

ASSET TOKENISATION AS A TOOL FOR LIQUIDITY DIAGNOSTICS AND AUDIT IN THE CONTEXT OF BASEL III REQUIREMENTS: PROSPECTS FOR UKRAINE AND EU EXPERIENCE

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Introduction. One of the main goals of introducing the international standard "Basel III", with the alignment of banking regulation and supervision with international standards, while introducing innovative instruments of modern financial technologies of domestic banking to increase its ability to withstand crisis phenomena, is the tokenisation of assets. Consideration of this topic requires an analysis of the topic of combining asset tokenisation, liquidity and Basel III requirements, which is of considerable relevance, especially in the context of the European integration context for Ukraine, because the implementation of Basel III standards is a mandatory step for harmonising the Ukrainian financial system with the European one. The global trend towards financial innovations, such as FinTech / DeFi, namely the tokenisation of assets, determines one of the most promising trends in international finance. How does accounting reflect tokenised assets, auditing, and verifying their existence and ownership in the blockchain? Banking regulation is an interdisciplinary field for scientific research. The research problem is that traditional illiquid assets burden banks' balance sheets and make it challenging to meet the LCR and Net Stable Funding Ratio (NSFR). This financial instrument transforms traditional illiquid assets such as real estate, art, and private debt into easily tradable digital tokens. This directly impacts a key metric for banks, which is liquidity [1].

Research findings. The main aspects of the study of how new technologies through tokenisation can help banks meet these requirements are a direct consequence of the Basel III standard, according to which banks must hold highly liquid HQLA assets to cover potential outflows of funds. Subject to their recognition by the regulator, tokenised assets can be considered a new class of HQLA, provided that they have a deep and liquid market. This reveals the essence of liquidity coverage, «Liquidity Coverage Ratio – LCR». Secondly, applying the net stable funding ratio, "Net Stable Funding Ratio – NSFR", through tokenisation helps banks manage long-term funding more effectively, transforming long-term assets into liquid instruments that meet NSFR requirements. Third, liquidity risk management using blockchain technology, which underlies tokenisation, provides transparency, speed of settlements and reduction of counterparty risks, which improves the bank's overall liquidity management. European integration and harmonisation of standards involve implementing Basel III principles, a mandatory step for the Ukrainian banking system within the harmonisation framework with EU legislation [2]. Research into how new tokenisation technologies affect key parameters of these standards, such as liquidity, is a practically significant,

most promising trend in the finance methodological concept, with the global trend towards tokenisation of Real-World assets. Tokenising assets such as real estate, equipment, bonds or even intellectual property opens up new opportunities to increase liquidity. The main idea of tokenisation is to convert illiquid assets into easier-to-trade digital tokens. This directly affects liquidity management both at the level of an individual enterprise and at the level of the banking system, which has a direct impact on liquidity. Basel III introduces two key ratios: LCR (Liquidity Coverage Ratio), Coverage Ratio (liquidity coverage, NSFR (net stable funding ratio), and net stable funding ratio. Tokenisation can affect the calculation of these ratios because it changes the qualitative characteristics of assets on banks' balance sheets. Tokenisation of assets, such as mortgage portfolios or corporate debt, can increase liquidity, allowing banks to convert these assets into funds more quickly when needed. This directly affects the LCR. A bank holding tokenised, and therefore more liquid, assets can more easily meet liquidity coverage requirements. This allows it to manage its HQLA assets more effectively. Another issue to consider is how to classify tokenised assets in accounting. Are they intangible assets, financial instruments, or a new separate class? Should new asset classes and their accounting be introduced or not? The classification determines how these assets will be considered in calculating the NSFR, as stable or unstable funding. This is a direct link between accounting methodology and banking regulation. There are also challenges for audit and risk management with the issue of auditing tokenised assets, which requires new procedures for verifying the existence, ownership, valuation and liquidity of tokens. How can an auditor confirm the real liquidity of a tokenised asset? Basel III is based on an adequate risk assessment. The regulator and banks need reliable methods for assessing the credit, market and operational risks associated with tokenisation [3]. In EU countries, European banks and regulators, within the MiCA "Markets in Crypto-Assets", are beginning to approach this issue with pilot projects. It is necessary to clarify some issues of the context of accounting methodology: "How do we reflect on the balance sheet?" This is the core of solving the accounting problem. Tokenisation of an asset creates a new form of its existence, which requires rethinking the classification and valuation [4]. As for the problem of identification and recognition, it is necessary to provide answers to the questions of what a token is from an accounting point of view. Is it an intangible asset? If the token is not secured by a specific asset, but is utilitarian. Is it a financial instrument? If the token represents a right to future cash flows, for example, a tokenised bond or a share in the income. Questions of ownership of the underlying asset arise. For example, the question of a token representing direct ownership of a part of commercial real estate. This is the most difficult question - can a digital token be considered an "asset" in the accounting sense, or is it just a technological embodiment of existing rights? The current valuation issue is related to the initial valuation: at what value should a tokenised asset be valued? At the cost of creation, what is the cost of the platform, the commission, or the fair value of the underlying asset? The subsequent valuation consists of confirming which method to use. At cost or at fair value through other comprehensive income/loss? The liquidity of the token market directly affects the ability to determine a reliable, fair value. If the market is shallow, the valuation

becomes subjective. There is also a liquidity problem in accounting, with the classification of assets into current and non-current depending on the intentions of management and the possibility of realisation within 12 months. Tokenisation, which increases liquidity, may be the basis for reclassifying an asset from non-current to current, significantly affecting financial indicators, such as the current liquidity ratio and the balance sheet structure. The context of the audit lies in answering the question "How to confirm reliability?" The auditor faces new risks that require new procedures. Existence and rights audits use a traditional approach, where the auditor checks contracts and extracts from registers. For tokens, the auditor can verify that the token really exists in the blockchain. Is the enterprise its legal owner, and does it have access to the private key? Does the token really provide the right to the underlying asset (the presence of a "legal bridge" between the digital token and the real asset? This is the key risk. Valuation audit. The auditor must assess the validity of the chosen valuation method and the reliability of the data on which it is based. If the liquidity of the token market is low, the auditor may question the reliability of the application of fair value.

Conclusions. Therefore, without a transparent accounting methodology and reliable audit procedures for tokenised assets, their potential advantage in the form of increased liquidity cannot be reliably reflected in reporting, and therefore, used for effective risk management and regulation under Basel III standards. Asset tokenisation has significant potential to increase the liquidity of the banking sector. To realise this potential, it is necessary to overcome legal, accounting and regulatory challenges. Research on this topic is highly relevant to Ukraine's path to harmonisation with European standards. It combines theoretical aspects of accounting, modern challenges of banking regulation and innovative financial technologies. Asset tokenisation can become an innovative mechanism for transforming low-liquid assets into highly liquid ones, contributing to the fulfilment of Basel III requirements.

List of sources used

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