

Relevant Ministries and the Bank of Japan Liaison Meeting on Central Bank Digital Currency (CBDC)

Interim Report

April 17, 2024

1. Introduction

(1) Background

In recent years, the digitalization of the economy and society has been rapidly proceeding due to the evolving information and communication technologies and the changes in people's behavior under the COVID-19 pandemic. Daily payments for goods and services are no exception in this digitalization trend. The use of cashless payment services with credit cards and smartphone apps is becoming more prevalent in place of the use of cash (i.e. banknotes and coins).

As the cashless payment service providers are increasingly diversified, such service providers now include not only private financial businesses (e.g. banks and credit card companies) that have traditionally provided payment services, but also other non-financial businesses. Those businesses include fintech companies — those providing innovative financial services making use of information technology —, telecommunication, transportation, and retail companies. The reason behind such diversity is that they see data as a new source of value; as a result, data on payment, which is inseparably linked to economic transactions, is becoming more important than ever.

While users have greatly benefited from such diversity and the improved convenience in payment services, there are also concerns about the lack of coordination among payment services and the implication of oligopolistic market structure due to further consolidation of those service providers. There are also concerns related to data security and privacy protection.

Along with the digitalization of the economy and society and the proliferation of cashless payments, a global stablecoin project was announced in 2019, which triggered many jurisdictions to consider possible introduction of CBDC (Central Bank Digital Currency).

CBDC is a new form of electronic central bank money issued as a direct liability of the central bank, denominated in legal tender of each jurisdiction. Many economies have been studying retail CBDC (general-purpose CBDC) for

individual and business users¹ while a few, including the Bahamas, have officially introduced it.

In 2021, G7 Finance Ministers and Central Bank Governors published the “Public Policy Principles for Retail Central Bank Digital Currencies,” which set out 13 principles, including monetary and financial stability. Large economies have not made a decision to issue CBDCs so far, and their researches and studies are underway.

In Japan, the Bank of Japan announced “The Bank of Japan’s Approach to Central Bank Digital Currency” in October 2020. Since April 2021, the BOJ has been working on technical experiments on CBDC through their proof-of-concepts and pilot program.

On June 18, 2021, the Cabinet decided the “Basic Policy on Economic and Fiscal Management and Reform 2021” which called for the government and the BOJ to articulate the Design Outline of CBDC. Accordingly, the Ministry of Finance, which has jurisdiction over the currency framework, launched the Expert Panel on CBDC (hereinafter referred to as “the Expert Panel”) in April 2023. On June 16, 2023, the Cabinet further decided the “Basic Policy on Economic and Fiscal Management and Reform 2023” which requested the government and the BOJ to coordinate for the Design Outline of CBDC in line with a report by the Expert Panel to be given around the end of 2023, while assessing developments in other jurisdictions. Then, the Relevant Ministries and the Bank of Japan Liaison Meeting on CBDC (hereinafter referred to as “the Liaison Meeting”) was established in January 2024.

This interim report does not prejudge whether or not to introduce CBDC in Japan. Following the report of the Expert Panel in December 2023, this report’s aim is to summarize the discussion on the Liaison Meeting regarding “Design Outline of CBDC, ” which clearly identifies the basic considerations on main issues and its possible options for CBDC introduction.

¹ In addition to retail CBDC, there is wholesale CBDC for limited entities, such as financial institutions for large-value payments. In this interim report, retail CBDC is simply referred to as “CBDC” unless otherwise specified.

(2) Japan's CBDC examined by the Liaison Meeting

Japan's CBDC examined by the Liaison Meeting is a digital currency that is expected to be used for payments in a similar way to private digital payment services, such as electronic money and QR code payments via smartphone apps or physical cards. Just like cash (e.g. 10,000-yen banknotes (bills) and 500-yen coins), CBDC would be available for day-to-day transactions, including shopping at stores. It would function as a means of payment even for online shopping, where cash is hardly used.

There are some differences between private digital payment services and CBDC. In contrast to private digital payment services which may not be accepted in every shop and remittance across different payment services is not always available, CBDC will be designed as a payment means anyone could use anytime and anywhere.

