



May 16, 2026

Bank of Japan

Singleness of Money and the Role of Central Banks

*Speech at the 2026 Spring Annual Meeting of
the Japan Society of Monetary Economics*

HIMINO Ryozo

Deputy Governor of the Bank of Japan

I. GENIUS Act and Digital Euro

Last year, both the United States and Europe took critical steps in the design of their monetary systems (Chart 1).

The United States enacted the GENIUS Act in July to regulate and promote stablecoins.¹ An executive order in January prohibited the development and issuance of CBDC by federal agencies.

On the other hand, in October, the ECB announced plans to launch a CBDC in 2029, and the European Parliament began the relevant legislative processes. Stablecoins have been under the MiCA regulation since December 2024.

The developments in 2025 seem to show that the United States has steered itself toward stablecoins, and Europe toward CBDC, though the possibility of further twists and turns cannot be excluded.

In his statement on the enactment of the GENIUS Act, Secretary Scott Bessent of the U.S. Treasury commented that the stablecoin technology will "buttress the dollar's status as the global reserve currency, expand access to the dollar economy for billions across the globe, and lead to a surge in demand for US Treasuries, which back stablecoins."² Here, stablecoins are expected to strengthen the dollar's privilege as the global key currency and attract and induce people around the world to finance the U.S. fiscal deficit.

Europe seems to have different motivations. In his speech, ECB Executive Board Member Philip Lane remarked as follows: "The benefits of a CBDC are more extensive compared to the calculus for an individual nation state with its own currency... The digital euro presents a unique opportunity to overcome the persistent fragmentation in retail payment systems across the euro area... The digital euro would also play a crucial role in strengthening the

¹ [Guiding and Establishing National Innovation for U.S. Stablecoins Act.](#)

² [U.S. Department of the Treasury, "Statement from U.S. Secretary of the Treasury Scott Bessent on Enactment of the GENIUS Act," July 18, 2025.](#)

strategic autonomy of Europe in an increasingly fragmented geopolitical landscape."³

The United States and Europe might not necessarily serve as a model for Japan to follow. Firstly, it seems that the United States and Europe are heading in different directions, limiting the room for global consensus standards to emerge. Second, unlike the dollar, the yen is not the world's key currency. Third, Japan is what Lane refers to as "an individual nation state with its own currency," and the yen is not a tool for regional integration.

Japan is prepared for both paths. Japan was the world's pioneer in introducing stablecoin legislation. The Bank of Japan is advancing its CBDC pilot program, and relevant ministries and the Bank are working to develop a CBDC design outline. Developments overseas, however, seem to suggest that work on components is not enough and that a holistic design of the future monetary system is needed.

Designing a future monetary system requires an examination from a multitude of perspectives: technical feasibility, social costs and their allocation, user convenience, resilience, compatibility with new technologies, competition and antitrust, financial stability, financial intermediation, AML-CFT, elasticity of money, monetary policy, seigniorage, and the international monetary system (Chart 2).

These points need to be assessed against various scenarios and environments. For example, stablecoin business models might not be sustainable under zero or negative interest rates.⁴ CBDCs may find it difficult to attract general users under unstressed conditions.⁵

There can be a trade-off between user convenience in normal times and resilience in times of

³ [Philip R. Lane, "The digital euro: maintaining the autonomy of the monetary system," March 20, 2025.](#) Five months after Lane's lecture, the United State imposed sanctions on judges and prosecutors of the International Criminal Court, and their Visa and Master credit cards were blocked, materially constraining their business and private activities. It seems that the incident further alerted Europeans to the geopolitical implications of payment systems.

⁴ In Japan, the business model of money market funds (MMFs) became unsustainable after the policy interest rate turned negative.

⁵ In China, the digital yuan, which had originally been issued as central bank liability, was recently recast as commercial bank deposits, allowing it to accrue interest.

crisis. In March, Sweden's Riksbank, the world's oldest central bank and a pioneer in CBDC, published new recommendations for public payment preparedness (Chart 3, left).⁶ The recommendations state, "The current international situation and Sweden's high degree of digitalization may lead to vulnerabilities in the payments system. It is therefore important for the general public to ensure that they have different ways to pay, such as cash, cards and access to payment services via mobile phones. The general public is an important part of Sweden's total defense and central to strengthening national preparedness in the payments market."

The recommendations include the following points:

- Keep a sum of SEK 1,000 in cash per adult at home to cover a week's worth of essential purchases.
- Hold cash in several different denominations.
- Use cash at regular intervals during normal times to keep the cash systems running.
- Have access to at least two cards from different card networks.
- Have access to payment service via mobile phone.
- Have physical cards and PINs easily accessible in case mobile phone discharges or stops working.

