Payments System Research Briefing

A Brief History of Deposit Tokens and Tokenized Deposits

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The tokenization of commercial bank deposits has been in development globally since the late 2010s, evolving from theory and experimentation to the more recent implementation of both deposit tokens and tokenized deposits. Tokenizing commercial bank deposits has implications for other blockchain-based payment instruments, such as stablecoins, as well as for legacy payments systems, presenting banks with new opportunities and challenges.

The concept of tokenizing commercial bank deposits, or representing bank deposits digitally on a distributed ledger such as blockchain, emerged in the banking industry in the late 2010s. Today, tokenization has been implemented in two main forms, which differ in how they represent a deposit and how they may be used. A "deposit token" is a bearer instrument, like a physical currency or stablecoin, and does not require interbank settlement, as its ownership constitutes payment and settlement of a transaction. In contrast, a "tokenized deposit" acts as a credit or debit instrument wherein making a payment typically requires a background settlement between banks.

This *Payments System Research Briefing* reviews the development of commercial bank deposit tokenization. Although deposit tokens have attracted some attention in the banking industry, large banks currently seem to favor tokenized deposits and are constructing shared tokenized deposit networks. Nevertheless, the banking industry faces challenges to widely implementing tokenized deposits.

Theorizing the tokenization of commercial bank deposits

In 2019, JPMorgan Chase launched its JPM Coin (now known as Kinexys), perhaps the first experiment with tokenization. Institutional depositors (such as large corporations or organizations) could convert some of their deposits into the JPM Coin token, which could then be transferred to other accounts in the bank, both domestic and overseas, using JPMorgan Chase's in-house blockchain. Transfer and settlement times became almost instantaneous. Unlike later tokenization efforts, JPM Coin was part of a private payment system, limited to one bank's clients (Mearian 2019). At the time, JPM Coin was referred to as a "wholesale stablecoin," as the concept of a tokenized deposit did not yet exist (Noll 2020; Melachrinos and Pfister 2020).

In 2021, the German Banking Industry Committee began to explore how tokenization might expand into a more public payment system (Die Deutsche Kreditwirtschaft 2021). The Committee theorized a possible "commercial bank token," which was a liability of the issuing bank alone. As in traditional transactions, payments with this token would require settlement between banks with central bank money using existing systems. With this hypothetical commercial bank token, the Committee sought to address two concerns for the banking industry. The first concern was the threat posed by the emergence of private global currencies, specifically stablecoins, to both the existing two-tiered banking system (consisting of the central bank that anchors the monetary system and commercial banks that create money through operations) and the "singleness of money" (wherein all forms of money always exchange at par). The second concern was the banking industry's lack of preparedness for the tokenization of money expected to be used imminently in the digital asset market, particularly for tokenized securities trading. At the time, tokenized money was broadly expected to be used in remittance payments via cryptocurrencies, as well as in the development of "Industry 4.0" involving the internet of things (IoT), where machines communicate directly with each other and can thus make machine-to-machine payments.

In 2022, researchers at the Federal Reserve Bank of New York wrote an article in support of tokenizing commercial bank deposits (Garratt and others 2022). They argued that tokenized bank deposits, being fractionally backed by reserves, would not lock up liquidity (as opposed to stablecoins backed fully by reserves). Tokenizing bank deposits would also "support bank lending to the real economy and the transmission of monetary policy," preserve the singleness of currency, provide FDIC insurance, and facilitate compliance with existing regulations.[1]

During 2022 and 2023, two forms of commercial bank deposit tokenization were in development. Although both forms are fundamentally commercial bank deposits, a deposit token is recorded directly onto a blockchain or distributed ledger, while a tokenized deposit is recorded on the traditional, centralized ledger of a bank and then represented by a token on a blockchain. Consequently, a deposit token acts as a bearer instrument (wherein ownership constitutes payment and settlement), while a tokenized deposit acts as a credit or debit instrument (wherein payment involves centralized ledger entries and interbank settlement) (Buiter, Sibert, and Tollenaar 2022; The Clearing House 2022; JPMorgan 2022; Cunliffe 2023; Private Digital Euro Working Group 2023; Deutsche Bank 2023). Despite this difference, the banking industry theorized that the regulatory treatments of both forms of deposit tokenization should be the same as traditional deposits. In its 2022 white paper, The Clearing House referred to the tokenization of deposits as a "new mechanism" that was "simply a continuation of the business of banking" (The Clearing House 2022).

