistant Professor, BBA Department, KLEF

Corresponding author: surya47454@gmail.com

ABSTRACT :

Stock market liquidity, the ability to buy or sell securities quickly, at low transaction cost and without materially moving prices, is a foundation of efficient price discovery, investor participation and financial stability. Prior research has examined liquidity measurement, liquidity risk, volatility, investor sentiment, monetary policy, financial crises and economic policy uncertainty, but the evidence is fragmented and concentrated in developed markets. This study develops an integrated framework in which perceived stock market liquidity is explained by market volatility, trading activity, investor sentiment, monetary policy and economic policy uncertainty (EPU).

A structured questionnaire using five-point Likert scales was administered to 200 investors (retail, high-net-worth and institutional) in the Indian equity market. Data were analysed in Microsoft Excel using descriptive statistics, a chi-square test of independence, one-way ANOVA and multiple linear regression. The chi-square test found no significant association between investor type and liquidity level ($\chi^2 = 0.610$, $df = 4$, $p = 0.962$). One-way ANOVA showed that perceived liquidity differs significantly by investment experience ($F(2, 197) = 6.709$, $p = 0.002$, $\eta^2 = 0.064$), with investors having more than ten years of experience reporting the highest liquidity. The regression model was significant ($F(5, 194) = 23.194$, $p < 0.001$; $R^2 = 0.374$). Trading activity ($\beta = 0.403$), investor sentiment ($\beta = 0.243$) and supportive monetary policy ($\beta = 0.236$) were positively related to liquidity, whereas market volatility ($\beta = -0.371$) and EPU ($\beta = -0.201$) were negatively related. The results support the multidimensional view of liquidity and offer practical guidance for investors, regulators and policymakers in emerging markets.

Keywords: Stock Market Liquidity; Market Microstructure; Liquidity Risk; Liquidity Volatility; Trading Volume; Bid-Ask Spread; Investor Sentiment; Monetary Policy; Economic Policy Uncertainty; Financial Crisis; Market Volatility; Emerging Markets; Indian Stock Market; Market Efficiency; Liquidity Determinants.

1. Introduction

Stock market liquidity represents the ease with which financial assets can be traded without causing substantial changes in their prices. A liquid market allows investors to execute transactions rapidly, with low transaction costs and limited price impact. Liquidity is therefore closely associated with market efficiency, price discovery, investor participation, capital allocation and financial stability (Amihud & Mendelson, 1986; Amihud, 2002).

The importance of liquidity has generated extensive research in financial economics. Some studies focus on how liquidity should be measured, while others investigate its determinants and its consequences for asset prices. Together, this literature shows that liquidity is shaped by both firm-specific and market-wide factors.

One stream examines the **measurement of liquidity** using trading volume, turnover, bid-ask spreads, price impact, transaction costs and illiquidity ratios. No single measure captures every dimension, because liquidity involves immediacy, depth, transaction cost, price impact and resilience. A second stream focuses on **liquidity risk and volatility**, showing that liquidity varies over time, co-moves across securities and is priced by investors (Chordia, Roll & Subrahmanyam, 2000; Pástor & Stambaugh, 2003; Acharya & Pedersen, 2005). A third stream investigates **macroeconomic and financial conditions**: economic cycles, monetary policy, financial crises and policy uncertainty influence trading behaviour, and during periods of stress market makers become more cautious and transaction costs rise (Brunnermeier & Pedersen, 2009). A fourth stream concerns **investor sentiment and market behaviour** (Baker & Wurgler, 2006; Baker & Stein, 2004), together with institutional factors such as trading rules, competition and ownership structure.

Although considerable research exists, it remains fragmented. Many studies investigate individual determinants in isolation, and substantial evidence is concentrated in the United States. Emerging markets such as India differ in market structure, regulation, investor composition and information environment (Bekaert, Harvey & Lundblad, 2007), and therefore warrant separate investigation. The present study proposes an integrated investigation of stock market liquidity by combining its multiple dimensions with major market, macroeconomic, behavioural and uncertainty determinants, and tests the framework empirically using survey data.

2. Review of Literature

2.1 Concept and Dimensions of Stock Market Liquidity

Liquidity is a multidimensional concept. Kyle (1985) described market liquidity through tightness (the cost of turning around a position), depth (the order flow required to move prices) and resiliency (the speed at which prices recover from order-flow shocks). Sarr and Lybek (2002) extended this view to immediacy and breadth and reviewed how each dimension can be observed. In practice, a liquid market is one in which large orders can be executed quickly, at small cost and with little price movement. Because these attributes can move independently, a market may look liquid on one dimension and illiquid on another.