I usually carry a fat wallet with me, stuffed with Bank of Japan notes and multiple credit cards. I often felt myself to be old-fashioned compared with the wallet-free younger generation. I also felt slightly guilty for not being well aligned with the policy of the Japanese Ministry of Economy, Trade and Industry, which promotes a cashless society. But perhaps I should take pride in my old-fashioned fat wallet, which may symbolize the emerging lifestyle of the era of geopolitical tensions.

Recently, several countries have incorporated cash into their constitutions. Slovakia, Hungary, and Slovenia enshrined the right to pay with cash in their constitutions (Chart 3, right). In March, Switzerland incorporated the central bank's provision of cash into its constitution. While at the Financial Services Agency, I once argued that fintech affects the allocation of power and control over information between the government, corporations, and individuals

⁶ [Sveriges Riksbank, "New recommendations for public payment preparedness." March 4, 2026.](#)

and may make society face the trilemma of inefficiency, overreach by government or big businesses, and anarchy.⁷ The trilemma may become particularly acute when technology meets money.

In addition, when designing a monetary system, we should think about other deeper questions as well: What is money? Why does fiat money work? Which functions of money should be preserved and promoted?

The list of issues has become too long to cover. In the following, I will focus on the issue of the singleness of money, which is closely associated with the role of central banks. This is a topic under discussion both within the Bank and in international forums, and so some of the points I make will inevitably reflect my personal views rather than the views of the Bank or the consensus among central banks.

II. The Three Functions of Money

Money is said to serve three primary functions: it is a unit of account, a store of value, and a medium of exchange (Chart 4).

Of these, the unit of account function refers to the role of a unit such as the yen in measuring value and setting prices. This is an abstract function not tied to specific instruments. The Bank of Japan implements monetary policy to ensure price stability, or the stable functioning of the yen as a unit of account.

On the other hand, the store of value function requires not just the yen unit but also specific instruments to realize it, such as cash, bank deposits, bonds, stocks, and mutual funds. Each of these has its unique characteristics: holding a large amount of cash can incur storage and transportation costs, bank deposits may lose value when faced with inflation, and market prices of bonds, stocks, and mutual funds can drop. People choose instruments according to the aims to store value, ranging from weekend shopping to life after retirement.

⁷ On the sources of trust, see ["Is Satoshi's Dream Still Relevant Today?" \(2020\)](#). On the trilemma of inefficiency, government or corporate overreach, and anarchy, see ["FinTech, the Future of Society, and Regulation" \(2018\)](#). On challenges in regulatory design, see ["Regulatory Responses to Issues Raised by Libra" \(2019\)](#).

Since we store value to spend in the future, the instruments used to store value have to serve as a medium of exchange as well, or at least be convertible into a medium of exchange

III. Multiplication of Payment Methods and the Singleness of Money

The medium of exchange function, also known as the payment function, refers to money's use to settle transactions between sellers and buyers.

In recent years, a multitude of new payment methods have been introduced. In addition to traditional cash payments and bank transfers, people use the COTRA fast payment system; credit cards; QR code payments on mobile phones; SUICA and other prepaid, rechargeable, and contactless cards; and gift vouchers. At the Osaka-Kansai World Expo in 2025, as many as 73 cashless payment brands were accepted (Chart 5).

Meanwhile, central bankers cherish the concept of the singleness of money when discussing money as a medium of exchange. This emphasis may sound strange given the ever-growing diversity of payment methods. However, upon closer examination, while there are differences in user convenience, fees, and rewards between different payment methods, they all share a common fundamental function: upon using any of these means to make a payment, it is universally understood that the payment has been completed.

Let's think about what happens when we make a payment using a mobile payment app, a credit card, or other payment method. Though timing may differ between methods, the underlying mechanism always involves either cash or bank deposits being reduced on the payer's end, with a corresponding increase in the recipient's bank deposit through a transfer from the payment service provider. What a payment service provider does is, in essence, to carry out numerous bank transfer procedures on our behalf. Methods of instruction vary, but in the end, funds always reach the recipient via bank transfers.

Then, what exactly happens when a bank transfer is made?

IV. Bank Transfers and the Settlement Service by the Bank of Japan

Bank transfers can be made by bringing cash to a bank or by using an existing deposit account. Here we look at the latter case (Chart 6).

Suppose I have a deposit account only at Bank A, and the shop receiving the transfer has an account only at Credit Union B. In this case, when I issue an instruction to transfer 100,000 yen, Bank A will reduce my deposit balance by that amount. Bank A will instruct the Bank of Japan to reduce the reserves Bank A has at the central bank and to increase the reserves Credit Union B has by the same amount.⁸ Credit Union B will increase the shop's deposit balance at Credit Union B by 100,000 yen.

From my perspective, this process resembles selling my deposit at Bank A to buy reserves at the Bank of Japan, using it to buy a deposit at Credit Union B, and transferring it to the shop. It also resembles withdrawing cash from Bank A, and depositing the cash into the shop's account at Credit Union B.