In 2023, Oliver Wyman and JPMorgan Chase published a white paper that advocated for deposit tokens over tokenized deposits (Oliver Wyman and JPMorgan Chase 2023). The white paper describes tokenized deposits as account-based, non-native blockchain tokens, in which deposits are treated in the traditional way but represented by a token on the blockchain. With tokenized deposits, "on-chain" activity triggers the movement of value and settlement "off chain" via traditional payment systems. In contrast, deposit tokens are token-based, blockchain-native tokens, wherein deposits are recorded directly and solely on the blockchain. Value is moved "on chain" with the token, and the depository institution is liable to the token holder for the fiat value of the deposit token. The white paper concluded that deposit tokens would therefore be better at supporting the "Web3 economy" (a decentralized and tokenized digital economy) and interacting with "smart-contract protocols," which automate transactions on the blockchain and represent a key feature of decentralized finance.

The Oliver Wyman and JPMorgan Chase paper also raised the question of whether networks would be needed for tokenizing commercial bank deposits. The model adopted by JPMorgan Chase for its JPM Coin was relatively simple: a single bank ledger where the tokens were moved within a single bank from account to account. However, a shared banking network with a shared ledger would allow a consortium of banks to interact with each other, with the banks agreeing to common token standards and governance. As another possibility, tokens could move on public blockchains, allowing them to interact with decentralized finance (DeFi) protocols, remittance services, and other distributed ledger technology (DLT)-based applications (Ledger Insights 2023c). A public network would require individual banks to establish an array of protocols to ensure the safety of the deposits and broader financial stability as well as some kind of clearinghouse for banks' tokens.

In another 2023 paper, the Swiss Bankers Association expressed a preference for deposit tokens over tokenized deposits, as it wanted an instrument that would not require off-chain settlement (Swiss Bankers Association 2023). The Association saw the main use of deposit tokens to be in the finance industry "as a means of payment (the 'cash leg') for buying and selling a tokenized asset (the 'asset leg')," though they could eventually find use in other financial transactions, the IoT, and Web3. However, to achieve these ends, the Association argued that tokens needed to be deployed on a public blockchain to promote their interoperability with other deposit tokens. To further interoperability, the Swiss Bankers Association advocated for a "Joint Token," a deposit token jointly owned, backed, and issued by a group of banks. Such a deposit token would have a technically standardized format unlike "Colored Tokens" that are issued by individual banks using different technological configurations (Ledger Insights 2023d).

In contrast to the Swiss Bankers Association's preference for a public blockchain, by 2023 the German Banking Industry Committee saw the most likely application of tokenized deposits happening on industry-specific private blockchains (Die Deutsche Kreditwirtschaft 2023a). The Committee foresaw a collection of industry-specific platforms involving a "few corporates" and a collection of banks serving them. Presumably, these corporates could be involved in finance, agriculture, or heavy industry.

As the banking community continued to debate deposit tokens versus tokenized deposits, some argued that deposit tokens carried more risks for banks. As bearer instruments like stablecoins or "a digital banknote issued by a private bank," deposit tokens allowed for payment beyond the regulatory boundary of the issuer, opening the bank to possible risks of money laundering or terrorist financing. Because deposit tokens could move outside of a bank's regulatory boundaries, they also called into question whether a bank could accurately view who held its liabilities—crucial to the operation of deposit insurance in the case of a bank failure (Cunliffe 2023). A tokenized deposit, on the other hand, never moved beyond the issuing and receiving banks' regulatory boundaries, maintaining the banks' regulatory compliance (Garratt and Sim 2023). Banks' regulatory compliance stems from the adjustment of issuing and receiving bank ledgers through a largely traditional settlement process, where "deposit money issued by a bank could only ever be held in an account at that bank." This process allows the issuing bank to maintain a view of who holds its liabilities, allowing for the customary operation of deposit insurance in case of a bank failure (Cunliffe 2023).