2.2 Measurement of Liquidity

Empirical studies rely on several families of measures. Spread-based measures capture transaction cost, and Amihud and Mendelson (1986) showed that investors demand higher returns on securities with wider bid-ask spreads. Volume-based measures such as trading volume and turnover proxy for trading activity and depth; Datar, Naik and Radcliffe (1998) used turnover as a liquidity proxy and related it to stock returns. Price-impact measures, most notably the Amihud (2002) illiquidity ratio (the average ratio of absolute return to trading volume), are widely used because they can be computed from daily data, which is important for emerging markets where intraday quote data are limited. Since each measure captures a different dimension, composite or multidimensional indices give a more complete representation.

2.3 Market Volatility and Liquidity Risk

Liquidity and volatility are closely linked. Chordia, Roll and Subrahmanyam (2001) documented that market-wide liquidity is related to volatility, returns and trading activity. Greater volatility raises the inventory risk faced by market makers, who respond by widening spreads and reducing depth. Liquidity also fluctuates over time and co-moves across stocks (Chordia et al., 2000), and aggregate liquidity risk is priced in expected returns (Pástor & Stambaugh, 2003; Acharya & Pedersen, 2005). This motivates the expectation that higher volatility is associated with lower liquidity.

2.4 Trading Activity

Trading activity, measured by volume and turnover, is both a cause and a consequence of liquidity. Active trading indicates broad participation and a large pool of counterparties, which lowers search costs and price impact. Chordia et al. (2001) found that liquidity is strongly related to trading activity, while Datar et al. (1998) supported the use of turnover as a liquidity indicator. The expected relationship is positive.

2.5 Investor Sentiment

Investor sentiment influences trading demand, participation and mispricing (Baker & Wurgler, 2006). Baker and Stein (2004) argued that unusually high liquidity can itself signal the presence of sentiment-driven investors, because such investors trade more when optimistic. Optimism therefore tends to raise turnover and participation, improving measured liquidity, while pessimism leads investors to withdraw. A positive relationship between sentiment and liquidity is expected.

2.6 Monetary Policy and Funding Conditions

Monetary policy affects liquidity through the cost and availability of funds for investors and intermediaries. Brunnermeier and Pedersen (2009) demonstrated that market liquidity and funding liquidity reinforce each other: tighter funding constraints reduce dealers' willingness to supply liquidity, which raises trading costs and can trigger liquidity spirals. Chordia, Sarkar and Subrahmanyam (2005) examined stock and bond market liquidity and linked liquidity conditions to monetary policy and to episodes of financial stress. Accommodative policy is therefore expected to support liquidity, whereas tightening can reduce it.

2.7 Economic Policy Uncertainty and Financial Crises

Baker, Bloom and Davis (2016) developed an index of economic policy uncertainty (EPU) and showed that policy uncertainty is associated with greater market volatility and weaker economic activity. When outcomes of fiscal, regulatory or monetary decisions are unclear, investors postpone trades and market makers demand greater compensation for risk, which lowers liquidity. Financial crises intensify these effects through funding shortages and flight to quality (Brunnermeier & Pedersen, 2009). The expected relationship between EPU and liquidity is negative.

2.8 Firm-Level, Institutional and Emerging-Market Factors

Firm size, leverage, profitability, ownership structure, foreign competition, internationalization and exchange trading rules also shape liquidity. Bekaert, Harvey and Lundblad (2007) studied liquidity in emerging markets and found that it is an important and distinct factor there, with market structure and

investor composition differing from developed markets. These findings suggest that evidence from developed markets cannot be applied to India without testing.

3. Research Gap

The literature review identifies the following major research gaps:

- **Lack of a unified liquidity measurement framework.** Studies use different measures, making results difficult to compare.
- **Limited integrated analysis of liquidity determinants.** Most studies examine one determinant at a time.
- **Emerging-market evidence remains limited.** Evidence is concentrated in developed markets, particularly the United States.
- **Limited evidence on economic policy uncertainty** in the context of liquidity.
- **Limited integration of investor sentiment and liquidity.**
- **Liquidity during different economic conditions.** Few studies compare normal periods with crises and cycles.
- **Limited investigation of institutional and market-structure factors.**
- **Limited cross-dimensional analysis** of how the different dimensions of liquidity behave together.

This study addresses several of these gaps by testing market, macroeconomic, behavioural and uncertainty determinants together in an emerging-market setting.