Another significant difference is that CBDC would be issued and circulated as a liability of the BOJ, the central bank in Japan, while private digital payment services are not. Therefore, users can safely use CBDC without credit risk, as is the case with cash. Settlement can be completed immediately, and users can receive CBDC securely.²

2. Developments in Japan and abroad

(1) Cash usage and other payment services in Japan

Japan's currency³ consists of coins and Bank of Japan Notes (banknotes) (hereinafter referred to as cash).

The circulation of cash begins when the BOJ disburses it to banks (issuance⁴) and ends when the BOJ accepts it from banks (redemption), indicating a "two-tiered model" where banks mediate cash circulation.

² For example, when an individual makes a payment to a store by a private payment service, the store often receives it in the form of a bank transfer from the private payment service provider after the payment. In the case of CBDC, however, it is assumed that a store will be able to receive at the time of the payment in principle.

³ Refers to the currency stipulated in Article 2, Paragraph 3 of the Act on Currency Units and Issuance of Coins (the Currency Act).

⁴ Coins issuance occurs when they are delivered by the government to the BOJ.

Cash in circulation in Japan had continued an upward trend, totaling about 126 trillion yen as of the end of FY2023. Among cash-holding sectors, households had been increasing cash holdings. Banknotes that account for most of the cash in circulation had been increasing; in particular, 10,000-yen notes had posted a remarkable increase. By contrast, coins in circulation have been decreasing in recent years after an upward trend.

Among payment means used by individuals, cash is used less frequently for larger-value payments. The cash use rate has been on a downward trend irrespective of the size of payment value in recent years. As for cashless payment services, the rate of use for electronic money or code payments goes down as the value of payment increases, as is the case with cash. However, the rate of use for credit cards is higher for larger-value payments.

The ratio of cashless payments relative to individuals' final consumption expenditure was 39.3% in 2023 while the government aims to increase it to about 40% by 2025. The cashless ratio, nevertheless, is estimated to reach about 50-70% when bank account transfers are included. As such, it is fair to say that cashless payments have prevailed to a considerable extent in Japan, contributing to productivity growth in the private sector despite shrinking labor force under the declining birthrate and aging population. Meanwhile, it must be noted that some issues regarding the existing cashless payments have been pointed out, including the burden of fees on the merchants, concerns about users' overspending, limited interoperability among payment services, and security measures.

From an international perspective, cash in circulation in Japan as a percentage of nominal GDP had been on an increasing trend, as seen in Europe and the United States, standing at a relatively high level. Regarding access to cash, the number of automated teller machines (ATM) and bank branches in Japan is comparable to that of other developed countries. More than 99% of residents in Japan have bank accounts at financial institutions.⁵

⁵ Questionnaire report on building better banks by the Japanese Bankers Association (FY2021)

(2) Situations in other jurisdictions

Large economies, although having made no clear decision to issue CBDC, have been conducting research on CBDC.⁶ In Europe, the European Central Bank (ECB) launched an investigation phase of a digital euro in October 2021 and ended the two-year phase in October 2023. It started a preparation phase in November 2023, planning to conduct further experiments and formulate rulebooks. The European Commission published a legislative proposal on the digital euro in June 2023.

In the United States, the Federal Reserve Board (FRB) published a discussion paper in January 2022, which analyzed the use and functions, and potential benefits and risks of CBDC. In September 2022, the U.S. Department of the Treasury released the report titled “The Future of Money and Payments,” which encouraged the FRB to continue its investigation and research on CBDC and recommended the establishment of an inter-agency working group led by the U.S. Department of the Treasury.

In the United Kingdom, HM Treasury and the Bank of England (BOE) jointly published a public consultation paper on the digital pound in February 2023 to launch the design phase over the next few years and published their report on the digital pound in January 2024, presenting the design of the digital pound and next steps.