Why should I go through such a cumbersome process? For example, couldn't I simply give the 100,000 yen deposit I hold at Bank A directly to the shop? However, this method would leave the shop holding deposits at various financial institutions sent by various customers. This would make life of the shop unbearable. The shop would have to manage its funds by keeping an eye on multiple accounts. Some of the banks might not have branches in the shop's vicinity. Each banking app has a different operating process. The revenue of the shop would be reduced if the interest rate on deposits at Bank A is lower than that at Credit Union B. The shop would have to monitor the soundness of a multitude of financial institutions.

Deposits at different financial institutions are not identical in terms of convenience or creditworthiness. The shop would prefer to receive payment in deposits at Credit Union B, which it trusts and is familiar with. A recipient never fails to recognize the finality of payment by bank transfers precisely because she gets her preferred type of deposit.

⁸ If the amount of a transaction is below 100 million yen, financial institutions do not instruct the Bank of Japan to adjust their reserves at the time of each transfer. Instead, adjustments are made once a day, based on the net difference arising from all similar transfers conducted during the day. However, the logic behind the mechanism remains the same as described here.

What about setting up a system which can directly exchange a deposit at Bank A with that at Credit Union B? Given the vast number of financial institutions in Japan, the number of possible exchange combinations would be innumerable. The desired exchange combinations might not always occur promptly. The exchange rates might deviate from par, for example if Bank A announces unanticipated losses. Both the shop and I cannot be sure if the payment will be successfully completed and fully settled.

In bank transfers, Credit Union B need not ask questions about the value of Bank A's deposits, as long as Bank A has a balance at the Bank of Japan and reserve at the Bank of Japan is trusted. Furthermore, since the transfer of reserves is executed through the BOJ-NET system operated by the Bank of Japan itself, the transfer can be verified with the highest level of certainty.

The asset side of a bank balance sheet, which backs the value of deposits it issues, includes assets with low liquidity or with material credit or market risks. By holding such assets, banks fulfill their essential role as financial intermediaries. The materialization of the risks in the assets held, however, has repeatedly caused banking crises. Even in normal times, the creditworthiness of each financial institution is not entirely identical, and gaps in credit ratings and credit spreads among banks are not uncommon.

To enhance the credibility of deposits and minimize the risk of banking crises, the Financial Services Agency regulates and supervises banks; the Bank of Japan monitors banks and act as the lender of last resort; and the Deposit Insurance Corporation insures and protects bank depositors. Non-interest-bearing deposits held for settlement purposes are protected in full. With the substantial social costs incurred in running such operations, these authorities endeavor to enhance the credibility of deposits as a store of value and a medium of exchange.

This enhanced credibility of commercial bank deposits and the Bank of Japan's settlement functions allow the process outlined in Chart 6 to work, and the process enables both me and the shop to carry out payments without asking questions about differences between

commercial bank deposits.⁹ As long as the sender's bank has sufficient reserves at the Bank of Japan, the central bank's settlement function ensures that the bank deposit works as a medium of exchange with complete singleness. Day after day, each and every bank transfer demonstrates exchangeability at par among commercial bank deposits, reinforcing trust in deposits as a medium of exchange with finality and confidence in the singleness of deposits.

V. Unique Characteristics of Payments with Stablecoins

On the other hand, stablecoins, particularly those compliant with the GENIUS Act, are backed exclusively by highly liquid assets with minimum levels of credit or market risk. In terms of the assets backing the value, stablecoins are more homogeneous than bank deposits.

Another unique characteristic is that payments via stablecoins operate without relying on the central bank settlement function. Bank transfers rely on it, and credit card and other payment methods involve bank transfers from payment service operators to recipients and thus also rely on the central bank settlement function.

Let's assume that yen-denominated stablecoins issued by Company C ("C-Coins") and those issued by Company D ("D-Coins") are in circulation. There are three scenarios that allow me to make a payment to a shop (Chart 7):¹⁰

1. Pay and accept one type of coin: Both the shop and I use C-Coins, and I transfer C-Coins from my wallet to the shop's.
2. Exchange and pay: The shop accepts only D-Coins, so I exchange my C-Coins for D-Coins at an exchange before transferring the D-Coins to the shop's wallet.
3. Receive multiple types of coins: The shop accepts both C-Coins and D-Coins, and I use C-Coins for the payment. The shop holds both types of coins or exchanges C-Coins for D-Coins afterwards.

The values of C-Coins and D-Coins may be backed by high-quality liquid assets and

⁹ For example, to finalize a transfer, nobody needs to ask if deposit insurance protects the deposit I hold at Bank A, in full or in part.

¹⁰ In practice, to successfully complete a transaction, other issues may also need to be addressed. For example, the payment process can become more complicated if the shop does not have a wallet on the same blockchain as mine. Blockchain gas fees may surge during periods of network congestion.