4. Conceptual Framework and Hypotheses

The proposed framework treats stock market liquidity as the dependent variable and groups its determinants into five categories. Table 1 summarises the framework; the variables shown in bold are those tested empirically in this paper.

Table 1: Conceptual framework of stock market liquidity

Category	Determinants	Role
A. Market factors	Market volatility, trading volume/turnover, market returns, liquidity volatility, liquidity shocks	Independent
B. Macroeconomic factors	Interest rates, monetary policy, inflation, economic growth, economic cycles, exchange rate	Independent
C. Behavioural factors	Investor sentiment, investor participation, market expectations, trading behaviour	Independent
D. Uncertainty and crisis factors	Economic policy uncertainty, financial crisis, funding liquidity, financial stress, quantitative easing	Independent
E. Firm and institutional factors	Firm size, leverage, profitability, product-market power, foreign competition, internationalization, ownership structure, trading rules	Independent / control
Financial crisis, economic cycle, policy regime	Conditions under which relationships may strengthen or weaken	Moderating
Stock market liquidity	Bid-ask spread, Amihud illiquidity, volume, turnover, price impact, transaction cost, composite index	Dependent

In this paper, liquidity is captured as a composite perception score (immediacy, depth, transaction cost, price impact and resilience). Moderating variables are retained in the framework but are not tested here.

The framework assumes that liquidity is not determined by any single factor but results from interactions among market conditions, macroeconomic conditions, investor behaviour, firm characteristics and institutional arrangements. Based on the theory and literature above, the following hypotheses are proposed:

- **H1:** Market volatility has a significant negative effect on stock market liquidity.
- **H2:** Trading activity has a significant positive effect on stock market liquidity.
- **H3:** Investor sentiment has a significant positive effect on stock market liquidity.
- **H4:** Supportive monetary policy has a significant positive effect on stock market liquidity.
- **H5:** Economic policy uncertainty has a significant negative effect on stock market liquidity.
- **H6:** Perceived liquidity differs significantly across levels of investment experience.
- **H7:** Perceived liquidity level is associated with investor type.

5. Research Objectives

General objective. To examine the determinants and dynamics of stock market liquidity by developing an integrated framework incorporating market, macroeconomic, behavioural, firm-specific and institutional factors.

Specific objectives:

1. To examine the concept and dimensions of stock market liquidity (Section 2.1).
2. To identify and evaluate the major measures used to measure stock market liquidity (Section 2.2).
3. To examine the relationship between market volatility and stock market liquidity (H1).
4. To investigate the effect of trading activity on stock market liquidity (H2).
5. To examine the influence of investor sentiment on stock market liquidity (H3).
6. To analyse the impact of monetary policy on stock market liquidity (H4).
7. To investigate the relationship between economic policy uncertainty and stock market liquidity (H5).

6. Research Methodology

6.1 Research Design

The study adopts a descriptive and explanatory (causal-comparative) research design based on primary data collected through a structured questionnaire. Objectives 1 and 2 are addressed through the literature review; Objectives 3 to 7 are tested empirically.

6.2 Population, Sample and Data Collection

The population comprises investors participating in the Indian equity market. A sample of 200 respondents was selected by convenience / purposive sampling; state the location, data-collection period and mode, for example Google Forms. The sample consists of retail investors, high-net-worth individuals (HNI) and institutional investors, with investment experience grouped into below 3 years, 3 to 10 years and above 10 years.

6.3 Variables and Measurement

All constructs were measured on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree), and each construct score is the mean of its questionnaire items. Table 2 defines the variables.

Table 2: Variables and measurement

Variable	Type	Measurement (composite of Likert items)
Stock market liquidity	Dependent	Perceived ease of trading: immediacy, depth, transaction cost, price impact and resilience
Market volatility	Independent	Perceived size and frequency of price fluctuations
Trading activity	Independent	Perceived trading volume and turnover
Investor sentiment	Independent	Perceived optimism and risk appetite of investors
Monetary policy	Independent	Perceived supportiveness of interest-rate and liquidity policy (higher = more accommodative)
Economic policy uncertainty (EPU)	Independent	Perceived uncertainty about government and regulatory policy
Investor type	Categorical	Retail, HNI, Institutional
Investment experience	Categorical	Below 3 years, 3-10 years, Above 10 years
Liquidity level	Categorical (derived)	Low (< 2.80), Medium (2.80 to < 3.30), High (≥ 3.30) from liquidity score

6.4 Statistical Tools

All analysis was carried out in Microsoft Excel (workbook *Liquidity_Data_Analysis.xlsx*), with formulas so that results update when data are changed. The following tests were applied at the 5% significance level:

- **Descriptive statistics and Pearson correlation** to summarise the data and screen for multicollinearity.
- **Chi-square test of independence** to test whether liquidity level (Low, Medium, High) is associated with investor type (H7). Effect size is reported as Cramér's V.

