

SCIENTIFIC AND THEORETICAL VIEWS OF SCHOLARS ON THE REGULATION OF COMMERCIAL BANK LIQUIDITY

UKTAMOV NODIRJON MAKHAMATNOSIR UGLI

Researcher of the Tashkent State University of Economics

nodirjonuktamov@gmail.com

Abstract: The thesis systematises the scientific and theoretical views of leading foreign and domestic scholars on the regulation of commercial bank liquidity. Liquidity regulation is treated as a subsystem of prudential banking supervision aimed at maintaining a bank's ability to meet its obligations under normal and stressed conditions and at preventing systemic liquidity crises. On the basis of a critical review of the works of Bagehot, Diamond and Dybvig, Allen and Gale, Rochet and Vives, Farhi and Tirole, Adrian and Shin, Gorton and Metrick, Brunnermeier, Acharya and Yorulmazer, and Drechsler, Savov and Schnabl, four consecutive paradigms of liquidity regulation are distinguished: the lender-of-last-resort paradigm, the deposit-insurance paradigm, the market-based Basel III paradigm and the macroprudential-digital paradigm. A comparative table of the paradigms and their instruments is presented. The thesis concludes that under the conditions of digital banking, the modern regulatory framework must synthesise macroprudential, microprudential and behavioural instruments.

Keywords: bank liquidity, liquidity regulation, lender of last resort, deposit insurance, Basel III, macroprudential policy, digital bank run, LCR, NSFR, financial stability.

Introduction

The regulation of commercial bank liquidity is one of the oldest and most controversial areas of financial policy. Since the works of Bagehot (1873), central banks have been considered the ultimate guarantors of liquidity in the banking system, but the concrete instruments, scope and philosophy of such regulation have changed profoundly over the past century. The 2008 global financial crisis, the 2020 COVID-19 pandemic and the 2023 collapse of U.S. mid-sized banks all revealed both the achievements and the limitations of the existing regulatory framework and stimulated a new wave of theoretical research.

The relevance of the topic is reinforced by three factors. First, the digital transformation of banking has qualitatively changed the speed of deposit outflows, which questions the adequacy of the traditional Basel III framework designed for a 30-day horizon. Second, the increasing complexity of the shadow banking system requires new macroprudential instruments to address risks that are formally outside the perimeter of banking supervision. Third, in the Republic of Uzbekistan the Central Bank is actively adapting international best practice to the national environment, and the systematic review of scholars' views on liquidity regulation is a necessary methodological basis for this work.

The aim of this thesis is to systematise the scientific and theoretical views of scholars on the regulation of commercial bank liquidity, to identify the logic of their evolution and to propose directions for the further enrichment of the existing paradigm. The methodology relies on scientific abstraction, historical-logical analysis, comparative institutional analysis and content analysis of publications indexed in Scopus and Web of Science.

Main body

The classical foundation of liquidity regulation was laid by Bagehot (1873) in the doctrine of the lender of last resort: in a crisis, the central bank should lend freely, but only to solvent banks, only against good collateral and only at a penalty rate. This principle was later formalised by Goodhart (1999) and remains an essential element of any modern regulatory framework. Its main advantage is the flexibility to address liquidity shortages without socialising banking losses, but its main limitation is its ex-post character: it responds to crises rather than preventing them.

The second paradigm — deposit insurance — was theoretically justified by Diamond and Dybvig (1983), who demonstrated that ensuring deposits eliminates the self-fulfilling bank run equilibrium at a modest cost to society. This paradigm dominated banking regulation from the middle of the twentieth century until the 2008 crisis and continues to be an essential element of the modern framework. However, Kareken and Wallace (1978), Merton (1977) and later Demirgüç-Kunt and Detragiache (2002) demonstrated that deposit insurance generates significant moral hazard, which requires complementary prudential regulation.

The third paradigm — the market-based Basel III framework — was developed by the Basel Committee on Banking Supervision after the 2008 crisis and combines microprudential (LCR, NSFR, Leverage Ratio) and disclosure-based instruments. Adrian and Shin (2010) laid down the theoretical foundation of this framework by showing that intermediary balance sheets amplify shocks and require quantitative

liquidity buffers. Bonner, van Lelyveld and Zymek (2015) empirically confirmed the effectiveness of the LCR, while Duffie (2019) documented the effect of the framework on the market microstructure. The advantages of this paradigm are its rule-based nature, international comparability and transparency; its main limitations are procyclicality and inadequate coverage of digital bank runs.

