

IMPROVING THE PRACTICE OF REGULATING THE LIQUIDITY OF COMMERCIAL BANKS

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Abstract: The thesis considers the modern practice of regulating the liquidity of commercial banks and, on this basis, proposes directions for its improvement. Liquidity regulation is treated as a system of instruments that combines microprudential ratios (LCR, NSFR, LR), macroprudential requirements, deposit-insurance mechanisms and central-bank facilities, and that must be adapted to the digital transformation of banking. Empirical experience of the Basel III implementation, of the 2020 COVID-19 pandemic, of the 2022–2023 interest-rate cycle and of the 2023 collapse of Silicon Valley Bank, Signature Bank and First Republic Bank is analysed, along with the regulatory practice of the Republic of Uzbekistan in 2020–2026. On the basis of a critical review of the works of Adrian and Shin, Bonner, van Lelyveld and Zymek, Duffie, Drechsler, Savov and Schnabl, Jiang, Matvos, Piskorski and Seru, Koont, Santos and Zingales, the paper proposes an integrated seven-direction package of improvements. A summary table of current problems and proposed solutions is presented. It is concluded that the further improvement of the liquidity regulation framework in Uzbekistan should combine international best practice with the specific features of the national banking system.

Keywords: commercial bank, liquidity regulation, Basel III, LCR, NSFR, digital bank run, deposit insurance, macroprudential policy, RegTech, Republic of Uzbekistan.

Introduction

The practice of regulating the liquidity of commercial banks has undergone significant transformation over the past two decades. After the 2008 global financial crisis, the Basel Committee on Banking Supervision introduced the Liquidity Coverage Ratio and the Net Stable Funding Ratio, which became international standards. However, the 2023 collapse of U.S. mid-sized banks, in which USD 42 billion was withdrawn from Silicon Valley Bank in 48 hours despite formal compliance with Basel III, demonstrated that the existing framework requires further improvement, particularly with respect to digital bank runs, the concentration of uninsured deposits and interest-rate risk in the securities portfolio.

The relevance of the topic is reinforced by three factors. First, the digital speed of modern deposit outflows requires new stress-testing scenarios and shorter regulatory horizons than the classical 30-day LCR. Second, the interaction between liquidity risk and interest-rate risk in the banking book has become a systemic issue, requiring the coordination of Basel III liquidity ratios with the IRRBB framework. Third, in the Republic of Uzbekistan the Central Bank has actively implemented Basel III standards in 2020–2026, but the further improvement of the national framework requires the integration of macroprudential-digital elements and the strengthening of deposit-insurance credibility.

The aim of this thesis is to analyse the current practice of regulating commercial bank liquidity, to identify its main problems and to propose directions for its improvement, with particular reference to the Republic of Uzbekistan. The methodology relies on scientific abstraction, comparative and structural analysis, historical-logical method and content analysis of Basel Committee documents and academic publications indexed in Scopus and Web of Science.

Main body

The empirical experience of the Basel III implementation has demonstrated both significant achievements and important shortcomings. Bonner, van Lelyveld and Zymek (2015) confirmed that the LCR has effectively strengthened the short-term liquidity resilience of banks, and Duffie (2019) documented its effect on the microstructure of secondary markets. During the COVID-19 pandemic in 2020, well-capitalised and LCR-compliant banks were able to maintain their intermediation function; the IMF (2026) report confirms that banks with an LCR above 150 % experienced significantly fewer liquidity problems. As of 2026, the average LCR of commercial banks in Uzbekistan is 142 % and the average NSFR is 118 %, both above the international minimum of 100 %.

At the same time, the 2023 collapse of U.S. mid-sized banks revealed serious shortcomings. Jiang, Matvos, Piskorski and Seru (2024) empirically demonstrated that unrealised losses on the securities portfolio of U.S. banks, combined with a high share of uninsured deposits, generated a systemic vulnerability that was not detected by classical Basel III indicators. Koont, Santos and Zingales (2024) introduced the concept of "digital bank walks" and showed that mobile banking applications enable deposit outflows at a speed several times higher than the run-off rates assumed by Basel III. Drechsler, Savov and Schnabl (2021) demonstrated that the deposit franchise itself

provides a natural hedge against interest-rate risk, but only if the deposit base is diversified, stable and low-beta.

For the Republic of Uzbekistan, the practical implementation of Basel III standards since 2020 has produced substantial results: the average LCR and NSFR of commercial banks are above the international minimum, the deposit base has grown by 336 % in nominal terms, the share of national-currency deposits has increased from 54.8 % to 68.4 % and the share of term deposits has risen to 67.1 %. Nevertheless, a number of issues remain: the deposit-insurance ceiling is comparatively low, the share of uninsured large corporate deposits is significant, macroprudential-digital instruments are not yet formalised, and supervisory reporting still relies mainly on traditional coefficient-based indicators. The summary of current problems and proposed solutions is presented in Table 1.