Companies C and D may be well regulated and supervised, but the second (exchange and pay) and the third (accept multiple types) scenarios might not always work smoothly. For example, Company C may record a large loss, suffer from a cyberattack, or be found to have been involved in a major fraud. Then the exchange rate for C-Coins might slip from par. Some shops may also cease to accept C-Coins. Choices in payment methods exhibit network externalities: one uses a method as others use it. If some shops turning away from C-Coins create doubts as to their universal acceptability, the doubt could become self-fulfilling.

On the other hand, the first (pay and accept one type of coin) scenario may entail different problems. If people come to pay with only one type of coin, the network externality may protect its universal acceptability against any bad news, just as a dominant social media platform continues to thrive no matter how its operator behaves. This, however, means a private firm monopolistically dominating a key economic infrastructure. One might wonder if it is what we really want. I suppose that, at the very least, the firm needs to be subject to a central bank-like governance arrangement.

VI. Stablecoins and the Singleness of Money

If stablecoins are to become widely adopted in the future, what would be the implications for the singleness of money?

There appear to be nuanced differences among researchers' views in terms of the level of singleness that should be required of money (Chart 8).

On the one hand, reports published by the Bank for International Settlements (BIS) accept no room for doubt even on the possibility of micro-deviation from par.¹¹ Drawing on terminology from Nobel laureate Bengt Holmstrom,¹² they argue that money must be an *information-insensitive* instrument that can be accepted by economic agents with *no questions*

¹¹ For example, [Rodney Garrat and Hyun Song Shin, "Stablecoins versus tokenised deposits: implications for the singleness of money," *BIS Bulletin, No.73, April 2023*](#) and [Bank for International Settlements, "Chapter III. The next-generation monetary and financial system," *2025 BIS Annual Economic Report*](#).

¹² [Bengt Holmstrom, "Understanding the role of debt in the financial system," *BIS Working Papers, No.479, January 2015*](#).

asked. They also emphasize that even a small amount of adverse selection has the potential to reverberate through monetary exchange.¹³ Indeed, having to incur due diligence costs for each transaction is socially inefficient. Even the mere perception that such scrutiny is necessary could trigger a run on payment assets.

On the other hand, Bernhard and Haene of the Swiss National Bank point out that payment assets are often redeemed or exchanged with fees and thus not necessarily at par.¹⁴ Indeed, withdrawing cash from ATMs often comes with fees. When I make a 1,000-yen payment with a credit card, the shop might only receive 970 or 980 yen. Users might find payment by stablecoins preferable, if the benefit from saving fees outweighs the inconvenience from minor price fluctuations.

Users may be less tolerant of unanticipated price fluctuations than of anticipated fees. Some stablecoins, however, continued to grow even after suddenly falling below par in the wake of the FTX failure in November 2022 or the Silicon Valley Bank collapse in March 2023. This seems to suggest that some users, particularly those who use stablecoins for crypto asset trading, for holding dollars outside the United States, or for making cross-border payments, see benefits that outweigh the risk of price fluctuations, including the questionable "benefits" of circumventing identity verification.

Bernhard and Haene also point to the existence of diverse forms of payment assets that lack strict singleness, such as regional gift certificates and vouchers. In Japan as well, a wide range of gift certificates are traded with a variety of discounts in specialized shops. For payment instruments used for limited purposes by a specific audience, a level of singleness that matches the degree of user expectations may suffice to achieve uninterrupted circulation.

The key question, however, is this: If stablecoins become widely used as settlement assets for broader economic and financial activities and are relied on and trusted by the general public, what level of singleness should be required? In such scenarios, stablecoins may become fully

¹³ [Stephen Morris and Hyun Song Shin, "Contagious Adverse Selection," *American Economic Journal: Macroeconomics* 2012, 4\(1\):1-21.](#)

¹⁴ [Severin Bernhard and Philipp Haene, "Exploring the concept of uniformity of money," *SNB Economic Note, No.11/2025*.](#)

integrated into the payment system, and fund transfers between stablecoins and bank deposits may become systemic, enhancing the need to ensure singleness between the two types of money, under both normal and stressed conditions. We may want to think about how to attain this and at what additional social cost. These points warrant further examination.

VII. The Future of Money and the Role of Central Banks

Options for the future monetary system are not limited to CBDCs and stablecoins. For example, efforts are underway both in Japan and abroad to incorporate real-time gross settlement and other advanced functionalities into the framework of bank transfers.¹⁵

Another option is to transpose the system of bank deposits and central bank reserves described in Chart 6 into a system of tokenized bank deposits and tokenized central bank reserves operating on blockchain (Chart 9).¹⁶ Such an approach might preserve the rigorous singleness of money, attain interoperability with the existing systems, and allow for programmability, smart contracts, and DVP (delivery of tokenized assets versus payment by tokenized deposits).