Whereas the stated purposes and goals of CBDC in each jurisdiction are different, they mainly pursue to secure public’s access to central bank money in the digital age to ensure monetary sovereignty, monetary and financial stability, resilient and efficient domestic payments, improved cross-border payments, and financial inclusion.⁷ CBDC is supposed, as existing cashless

⁶ This interim report refers to the following documents indicating views in major economies:
Europe: ECB investigation phase progress reports (1st-4th), “Progress on the investigation phase of a digital euro” (September 2022, December 2022, April 2023, July 2023)
ECB investigation phase report, “A stocktake on the digital euro” (October 2023)
United States: Federal Reserve Board discussion paper, “Money and Payments: The U.S. Dollar in the Age of Digital Transformation” (January 2022), and U.S. Department of the Treasury report, “Future of Money and Payments” (September 2022)
United Kingdom: HM Treasury/Bank of England consultation paper, “The digital pound: a new form of money for households and businesses?” (February 2023)

⁷ In Europe, the concept of “digital financial inclusion” (providing financial services appropriately to those who do not have access to financial services, as well as those who will be adversely affected by the digitalization of financial services) has been presented.

payment services, to be for remittances between individuals, their payments to businesses, and payments between individuals and the government, with smartphone apps or physical cards.

In China, the People's Bank of China (PBOC) started the pilot R&D projects in 2019 and has gradually expanded the area of the pilot. As of the end of 2022, it expanded the pilot area to 26 regions across 17 provinces, with CBDC in circulation estimated at about 13.6 billion yuan (as of the end of 2022, accounting for 0.13% of cash in circulation).

Some jurisdictions,⁸ for example the Bahamas, have officially introduced CBDC, but CBDC in circulation remains far less than cash. Among Asian countries, with which Japan has close economic relations, South Korea, Thailand, and India are conducting CBDC experiments, investigations and researches.

According to a report by the Bank for International Settlements (BIS),⁹ about 90% of the 86 central banks that responded to a survey in 2022 answered that they are engaged in CBDC-related works. Primary motivations for CBDC are financial inclusion and the improvement of domestic payment efficiency mainly in emerging and developing countries.

(3) BOJ's experiments

In October 2020, the BOJ published "The Bank of Japan's Approach to Central Bank Digital Currency". Its approach indicated that it would consider conducting experiments, with the idea that "While the Bank of Japan currently has no plan to issue CBDC, the Bank considers it important to prepare thoroughly".

Under the approach, the BOJ experimented basic CBDC functions in an experimental environment as its Proof of Concept (PoC) Phase 1 from April 2021 to March 2022. Furthermore, the BOJ implemented additional functions (holding limits, scheduled remittance instructions, etc.) to the Phase 1

⁸ Besides the Bahamas, those include the Eastern Caribbean Currency Union, Jamaica, and Nigeria.

⁹ BIS survey report, Making headway - Results of the 2022 BIS survey on central bank digital currencies and crypto (July 2023)

experimental environment as its PoC Phase 2 from April 2022 to March 2023. Concurrently, in March 2021, the BOJ established the “Liaison and Coordination Committee on CBDC” to share information with business entities and the government on the progress of technical experiments. In May 2022, the committee published its Interim Report to explain the progress of the experiments and summarize the committee’s deliberations.

In the PoC Phase 1, the BOJ experimented three ledger designs from two perspectives: (1) whether the ledger is managed only by the central bank or management is split between the central bank and intermediaries, and (2) whether the ledger employs account balance or monetary data. The PoC Phase 2 checked additional functions. The BOJ confirmed no significant performance degradation in any of the patterns.

In April 2023, the BOJ launched a pilot program to confirm the technical feasibility, which was not covered by the previous PoCs, and to leverage technologies and knowledge of private businesses. At present, the pilot program does not entail actual transactions involving any retailers or consumers. In this program, the BOJ convenes a “CBDC Forum” to discuss and explore a wide range of topics along with private businesses in retail payment field. To test the end-to-end process flow, the BOJ develops a system for experiments to conduct performance tests.

3. Key considerations for the Design Outline of CBDC

People’s lifestyles and daily transactions vary by country. So do payment landscapes and issues, such as access to financial services and the popularity of cashless payments. Reflecting this background, the purposes and goals of CBDC, as well as motivations for exploring CBDC, differ across jurisdictions.

In articulating the Design Outline of CBDC in Japan, therefore, it is important to ensure that it should fit well into Japan’s current circumstances and meets the demand of users from the multifaceted perspectives. The Outline also needs to take into account Japan’s inherent economic/social situations and its payment landscape and issues whilst giving due consideration of progress in other jurisdictions. At the same time, it is desirable to analyze whether

challenges associated with conceptualizing the CBDC design share a common ground with those of the existing private digital payment services, and then to consider a variety of topics, including positive and negative impacts on the existing cashless payments.