Table 1. Problems of current liquidity regulation practice and proposed improvements

Problem area	Manifestation	Proposed solution
Digital speed of deposit outflows	Traditional 30-day LCR misses digital bank walks	Introduce a 5-day "digital LCR" and behavioural run-off rates
Interaction of liquidity and IRRBB	Unrealised losses on securities amplify liquidity shocks	Integrate Basel III IRRBB and NSFR into a joint stress test
Deposit-insurance limits	Uninsured deposits > 50 % in some banks	Raise the insurance ceiling; introduce partial coverage for corporate operational deposits
Concentration of the deposit base	High HHI of top-20 depositors in medium-sized banks	Introduce Pillar 2 supervisory add-ons for concentration risk
Supervisory analytics	Reporting relies on monthly balance-sheet ratios	Deploy RegTech / SupTech real-time analytics and behavioural dashboards
Macroprudential coverage	Shadow banking and fintech partnerships outside the perimeter	Extend liquidity requirements to

		material non-bank financial intermediaries
Communication and reputational management	Social-media-driven run risk	Establish a supervisory protocol for crisis communication and monitor media sentiment

On the basis of the above analysis, the following integrated package of improvements is proposed for the Republic of Uzbekistan. First, the introduction of a supplementary "digital LCR" for a five-day horizon calibrated on Uzbek data. Second, the integration of Basel III liquidity ratios with the Interest Rate Risk in the Banking Book framework into a joint quarterly stress test. Third, the gradual increase of the deposit-insurance ceiling and the elaboration of a partial-coverage scheme for corporate operational deposits. Fourth, the introduction of Pillar 2 supervisory add-ons for banks with high concentration of the deposit base. Fifth, the deployment of RegTech and SupTech real-time analytics and the mandatory disclosure of behavioural indicators. Sixth, the extension of macroprudential requirements to material non-bank financial intermediaries and fintech partners. Seventh, the establishment of a supervisory protocol for crisis communication and the systematic monitoring of media sentiment concerning banks.

A critical component of the proposed package is the institutional design of the reform. International experience shows that the effective implementation of macroprudential-digital instruments requires a clear allocation of responsibilities among the Central Bank, the deposit insurance agency and the Ministry of Finance, as well as a formal inter-agency framework for crisis management. Adrian and Shin (2010) emphasised that banking supervision must be equipped with real-time balance-sheet information; in the Republic of Uzbekistan this recommendation may be operationalised through the further development of the Central Bank's supervisory data warehouse and its integration with the State Tax Committee's electronic invoicing platform. Cornett, McNutt, Strahan and Tehranian (2011) empirically demonstrated that banks with a diversified liquidity position were able to sustain lending to the real economy during the 2008 crisis, which underlines the importance of stimulating deposit-base diversification through targeted supervisory expectations rather than through hard limits.

Conclusion

The conducted analysis leads to four generalising conclusions. First, the current practice of regulating commercial bank liquidity, based on the Basel III framework, has produced significant achievements in terms of short-term resilience but revealed important shortcomings in coverage of digital bank runs, interest-rate risk in the banking book and the concentration of uninsured deposits. Second, the modern regulatory framework must synthesise microprudential ratios, macroprudential requirements, deposit-insurance credibility and behavioural monitoring within an integrated real-time system.

Third, the empirical experience of the 2023 U.S. crisis and of the COVID-19 pandemic proves that no single indicator can fully capture the multidimensional nature of banking liquidity; supervisors must therefore rely on a comprehensive dashboard. Fourth, for the Republic of Uzbekistan the proposed seven-direction package of improvements — a digital LCR, joint IRRBB-NSFR stress testing, higher insurance ceilings, Pillar 2 add-ons, RegTech analytics, macroprudential coverage of shadow banking and crisis communication protocols — will contribute to the further strengthening of the financial stability of the national banking system and to its alignment with international best practice.

Finally, the successful implementation of the proposed reforms depends on the readiness of commercial banks themselves to invest in modern liquidity management infrastructure — including asset-liability management systems, behavioural deposit models, integrated stress testing platforms and the training of specialists in Basel III, IRRBB and digital analytics. The systematic upgrade of these internal capabilities, in parallel with the improvement of the regulatory framework, will maximise the long-term financial stability of the Uzbek banking system and its resilience to future liquidity shocks.

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