The Bank of Japan has internally begun a sandbox project to explore the technical feasibility of tokenizing Bank of Japan reserves and of using them for blockchain-based payment solutions, possibly including the tokenized deposit-based payment system I have just described.

Project Agora, led by the BIS and the Institute of International Finance, experiments with such a system for wholesale cross-border payments. The Bank of Japan and four Japanese commercial banks are participating in the projects.

In addition to stablecoins and CBDCs, the options described above should also serve as candidates for foundations of the future monetary system.

¹⁵ Study Group on the Future of Payment and Settlement Systems, "Findings of the Study Group on the Future of Payment and Settlement Systems," March 2026 (Japanese).

¹⁶ [Bank for International Settlements, *op. cit.*](#)

Lastly, the singleness of money is not the only criteria for the future of money. Nationwide discussion involving a whole array of stakeholders is needed, covering the perspectives I mentioned at the beginning (Chart 2). As the essence of monetary singleness lies in maintaining a no-questions-asked state, however, it may often be overlooked, so long as the system functions well. This is why I chose to focus today's discussion on this topic.

The mission of the Bank of Japan is to secure an environment where everyone can use money with safety and efficiency, by attaining price stability through monetary policy, by issuing, circulating, and managing Bank of Japan notes, by contributing to financial stability, and, last but not least, by providing payment instruments and operating and overseeing payment systems. We will continue to provide as much input as possible on the future design of payment systems and look forward to hearing your reactions and comments.¹⁷

Thank you for your attention.

¹⁷ The Payments and Markets section on the left side bar of the Bank of Japan website provides relevant information, including recent speeches on payment such as: [Kazuo Ueda, "The New Financial Ecosystem and the Role of Central Banks" \(2026\)](#), [Shinichi Uchida, "The Bank of Japan from the Perspective of Business Operations" \(2025\)](#), [Kazushige Kamiyama, "Points Forming Lines, Evolving to Surfaces" \(2026\)](#), and [Naomi Takeda, "The Future of Monetary and Payment Systems Under Technological Innovations and Geopolitical Tensions" \(2025\)](#).

Singleness of Money and the Role of Central Banks

*Speech at the 2026 Spring Annual Meeting of
the Japan Society of Monetary Economics*

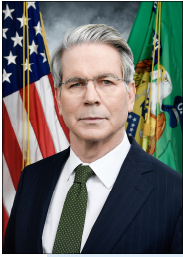
May 16, 2026

HIMINO Ryozo

Deputy Governor of the Bank of Japan

-
- I. GENIUS Act and Digital Euro
 - II. The Three Functions of Money
 - III. Multiplication of Payment Methods and the Singleness of Money
 - IV. Bank Transfers and the Settlement Service by the Bank of Japan
 - V. Unique Characteristics of Payments with Stablecoins
 - VI. Stablecoins and the Singleness of Money
 - VII. The Future of Money and the Role of Central Banks

GENIUS Act and Digital Euro



Statement from U.S. Secretary of the Treasury Scott Bessent on Enactment of the GENIUS Act (July 2025)

[Stablecoin technology will] "buttress the dollar's status as the global reserve currency, expand access to the dollar economy for billions across the globe, and lead to a surge in demand for US Treasuries, which back stablecoins."



Speech of ECB Executive Board Member Philip Lane (March 2025)

"The benefits of a CBDC are more extensive compared to the calculus for an individual nation state with its own currency."

"The digital euro presents a unique opportunity to overcome the persistent fragmentation in retail payment systems across the euro area."

"The digital euro would also play a crucial role in strengthening the strategic autonomy of Europe in an increasingly fragmented geopolitical landscape."

Sources: U.S. Department of the Treasury, "Statement from U.S. Secretary of the Treasury Scott Bessent on Enactment of the GENIUS Act," July 18, 2025.
Philip R. Lane, "The digital euro: maintaining the autonomy of the monetary system," March 20, 2025.

1

Checklist on the Future of Monetary System

- Technical feasibility
- Social costs and their allocation
- User convenience
- Resilience
- Compatibility with new technologies
- Competition and antitrust
- Financial stability
- Financial intermediation
- AML-CFT
- Elasticity of money
- Monetary policy
- Seigniorage
- The international monetary system

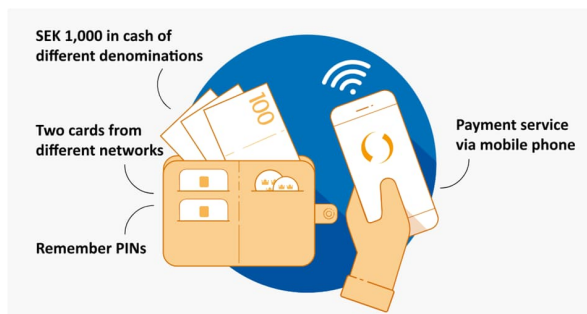
- Assessment assuming various scenarios and environments
- Allocation of power and control over information between the government, corporations, and individuals
- What is money?
- Why does fiat money work?
- Which functions of money should be preserved and cultivated?
- Singleness of money (today's topic)