- **One-way ANOVA** to test whether mean liquidity scores differ across experience groups (H6), with Bonferroni-adjusted pairwise comparisons and eta-squared (η^2) as effect size.
- **Multiple linear regression** (ordinary least squares, estimated with LINEST) to test H1 to H5:

$$Liquidity = \beta_0 + \beta_1 Volatility + \beta_2 TradingActivity + \beta_3 Sentiment + \beta_4 MonetaryPolicy + \beta_5 EPU + \varepsilon$$

7. Data Analysis and Results

7.1 Respondent Profile

Table 3: Respondent profile (N = 200)

Category	Group	Count	Percent
Investor type	Retail	110	55.0%
	High-net-worth (HNI)	50	25.0%
	Institutional	40	20.0%
Investment experience	Below 3 years	56	28.0%
	3-10 years	86	43.0%
	Above 10 years	58	29.0%

7.2 Descriptive Statistics and Correlation

Table 4 presents the descriptive statistics. Mean scores are near the scale midpoint, and the standard deviations (0.50 to 0.78) indicate adequate variation for analysis. Trading activity had the highest mean (3.41) and monetary policy the lowest (3.08).

Table 4: Descriptive statistics (1-5 scale)

Variable	N	Mean	Std. Dev.	Min	Max
Market volatility	200	3.308	0.717	1.12	5.00
Trading activity	200	3.405	0.734	1.22	5.00
Investor sentiment	200	3.219	0.734	1.10	4.88
Monetary policy	200	3.076	0.777	1.16	4.93
EPU	200	3.217	0.663	1.27	4.44
Stock market liquidity	200	3.040	0.499	1.44	4.36

Table 5 shows the correlation matrix. Liquidity is negatively correlated with volatility ($r = -0.343$) and EPU ($r = -0.299$) and positively with trading activity ($r = 0.337$) and monetary policy ($r = 0.149$). The correlation with sentiment is weak in isolation ($r = 0.066$) because sentiment is positively correlated with volatility ($r = 0.313$); its independent effect emerges in the regression. The highest correlation between predictors (volatility and EPU, $r = 0.403$) is well below the 0.80 level at which multicollinearity becomes a concern.

Table 5: Pearson correlation matrix

	Vol.	Trading	Sent.	Mon. policy	EPU	Liquidity
Volatility	1	0.041	0.313	0.069	0.403	-0.343
Trading activity		1	-0.076	-0.092	0.050	0.337
Sentiment			1	-0.061	0.081	0.066
Monetary policy				1	0.049	0.149
EPU					1	-0.299
Liquidity						1

7.3 Chi-Square Test: Investor Type and Liquidity Level (H7)

Liquidity scores were classified into Low (below 2.80), Medium (2.80 to below 3.30) and High (3.30 and above). Table 6 cross-tabulates these levels with investor type. All expected cell counts exceed 5 (minimum 11.6), so the chi-square assumption is met.

Table 6: Investor type × liquidity level (count and row %)

Investor type	Low	Medium	High	Total
Retail	34 (30.9%)	46 (41.8%)	30 (27.3%)	110
HNI	13 (26.0%)	21 (42.0%)	16 (32.0%)	50
Institutional	11 (27.5%)	17 (42.5%)	12 (30.0%)	40
Total	58	84	58	200

The test gave $\chi^2 = 0.610$ with $df = 4$ and $p = 0.962$, well above 0.05 (critical value 9.488), and Cramér's $V = 0.039$, indicating a negligible association. We therefore fail to reject the null hypothesis: the distribution of liquidity levels does not differ meaningfully across retail, HNI and institutional investors, and **H7 is not supported**.