Testing and implementing deposit tokens and tokenized deposits

In the early 2020s, several entities around the world moved beyond theorizing to begin experimenting with deposit tokens. Project Guardian, in 2022, was one of the first trials of deposit tokens. In this program, led by the Monetary Authority of Singapore and involving other financial institutions, JPMorgan created deposit tokens to use in a transaction on a public blockchain. The form of the token also allowed it to interact directly with a DeFi protocol. In 2023, a collection of UK banks used deposit tokens to test cross-border payments and the settlement of securities transactions. A deposit token trial occurred in South Korea in 2024 (JPMorgan 2022; Ledger Insights 2022; Ledger Insights 2023b; Ledger Insights 2023e; Sugimura and Bessho 2024).

Meanwhile, tokenized deposits continued to attract attention. In April 2023, DZ Bank and other German banks explored how tokenized deposits could support multiple currencies (Die Deutsche Kreditwirtschaft 2023b; Bundesverband der Deutschen Industrie and Die Deutsche Kreditwirtschaft 2024; Ledger Insights 2023a). They modeled a scenario where a company receives a token in a currency for which they do not have an account; the token is then automatically converted to a token of their own bank in their home currency. Also in 2024, the Hong Kong Monetary Authority participated in several trials involving tokenized deposits (Hong Kong Monetary Authority 2024; Ledger Insights 2024).

Early implementation that moved beyond testing centered on deposit tokens. In September 2023, while many banks were still experimenting, Citi Treasury and Trade Solutions launched Citi Token Services for its institutional clients (Chakravarty 2023). The service converted clients' deposits into deposit tokens to be used for instant cross-border payments, liquidity management, and automated securities trading. By 2025, Citi Token Services had expanded to 24/7 settlement and multiple currencies (Citi 2025). In November 2025, JPMorgan deployed its institutional deposit tokens on the public Base blockchain. This instrument, which is still in use, assigns clients a Blockchain Deposit Account (BDA) in which they deposit funds that can be converted into a deposit token and sent over Base. Payment and settlement are unified on a shared ledger with Base. Funds stay within JPMorgan's banking infrastructure at every stage (Du 2026; JPMorgan 2026; Ledger Insights 2026).

More recently, the banking industry has embraced tokenized deposits over deposit tokens. In early 2026, the Bank of New York Mellon (BNY) announced plans to deploy clients' tokenized deposits on its Digital Assets platform. BNY plans to create on-chain digital book entries that represent participating clients' existing demand deposit claims against the bank while maintaining client balances on BNY's traditional systems to maintain regulatory and reporting integrity. The tokenized deposits will serve as "the connective tissue of BNY's digital infrastructure" (BNY 2026).

Besides these efforts by individual firms, momentum may be building toward creating interbank consortiums and shared networks around tokenized deposits. The more notable efforts include the DTX Consortium, the Cari Network, and The Clearing House Network. In December 2025, the Independent Bankers Association of Texas launched the DTX Consortium to create an interbank tokenized deposit network. The consortium currently has over 50 member banks, including banks headquartered outside of Texas, and the project is still under development (Williston 2025; Williston 2026a; Williston 2026b). In March 2026, five regional U.S. banks—Huntington, First Horizon, M&T Bank, Key Bank, and Old National—launched the Cari Network to issue and move digital representations of bank deposits over a shared private, permissioned, blockchain infrastructure (Inabinet 2026; ZKsync 2026). In June 2026, 12 of the largest banks in the United States, led by JPMorgan Chase, Citigroup, and Bank of America, jointly announced plans to build a shared tokenized deposit network by 2027, using The Clearing House to provide on-chain clearing and settlement of tokenized deposits between banks within the established banking framework. The network consists of "The Chain," which clears the tokenized deposit transaction between banks, and "The Bridge," which connects the blockchain-based activity with the RTP and CHIPS networks to provide settlement of the transaction via the movement of fiat (Heeb and Huang 2026; The Clearing House 2026; Irrera 2026; PYMNTS TV 2026; Matera 2026).