2

Use of Cash: Recent Developments in Europe

Sveriges Riksbank, "New recommendations for public payment preparedness," March 2026

- Keep a sum of SEK 1,000 in cash per adult at home to cover a week's worth of essential purchases.
- Hold cash in several different denominations.
- Use cash at regular intervals during normal times to keep the cash systems running.
- Have access to at least two cards from different card networks.
- Have access to payment service via mobile phone.
- Have physical cards and PINs easily accessible in case mobile phone discharges or stops working.



Cash in Constitutions

Central European Countries

Slovakia (June 2023):

"All citizens have the right to make payments for the purchase of goods or the provision of services in cash, which is legal tender, and such payments may only be refused for reasonable or generally applicable reasons."

Hungary (April 2025):

"All citizens have the right to property, inheritance, and to make payments in cash."

Slovenia (November 2025):

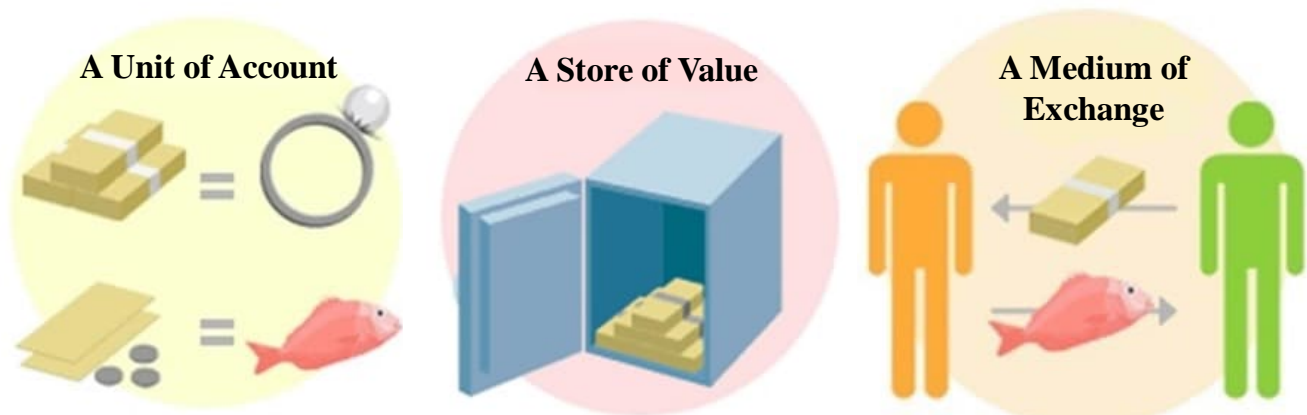
"All citizens have the right to use cash in banking and other legal transactions, in accordance with the law."

Switzerland (March 2026):

"The Swiss National Bank shall guarantee the supply of cash."