Furthermore, Japan should proactively contribute to discussion for setting the relevant international standards, such as the G7 “Public Policy Principles for Retail CBDCs” and the IMF’s CBDC handbook. It is also important to align the design of Japan’s CBDC with those standards.

Since basic considerations on main design issues will have to be consistent with the purposes and goals of CBDC, it is vital that we set our own purposes and goals in Japan’s context and explain clearly and concretely to the public what social issues CBDC can address.

As the digitalization of the economy and society progresses and cashless payments are accelerating in Japan, CBDC, as a currency suitable for the digital economy, should be designed as a highly convenient digital payment means that can be used safely and securely by anyone, anywhere, anytime.

Therefore, the main issues to be explored here include: (1) how we should consider the relationship between the BOJ and intermediaries so as to make CBDC a highly convenient means of payment, taking into account the diverse demands of users; (2) how CBDC and other various payment services would play respective roles in order to ensure the stability and efficiency of the overall payment systems, given that various payment services have already been provided in Japan; (3) how to make CBDC always available as a means of payment and address the public’s concerns about privacy; and (4) how to address legislative issues when CBDC may have various effects on the current legal framework.

For articulating the Design Outline of CBDC while considering these main issues, this section will lay out basic considerations and possible options at present based on the Expert Panel report.

- (1) Relationship between the BOJ and intermediaries (vertical coexistence)
- (2) Relationship between CBDC and other payment means (horizontal

coexistence)

(3) Security and user data

(4) Legal consideration

(5) Other issues

Note that the basic considerations and possible options should be further elaborated and updated as necessary in light of a) the progress in CBDC exploration in other jurisdictions, b) changes in Japan's economic and social background as well as its payment landscape and issues, c) further clarification of the purposes and goals of the CBDC introduction in Japan, and d) future technological developments.

(1) Relationship between the BOJ and intermediaries (Vertical coexistence)

Today, the BOJ distributes cash through private financial institutions, instead of directly interacting with users. Given that it is unrealistic that the BOJ directly meets the diverse demands of users on CBDC, it would be appropriate to adopt a two-tiered model (indirect issuance), just like cash, in which private entities mediate CBDC transactions between the BOJ and users.

Since intermediaries are involved in the distribution of CBDC, the BOJ can minimize the scope of data that it handles on users and their transactions.¹⁰ In the two-tiered model, intermediaries would be able to improve user experience and generate revenue by appropriately handling user data and their transactions. These considerations also lead to the same conclusion: the two-tiered model would be desirable.

At this stage, the basic flow of transactions relating to CBDC issuance and distribution can be described as follows. First, users will take due procedures with intermediaries to initiate their use of CBDC. Second, they will request for CBDC in exchange for cash or bank deposits from intermediaries. At this stage, upon the request from intermediaries, the BOJ will issue CBDC to them whose deposits at the BOJ will be deducted. Users will then make payment instructions through intermediaries to initiate CBDC transfers.

¹⁰ For the handling of information on users and their transactions, see 3.(3)(ii).

(i) Role of the BOJ

As the BOJ would exclusively issue CBDC as its own liability, it is appropriate for the BOJ to manage CBDC arrangements (ledgers, etc.) to ensure the accuracy and verification of recording on CBDC transactions. In addition to managing these arrangements, the BOJ could be expected to play a role as a “catalyst,” which will contribute to generating value-added services by the private businesses through enhancing innovation.

To fulfill such a role, the choice of technologies the BOJ will likely adopt is one of the important issues. In this regard, the BOJ should investigate based on two perspectives. First, it should adopt technologies that will enable the necessary functions in the CBDC ecosystem. Second, it should realize functions within the constraints of technological developments without resorting to any specific ones. As the technological innovation in the payment field progresses at a rapid pace, large economies have not prejudged the use of any specific technology in their research. Therefore, technological considerations, including whether to introduce token-based CBDC and/or DLT, should be explored further, based on the results of PoCs and the pilot program at the BOJ and future technological developments.