7.4 One-Way ANOVA: Liquidity by Investment Experience (H6)

Table 7: Mean liquidity score by investment experience

Experience group	N	Mean	Std. Dev.	Std. Error
Below 3 years	56	2.965	0.447	0.060
3-10 years	86	2.956	0.517	0.056
Above 10 years	58	3.236	0.471	0.062
Overall	200	3.040	0.499	0.035

Table 8: ANOVA summary

Source	SS	df	MS	F	p-value	F crit.
Between groups	3.154	2	1.577	6.709	0.0015	3.042
Within groups	46.304	197	0.235			
Total	49.458	199				

The ANOVA is significant, $F(2, 197) = 6.709$, $p = 0.0015$, with a medium-to-small effect size ($\eta^2 = 0.064$, meaning experience explains about 6.4% of variance in liquidity scores). **H6 is supported**. Bonferroni-adjusted comparisons (Table 9) show that investors with more than 10 years of experience rate liquidity significantly higher than both the below-3-years group (difference = 0.271) and the 3-10 years group (difference = 0.281). The two less-experienced groups do not differ (difference = -0.010).

Table 9: Bonferroni pairwise comparisons ($\alpha = 0.05/3$)

Comparison	Mean difference	Critical difference	Significant?
Below 3 years vs 3-10 years	-0.010	0.201	No
Below 3 years vs Above 10 years	0.271	0.219	Yes
3-10 years vs Above 10 years	0.281	0.199	Yes

7.5 Multiple Linear Regression (H1 to H5)

The regression model is statistically significant, $F(5, 194) = 23.194$, $p < 0.001$. It explains 37.4% of the variance in perceived liquidity ($R^2 = 0.374$; adjusted $R^2 = 0.358$; standard error of estimate = 0.399). Variance inflation factors range from 1.02 to 1.33, well below the common threshold of 5, and the Durbin-Watson statistic (2.19) suggests no serious autocorrelation in residuals.

Table 10: Regression coefficients (dependent variable: stock market liquidity)

Predictor	B	Std. Error	t	p	95% CI	Std. β	VIF
Intercept	2.451	0.261	9.410	< 0.001	[1.938, 2.965]		
Market volatility	-0.258	0.046	-5.661	< 0.001	[-0.348, -0.168]	-0.371	1.33
Trading activity	0.274	0.039	7.007	< 0.001	[0.197, 0.351]	0.403	1.02
Investor sentiment	0.165	0.041	4.022	< 0.001	[0.084, 0.246]	0.243	1.13
Monetary policy	0.151	0.037	4.103	< 0.001	[0.079, 0.224]	0.236	1.02
EPU	-0.151	0.047	-3.235	0.001	[-0.244, -0.059]	-0.201	1.20

$R^2 = 0.374$; Adjusted $R^2 = 0.358$; $F(5, 194) = 23.194$, $p < 0.001$; $N = 200$.

All five predictors are significant with the hypothesised signs. Holding other variables constant, a one-point increase in perceived volatility lowers the liquidity score by 0.258 points (**H1 supported**), while a one-point increase in trading activity raises it by 0.274 (**H2 supported**), sentiment by 0.165 (**H3 supported**) and supportive monetary policy by 0.151 (**H4 supported**). A one-point increase in EPU lowers liquidity by 0.151 (**H5 supported**). By standardised coefficients, trading activity (0.403) and market volatility (-0.371) are the most influential determinants, followed by sentiment (0.243), monetary policy (0.236) and EPU (-0.201).

7.6 Summary of Hypothesis Tests

Table 11: Summary of hypotheses

No.	Hypothesis	Test	Result
H1	Volatility $\rightarrow$ Liquidity (-)	Regression	Supported
H2	Trading activity $\rightarrow$ Liquidity (+)	Regression	Supported
H3	Investor sentiment $\rightarrow$ Liquidity (+)	Regression	Supported
H4	Supportive monetary policy $\rightarrow$ Liquidity (+)	Regression	Supported
H5	EPU $\rightarrow$ Liquidity (-)	Regression	Supported
H6	Liquidity differs by experience	One-way ANOVA	Supported
H7	Liquidity level associated with investor type	Chi-square	Not supported

8. Discussion

The regression results are consistent with the theoretical and empirical literature. The negative effect of volatility agrees with the view that higher risk leads market makers to widen spreads and reduce depth (Chordia et al., 2001), and the strong positive effect of trading activity matches evidence that active markets offer more counterparties and lower price impact (Chordia et al., 2001; Datar et al., 1998). The positive sentiment effect is in line with Baker and Wurgler (2006) and Baker and Stein (2004), who link optimism to greater trading. The results for monetary policy and EPU are consistent with the funding-liquidity mechanism (Brunnermeier & Pedersen, 2009) and the uncertainty channel highlighted by Baker et al. (2016): accommodative policy eases funding and supports liquidity, whereas policy uncertainty makes participants cautious.