3

The Three Functions of Money



73 cashless payment brands were accepted at the Osaka-Kansai World Expo

大阪・関西万博オリジナル電子マネー The Expo proprietary e-money



国際ブランド International credit card brands



電子マネー e-money



コード決済 code payment



※ゆうちょペイ契約のため下記銀行ペイが利用



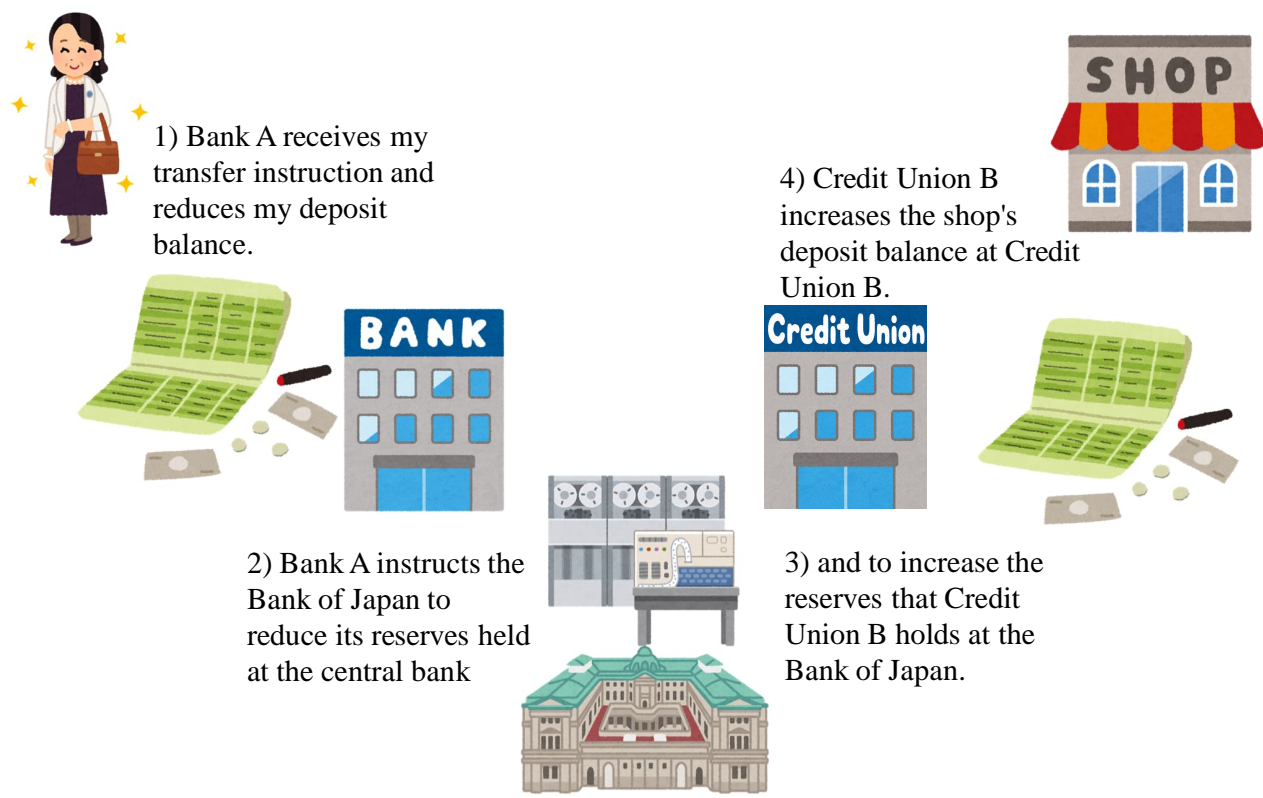
※Smart Code™ (スマートコード) は下記が利用可。





Source: Japan Association for the 2025 World Exposition.

Bank Transfers and the Settlement Service by the Bank of Japan



Three Patterns of Stablecoin Transaction

Pay and accept one type of coin

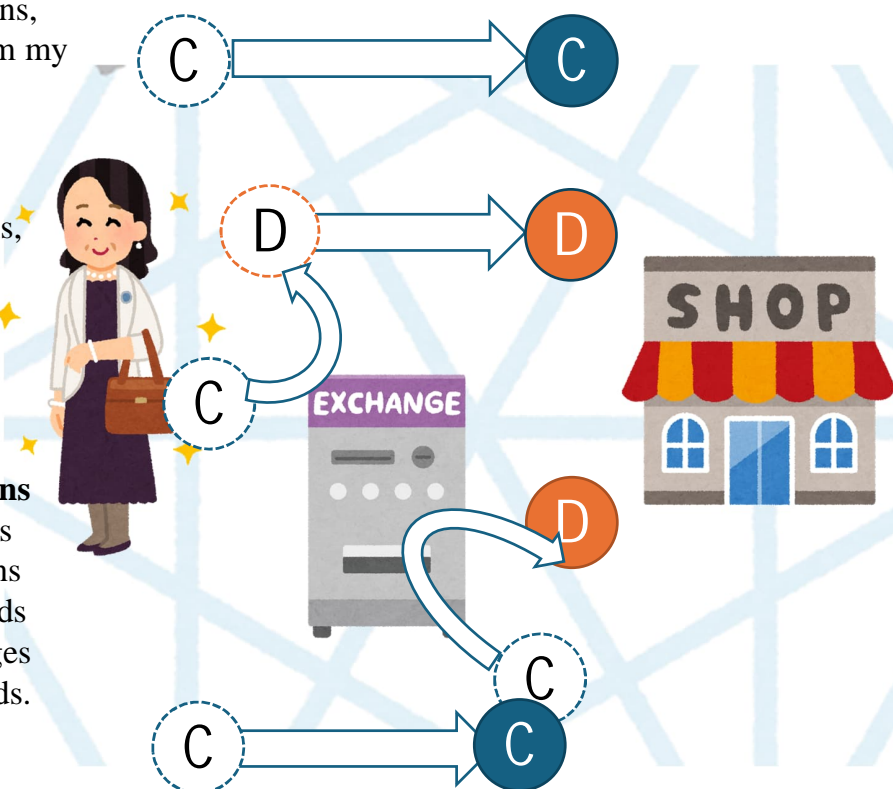
Both the shop and I use C-Coins, and I transfer my C-Coins from my wallet to the shop's.