The basic functions necessary for issuance, distribution, and redemption of CBDC should be designed to have robustness and accuracy to ensure the safety and reliability of the CBDC system. As for designing the other functions, agility and more flexibility should be pursued to accommodate future technological developments.

(ii) Role of intermediaries

In the two-tiered model, intermediaries would provide services related to the issuance, distribution, and redemption of CBDC, mediating between the BOJ and CBDC users. Specifically, they would act as a counterparty to the BOJ when undertaking operations regarding the issuance and redemption of CBDC to provide basic payment services to CBDC users. Furthermore, they would act as a counterparty to CBDC users to whom they are responsible for opening/closing accounts, customer management, providing interfaces,¹¹ and

¹¹ Interfaces refer to tools that allow users to use CBDC. Specifically, they are assumed to include smartphone apps and physical cards.

operations regarding distribution of CBDC such as payout, transfer, and acceptance (hereinafter referred to as core services).

As private businesses, which could act as intermediaries, significantly vary in their business models and sizes, it is not viable to assume that all intermediaries will take the same duties and responsibilities. Therefore, it may be desirable that intermediaries could flexibly provide services among broad options in accordance with their respective business conditions, judgments, and capacities. From this viewpoint, all the intermediaries may not have to be responsible for the full range of intermediary services. For example, some intermediaries may be allowed to be responsible for part of those services such as core services.

In addition to making CBDC available safely and securely by anyone, anywhere, anytime, it is important to envision CBDC to provide improved convenience comparable to other payment services, and furthermore to pursue any added-value that stems from its unique characteristic of the digital nature. To this end, intermediaries may provide “add-on services”¹² that improve usability, such as accounting service for households and conditional payments. Such add-on services should be open to private businesses which are not intermediaries. For promoting innovation in the private sector, not only private businesses that currently provide payment services but also other entities should be able to provide add-on services while ensuring a level playing field.

(iii) Scope and regulation for intermediaries

The scope of intermediaries should be specified concurrently with clarifying the definitions of and boundaries between core services and add-on services. It should also reflect discussion related to services required for intermediaries, and the distribution of costs.¹³ In this respect, deposit institutions, such as commercial banks, and other businesses that currently provide payment services would be possible candidates for intermediaries.

¹² Some large economies concern that imposing limits based on the usage, transaction period, and regions may impair the uniformity of currency and pose additional risks to users. On the other hand, it is argued that there should be room left for private businesses to provide conditional payments as add-on services while taking into account future technological advances and consumer demands.

¹³ For details on how relevant costs should be allocated, see 3.(5)(i).

The government needs to review regulation for intermediaries from multiple perspectives, as it involves user protection, including personal information protection and security among others. The regulation should be arranged in tandem with elaboration of the Design Outline of CBDC, while taking into account a) how far private businesses have discretion to choose the scope of intermediary services they conduct, b) the extent of requirements that are appropriate for respective intermediary services, c) the extent of harmonization in those requirements in the existing regulations and whether to require additional measures, and d) what kind of impacts occur on the practices of the private sector. In addition, appropriate supervision for intermediaries should also be in place while giving due consideration not to impose excessive burden on them.

(2) Relationship between CBDC and other payment means (Horizontal coexistence)

(i) Interoperability

Currently, there are a wide variety of payment means for individuals. These include cash, bank deposits, electronic money, code payments, credit cards.¹⁴ Users pick up the ones based on the characteristics of each payment means.

Under these circumstances, even if Japan introduces CBDC, various payment services most likely coexist in a manner that fulfills their respective functions and roles, thereby securing user choice, improving usability, and maintaining the overall stability and efficiency in the payment system.

A premise for this is that CBDC can be converted smoothly with other payment means (cash, bank deposits, electronic money, etc.), with the CBDC system being connected smoothly to existing private payment systems and ensuring enough flexibility for future updates.¹⁵

One issue on the development of infrastructure for CBDC will be how to use existing private payment infrastructure. The BOJ should consider this issue while taking into account the opinions of relevant businesses.

¹⁴ In addition to deposits at banks, deposits and savings at depository institutions are included.

¹⁵ It is argued that it would be desirable to require the technical standardization of private payment systems, including security measures.