Practical reasons for tokenizing commercial bank deposits

Banks are entering the world of tokenized commercial bank money in their emerging forms for two main reasons: customer demand and payments diversification. At the moment, deposit tokens and tokenized deposits are not aimed at retail customers but wholesale money movements. Most demand for these services seems to come from the treasurers of multinational corporations that want to manage liquidity on an instant basis around the clock. There also appears to be a desire to pay international suppliers and some interest in providing the cash leg in tokenized securities trades. Retail services and programmable payments may appear in the future (PYMNTS TV 2026; Matera 2026).

In looking to the future, banks are investigating not only deposit tokens and tokenized deposits but also stablecoins and ever faster instant payment rails. Many banks entering the world of tokenized commercial bank deposits are also getting involved in stablecoins or instant payment rails such as FedNow. Facing an uncertain payments future, banks are taking a multipronged approach to meet customers' future demands. Customers may want access to multiple payment systems, as different payment methods solve different problems. For example, tokenized deposits may be good for wholesale cross-border money movements, stablecoins may be suited for cross-border B2B and P2P payments, and instant payment rails may be used for most domestic money transfers (PYMNTS TV 2026; Matera 2026; PYMNTS 2026a; Marek 2026). This multipronged approach is evidenced by the launch of platforms such as the Hazel Network and the BankChain Alliance, which envelope both tokenized deposits and stablecoins (Main and others 2026; Texas Bankers Association 2026; Crosman 2026).

Summary

From its introduction in 2019 as JPM Coin, the tokenization of commercial bank deposits has become a widely discussed and tested concept involving major banks around the world. Deposit tokens and tokenized deposits bring many advantages, including conformity with existing banking regulations, a more robust business model based on fractional reserves instead of stablecoins' fully backed reserves, ready customer adoption, and support for the singleness of money. Demand for tokenized deposits, in particular, has grown with their use by multinational corporations and others seeking to move large sums instantly across borders.

However, tokenization also presents challenges for banks and the banking system. Regulations will need to be modified to meet the special needs of the movement of deposit tokens and tokenized deposits. For example, it is not yet clear how the bank frameworks Know Your Customer, Anti-Money Laundering, and Combating the Financing of Terrorism will be implemented, or how deposit insurance will work with deposit tokens. Banks will also face new challenges in liquidity management, as they must anticipate faster, round-the-clock, and less consistent deposit outflows. In addition, tokenization could affect deposit "stickiness" (the likelihood that a deposit will not be withdrawn) and blur the line between operational (used for daily business expenses) and nonoperational (excess funds to earn yield) deposits (European Banking Authority 2024; Hernández de Cos 2026; Levy and Ramaswamy 2026). Anticipating and addressing these challenges will be crucial as both demand and implementation of commercial bank deposit tokenization grow.

Endnotes

[1] This article appears to be the first published use of the term "tokenized deposit" (Garratt and others 2022).

Article Citations

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Franklin Noll began his professional life as a businessman. Coming from a small farming town in the Pennsylvania Dutch country, he studied business and computer science at Lehigh University. He then worked in the plastics industry before returning to school to study history. Earning a PhD in history at the University of Maryland, he taught history at the university level for several years, winning the Rundell Award for Teaching and being named a University of Maryland Distinguished Teacher. Noll then left academia to begin his own company, Noll Historical Consulting, LLC, which is no longer in operation.Noll is a recognized authority on the history of money, Treasury securities, Civil War finance, and the US public debt. He has extensively written and spoken upon these topics, including making film and radio appearances and writing blogs for the US Treasury and Bloomberg News. Noll has embraced the new world of cryptocurrencies and DeFi, examining how a knowledge of monetary history can aid in their development. He is an expert columnist for CoinDesk, Cointelegraph, Be In Crypto, New Money Review, and other crypto news agencies and was elected a member of the Association of Cryptocurrency Journalists and Researchers and the Digital Euro Association. He was also an advisor to the Vemanti Group, Inc. on monetary history and policy and authored its stablecoin white paper.Noll has recently completed his fourth term as the President of the Treasury Historical Association and is featured in the production of an upcoming documentary film on the history of the Treasury Building being created by the Treasury Historical Association.