Exchange and pay

The shop accepts only D-Coins, and I exchange my C-Coins at an exchange and transfer the exchanged D-Coins to the shop's wallet.

Receive multiple types of coins

The shop accepts both C-Coins and D-Coins, and I use C-Coins for the payment. The shop holds both types of coins or exchanges C-Coins for D-Coins afterwards.



7

Level of Singleness Required for Money

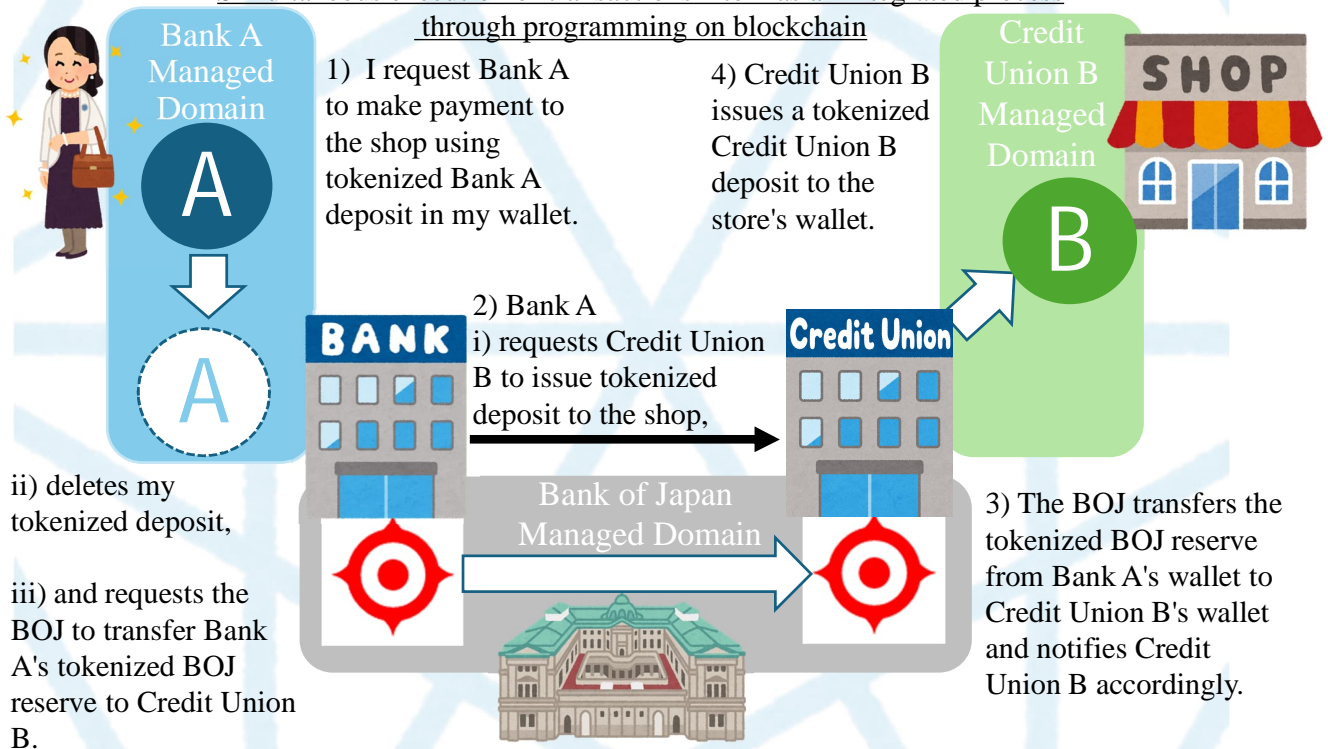
BIS Reports	Bernhard and Haene of SNB
<ul style="list-style-type: none"> Accept no room for doubt even on the possibility of micro-deviation from par. Money must be an <i>information-insensitive</i> instrument that can be accepted by economic agents with <i>no questions asked</i>. Even a small amount of adverse selection has the potential to reverberate through monetary exchange. 	<ul style="list-style-type: none"> Payment assets are redeemed or exchanged often with fees and thus not necessarily at par. There exist diverse forms of payment assets that lack strict singleness such as regional gift certificates and vouchers.

Sources: Rodney Garrat and Hyun Song Shin, "Stablecoins versus tokenized deposits: implications for the singleness of money," *BIS Bulletin*, No.73, April 2023. Bank for International Settlements, "Chapter III. The next-generation monetary and financial system," *2025 BIS Annual Economic Report*. Severin Bernhard and Philipp Haene, "Exploring the concept of uniformity of money," *SNB Economic Note*, No.11/2025.

8

Tokenized Deposit and Tokenized Bank of Japan Reserve: an Illustrative Example

Simultaneous execution of transactions 1 to 4 as an integrated process through programming on blockchain



Author's interpretation of Graph 4, Chapter III of 2025 BIS Annual Economic Report.