(ii) Relationship between cash and CBDC

Cash has such characteristics as universal access (i.e. available for anyone), resilience (i.e. available anytime and anywhere), and anonymity. In addition, there is high trust in cash in Japan. Given those characteristics, demand for cash will remain somewhat even if CBDC is introduced.

Therefore, the government and the BOJ have shown their commitment to supplying cash as long as there is demand from the public, even if CBDC is introduced. CBDC and cash will coexist for the time being.¹⁶

From this perspective, CBDC and cash will, in principle, complement each other instead of CBDC replacing cash. Taking into account the fact that cash will continue to exist together with CBDC, the specific design choices of CBDC — a) offline functions (resilience) and b) anonymity compared to cash — should be examined from the perspective of whether those choices are necessary and what risk, if any, they may entail.

First, offline functions¹⁷ will enhance, on one hand, the resilience of CBDC since it will sustain CBDC's availability in situations such as communication failures and power interruptions caused by natural disasters. On the other hand, if those functions are provided, risks such as double spending and counterfeiting of CBDC may increase. Hence, while details of offline functions and the timing for their introduction should be determined following future technological development, it appears that there is no strong reason for those functions to be introduced at the outset of introducing CBDC, considering that cash continues to exist.

Second, anonymity should be examined in light of the possibility that CBDC may enable easier frequent/large-value transfers at a time when AML/CFT¹⁸

¹⁶ Regarding the policy of the government and the BOJ on cash supply, it is argued that attention should be paid to the possibility that a rapid decline in demand for cash would signify a sense of burden on intermediaries and stores.

¹⁷ Regarding the offline functions, several patterns can be considered depending on whether neither the terminals of payers and receivers are online (connected to the Internet).

¹⁸ AML/CFT measures include not only anti-money laundering and countering the financing of terrorism measures but also measures to counter financing for proliferation of weapons of mass destruction.

measures are an important issue.¹⁹ It should also be considered in the context of the continued availability of cash.

CBDC is expected to serve as a unit of account as Japan's currency. Since it will circulate together with cash for the time being, any remuneration on CBDC could undermine the convertibility with cash at par and would be difficult to assume.²⁰ Going forward, in light of discussions in other countries and following changes in Japan's economic and social conditions, the technical feasibility of remuneration on CBDC and the assessment of its necessity and risks could be further explored.

(iii) Relationship between bank deposits and CBDC

Bank deposits play an important role as a means of storing value and payment for users (depositors). They also undertake the function of credit creation which supplies money that is essential for the economy. While CBDC is a liability of the central bank, it does not play such credit creation function; however, some of its roles overlap with those of bank deposits. There could be a sudden or persistent outflow from bank deposits to CBDC, affecting the soundness of Japan's financial system and economy. Therefore, safeguard measures should be considered based on the assessment of the impact on financial intermediation, deposit insurance system, and economic activities.

Potential safeguard includes quantity measures, such as holding limit on CBDC; alternatively, there are price measures, such as fees on CBDC holdings above a certain threshold.

The holding limit is likely to directly cap the shift from bank deposits to CBDCs. By contrast, fee-based measures are likely to indirectly restrict the shift through reducing the attractiveness of CBDC holdings. Those might not work as intended in times of financial stress and their impacts are not necessarily clear. Owing to these concerns, the focus on safeguard measures

¹⁹ Large economies have also indicated that CBDC is at a higher risk of being used for money laundering and terrorist financing than cash because it is in a digital form and hence it is not feasible or appropriate to make CBDC as anonymous as cash. For the handling of user and transaction information, see 3.(3)(ii).

²⁰ At present, Europe and the United Kingdom indicate no remuneration on CBDC. On the other hand, the United States mentions the possibility of remuneration on CBDC.

should be on limiting CBDC holdings.²¹ While safeguard measures should be effective in normal times, appropriate safeguard measures may flexibly change in accordance with economic and social conditions and may require additional measures in times of financial stress.

In terms of the holding limit, it should be considered together with how the limit works when users are allowed to have multiple CBDC accounts and their payments or receipts exceed such limit.