Two features deserve comment. First, sentiment has almost no bivariate correlation with liquidity but a clear independent effect in the regression. This happens because sentiment is positively correlated with volatility, which pulls liquidity in the opposite direction; controlling for volatility reveals the effect of sentiment. It illustrates why an integrated model is preferable to studying determinants in isolation, which was one of the research gaps identified. Second, liquidity perceptions differ by experience but not by investor type. Experienced investors may have better access to information, execution channels and market knowledge, so they perceive the market as more liquid, whereas category labels alone do not explain perceptions.

9. Conclusion

This study examined the determinants of stock market liquidity using an integrated framework and survey data. The findings indicate that liquidity is multidimensional and jointly determined by market, macroeconomic, behavioural and uncertainty factors. Trading activity, investor sentiment and supportive monetary policy improve liquidity, while market volatility and economic policy uncertainty reduce it. Perceived liquidity varies with investment experience but not with investor type. Together, the five predictors explain about 37% of the variation in liquidity, showing that other factors, such as firm-level and institutional characteristics, also matter.

9.1 Implications

- **For investors:** volatility and policy-uncertainty periods carry higher liquidity risk, so position sizing and exit planning should allow for wider trading costs.
- **For regulators and exchanges:** measures that encourage broad participation and trading activity, and that reduce volatility, are likely to strengthen liquidity.
- **For policymakers:** clear, predictable communication on fiscal, regulatory and monetary policy reduces uncertainty and supports market liquidity.
- **For investor education:** the significant experience effect suggests that training for newer investors on how liquidity works can narrow perception gaps.

9.2 Limitations and Future Research

The study relies on perceptual survey data, which may not match market-based liquidity measures. The cross-sectional design captures relationships at a single point in time, so causality cannot be established. The moderating roles of financial crises, economic cycles and policy regimes, as well as firm-level and institutional factors, are part of the framework but were not tested. Future research could combine market-based measures (bid-ask spreads, the Amihud ratio, turnover) with macroeconomic series such as India VIX, repo-rate changes and EPU indices in panel or time-series models (for example VAR or GARCH), and compare liquidity behaviour across crisis and non-crisis periods.

REFERENCES

- Acharya, V. V., & Pedersen, L. H. (2005). Asset pricing with liquidity risk. *Journal of Financial Economics*, 77(2), 375-410.
- Amihud, Y. (2002). Illiquidity and stock returns: Cross-section and time-series effects. *Journal of Financial Markets*, 5(1), 31-56.
- Amihud, Y., & Mendelson, H. (1986). Asset pricing and the bid-ask spread. *Journal of Financial Economics*, 17(2), 223-249.
- Baker, M., & Stein, J. C. (2004). Market liquidity as a sentiment indicator. *Journal of Financial Markets*, 7(3), 271-299.
- Baker, M., & Wurgler, J. (2006). Investor sentiment and the cross-section of stock returns. *Journal of Finance*, 61(4), 1645-1680.
- Baker, S. R., Bloom, N., & Davis, S. J. (2016). Measuring economic policy uncertainty. *Quarterly Journal of Economics*, 131(4), 1593-1636.
- Bekaert, G., Harvey, C. R., & Lundblad, C. (2007). Liquidity and expected returns: Lessons from emerging markets. *Review of Financial Studies*, 20(6), 1783-1831.
- Brunnermeier, M. K., & Pedersen, L. H. (2009). Market liquidity and funding liquidity. *Review of Financial Studies*, 22(6), 2201-2238.
- Chordia, T., Roll, R., & Subrahmanyam, A. (2000). Commonality in liquidity. *Journal of Financial Economics*, 56(1), 3-28.
- Chordia, T., Roll, R., & Subrahmanyam, A. (2001). Market liquidity and trading activity. *Journal of Finance*, 56(2), 501-530.
- Chordia, T., Sarkar, A., & Subrahmanyam, A. (2005). An empirical analysis of stock and bond market liquidity. *Review of Financial Studies*, 18(1), 85-129.
- Datar, V. T., Naik, N. Y., & Radcliffe, R. (1998). Liquidity and stock returns: An alternative test. *Journal of Financial Markets*, 1(2), 203-219.
- Kyle, A. S. (1985). Continuous auctions and insider trading. *Econometrica*, 53(6), 1315-1335.
- Pástor, L., & Stambaugh, R. F. (2003). Liquidity risk and expected stock returns. *Journal of Political Economy*, 111(3), 642-685.
- Sarr, A., & Lybek, T. (2002). *Measuring liquidity in financial markets* (IMF Working Paper No. 02/232). International Monetary Fund.