The fourth — macroprudential-digital — paradigm has been taking shape over the past decade under the influence of the shadow banking crisis, the digital transformation of banking and the 2023 collapse of U.S. mid-sized banks. Farhi and Tirole (2012) proposed a theoretical justification for macroprudential regulation as a response to strategic complementarities in bank behaviour; Gorton and Metrick (2012) systematised the risks of run-prone short-term wholesale funding; Acharya and Yorulmazer (2008) analysed the too-many-to-fail problem. Drechsler, Savov and Schnabl (2021) demonstrated that the deposit franchise itself provides a natural hedge, which changes the philosophy of liquidity buffers. Koont, Santos and Zingales (2024) introduced the concept of "digital bank walks" and showed that in the modern environment classical Basel III run-off rates significantly underestimate the true speed of deposit outflows. The comparison of the four paradigms is summarised in Table 1.

Table 1. Evolution of theoretical paradigms of commercial bank liquidity regulation

Paradigm	Key representatives (year)	Central idea and instruments
Lender-of-last-resort (LOLR)	Bagehot (1873); Goodhart (1999)	Central-bank emergency lending to solvent banks against good collateral at penalty rates
Deposit-insurance paradigm	Diamond & Dybvig (1983); Kareken & Wallace (1978); Merton (1977)	Public guarantee of deposits eliminates self-fulfilling bank runs but generates moral hazard
Market-based Basel III	Adrian & Shin (2010); Bonner, van Lelyveld & Zymek (2015); Duffie (2019)	Rule-based ratios (LCR, NSFR, LR), disclosure and stress testing
Macroprudential-digital	Farhi & Tirole (2012); Gorton & Metrick	Macroprudential buffers, digital-run

	(2012); Drechsler, Savov & Schnabl (2021); Koont, Santos & Zingales (2024)	stress tests, coverage of shadow banking and behavioural indicators
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The critical review shows that the four paradigms are complementary rather than substitutable: modern regulation must combine LOLR flexibility, deposit-insurance credibility, Basel III comparability and macroprudential-digital sensitivity into a single coherent framework. The 2023 crisis of Silicon Valley Bank confirmed that the absence of any of these elements creates a systemic vulnerability that cannot be compensated by strengthening the others.

A separate line of theoretical research concerns the interaction of liquidity regulation with monetary policy. Drechsler, Savov and Schnabl (2017) demonstrated that banks with market power in the deposit market react more weakly to increases in the central-bank policy rate, which creates a specific "deposit channel" of monetary transmission with important implications for liquidity regulation. Bianchi and Bigio (2022) constructed a general-equilibrium model in which banks' voluntary liquidity holdings and central-bank operations jointly determine the transmission of monetary policy through the banking system. These theoretical achievements underline the importance of coordinating liquidity regulation with monetary policy design, particularly in emerging-market economies where the deposit channel is dominant and where prudential buffers directly affect the transmission of the policy rate to the real economy.

The historical evolution of liquidity regulation also demonstrates a persistent tension between rule-based and discretion-based instruments. Rule-based instruments such as the Basel III LCR and NSFR ensure comparability, transparency and predictability, but they may fail to capture novel risks such as digital bank runs. Discretion-based instruments such as central-bank emergency lending and macroprudential adjustments provide flexibility but risk moral hazard and inconsistency. The modern consensus, reflected in the recent scholarly literature, is that the two categories must be used in complementary fashion: rule-based ratios establish the baseline resilience of the banking system, while discretion-based instruments address unexpected shocks and structural vulnerabilities that cannot be codified in advance.

Conclusion

The conducted study allows four generalising conclusions to be formulated. First, the regulation of commercial bank liquidity has passed through four consecutive paradigms — LOLR, deposit-insurance, market-based Basel III and macroprudential-digital — each of which enriched rather than replaced the previous one. Second, the modern framework must combine the flexibility of the central bank, the credibility of deposit insurance, the comparability of Basel III ratios and the sensitivity of macroprudential and behavioural instruments to digital bank runs.

Third, the 2023 collapse of U.S. mid-sized banks proved that classical Basel III run-off rates significantly underestimate the speed of digital deposit outflows and that supervisors must integrate real-time analytics, media-sentiment indicators and mobile-banking withdrawal metrics into their monitoring. Fourth, for the banking system of the Republic of Uzbekistan the priority directions of further research are the adaptation of macroprudential-digital instruments to national conditions, the development of a comprehensive stress-testing framework and the improvement of the deposit-insurance system in accordance with international best practice.

It should also be emphasised that any regulatory reform is meaningful only insofar as it is matched by adequate supervisory capacity. The strengthening of banking supervision through the training of specialists in macroprudential-digital analytics, the establishment of specialised liquidity monitoring units within the Central Bank of the Republic of Uzbekistan and the systematic exchange of experience with international regulators (IMF, BIS, EBA) is therefore an indispensable complement to the theoretical improvements outlined above.

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