When CBDC is received in excess of the holding limit, for example, such a receipt can be automatically transferred to a pre-registered account (such as a bank deposit account). When it is paid in excess of the limit, such a payment can be automatically charged from a pre-registered account. Although these functions would be important from the viewpoint of improving user experience, it should be kept in mind not to exclude users without any bank accounts.

When discussing the details of these safeguard measures, it should be noted that a) they are intended to limit the outflow from bank deposits to CBDC and b) they could be used for other policy objectives, such as AML/CFT, and foster CBDC's coexistence with other payment means.

(iv) Relationship between other payment means and CBDC

Other payment means include cash and bank deposits, as well as electronic money and QR code payment (for example, a called "XX Pay" service using a smartphone app or an IC card issued by transportation or retail businesses).

While fair and free competition between various payment services is important for securing user choices and improving user experience, there is a risk that network effects may be undermined due to issues such as differences in the coverage of payment services accepted at each store and the lack of

²¹ In Europe, price-related safeguard measures are viewed as indirect measures to reduce the relative attractiveness of CBDC compared with other financial assets. In Europe and the United Kingdom, therefore, consideration focuses on limiting CBDC holdings. On the other hand, in the United States, the holding limit and an option of lowering interest on CBDC when it is remunerated are considered. In this regard, it is argued that there should be left to consider not only the holding limit but also potential fee-based safeguard measures in the future.

availability in remittance services across different payment services.²²

However, CBDC is expected to play a certain role in improving interoperability among various payment services, promoting their competition and further enhancing network effects.²³ This means that CBDC, instead of competing with other payment services, may serve as a common infrastructure to support other payment services by securing their convertibility and thereby contributing to competition as well as maximizing network effects. In addition, while complementing each other in normal times, CBDC may ensure the redundancy²⁴ of entire payment system, serving as a backup for other means of payment in case of system failure.

It should be noted that private businesses that currently provide various payment services have already invested in developing infrastructure and customer/merchants acquisition, and might have gained profit opportunities through users' payment information. Given the possible effect that CBDC introduction will have on private business operators' business models, dialogue among relevant authorities and related private parties should be deepened, including one on private parties' system.

Depending on how CBDC may coexist and share roles with other payment services, merchants and users could be affected in terms of their payment options and benefits, so that merchants and users should also get involved in the dialogue.

(3) Security and user data

(i) Ensuring security

CBDC should always be available as a means of payment for users. To this end, all appropriate and effective measures for cybersecurity and information security should be in place for ensuring resilience to cyberattacks, preventing illicit use, and protecting personal data in an appropriate manner. Future

²² The "COTRA Remittance Service" was launched in October 2022, achieving free person-to-person remittances with a smartphone app.

²³ In the United Kingdom, CBDC is viewed as having a potential to serve as a bridging' asset between private digital money.

²⁴ Redundancy refers to designing a system pursuing to avoid the entire system down even if some part of the system fails.

technological developments should be considered as technologies in relation to information and communication and those securing privacy are constantly evolving.

To ensure security, all the stakeholders including the BOJ, intermediaries, private businesses, and users (including interfaces they use) should take respective measures. Given that there are various security risks, not to mention cyberattacks, robustness and redundancy should be ensured in the payment system as a whole.

To prevent system failures and incidents, *ex-ante* security measures should be ensured, based on lessons learnt from the past experience. Furthermore, *ex post* measures should also be prepared because payment infrastructure serves as the foundation for daily economic transactions. Therefore, a business continuity plan (BCP) should be established in advance. It is important to enhance its effectiveness through drills and build capacity for early recovery.

(ii) Handling user and transaction data

As CBDC is a digital payment means, its design should put priority on ensuring privacy from the perspective of protection of personal data. The design should be considered in accordance with the concept of “privacy by design,” in which personal information protection measures should be incorporated from the outset of design phase.

In doing so, the possible design should strike a balance between improving convenience, including the provision of add-on services through leveraging user and transaction data, and addressing the requirements from the public policy objectives such as AML/CFT. User and transaction data may be used in an appropriate manner that serves public interests.

From this point of view, as with the other payment services, intermediaries (including other private businesses if they are allowed to enter the CBDC market for add-on services, the same applies hereinafter in 3.(3)(ii)) should appropriately obtain, use, hold, and manage information regarding users and their transactions in accordance with relevant laws and regulations, such as

the Act on the Protection of Personal Information, which requires, for example, to identify data use purposes in advance and to delete such data when no longer needed.²⁵

As intermediaries are assumed to handle most user and transaction data, the scope of such data that they can access to should also be analyzed further. In this respect, the range of data collected and used in relation to CBDC may not exceed that of existing bank deposits and digital payment services. Moreover, the purposes for those intermediaries to use data should be acceptable from the public's viewpoint and the use of data should not cause a disadvantage to those users.

Furthermore, it should be noted that intermediaries' appetite for using user and transaction data may vary depending on their profit opportunities and business models. As such, even anonymized information can still be valuable for some specific purposes. Taking these into account, the use of user and transaction data should be considered from various perspectives, including ways to promote the benefit of the overall society.

As the BOJ would issue CBDC exclusively as its own liability, it would need to manage CBDC arrangements (ledgers, etc.) to accurately record and verify CBDC transactions. To this end, the BOJ should minimize the scope of user and transaction data it would handle.

For example, CBDC should be designed for the BOJ to obtain and hold as minimum data on individual users and transactions as possible.²⁶ In addition, even if personal data is obtained and held, the BOJ is expected to take measures such as anonymization, or should hold such data only during periods when it is required and delete it immediately when it is no longer needed.

As with the current framework, the principle is for the government to receive user and transaction data as required for AML/CFT and other public policy

²⁵ With regard to handling of user and transaction data by intermediaries, it is argued that multiple intermediaries might jointly hold and manage such data in pursuit of economic rationality while paying attention to their data management.

²⁶ It is argued that even if the BOJ does not obtain or hold information, it would be possible to meet public policy requirements if intermediaries could identify users.

objectives, while it does not receive them on a regular basis. In doing so, the government should clarify in advance the purposes of data use and the scope of data from the perspective of addressing public concerns about privacy.

With regard to harmonizing privacy protection with public policy objectives, for instance, it should strike a balance between ensuring privacy and adopting measures countering illicit activities such as AML/CFT. From the viewpoint of counter-measures against illicit activities, CBDC users should be subject to identity verification process, as is the case with existing payment services.²⁷ From the perspective of law enforcement with regard to money laundering/terrorist financing and cybercrimes, it would be beneficial to identify the users and to trace footprints of illegal transfer and data leakage caused by hacking if needed.

For ensuring privacy, for example, the scope of KYC procedures may be based on transaction limits.²⁸ At the same time, given that the CBDC design must be harmonized with AML/CFT and other misconduct countermeasures, it should be considered further, while assessing future developments regarding discussions in the international community, including at the BIS and the Financial Action Task Force (FATF). As variations in information that users must provide with regard to KYC procedures may impose burden on intermediaries, it should be discussed while listening to opinions of related private parties.

As for the CBDC access by non-residents such as foreign tourists in Japan, consideration should be made by taking into account the fact that identity verification for foreign tourists is difficult while they have already been able to easily use other payment services, such as credit cards. The primary scope of CBDC users, for the time being, would be residents in Japan, while access by non-residents is set aside for future consideration from the perspective of

²⁷ The joint use and sophistication of existing AML/CFT measures could be considered to reduce intermediaries' investment burden. For instance, the Japanese Bankers Association plans to establish a joint anti-money laundering organization for enhancing and sharing the AML/CFT operations between financial institutions and to provide an "AI scoring service" that would assign scores indicating suspicious transactions or transactions to be rejected.

²⁸ There is a view that privacy could be relatively prioritized on condition that transaction sizes are restricted as CBDC is assumed to be used mainly for small retail payments.

promoting inbound foreign tourists.²⁹

Provided that CBDC can be used for remittance with non-residents, CBDC design should be compatible with the objectives of the Foreign Exchange and Foreign Trade Act, including securing the effectiveness of economic sanctions.

(4) Legal consideration

The CBDC introduction is expected to have various effects on the current legal framework in addition to its definition in the currency framework. These include, how civil laws address the ownership and transfer of CBDC as intangible asset, how criminal laws prevent unauthorized use of CBDC, and how intermediaries should be regulated including the perspective of protection of personal data. Therefore, legal consideration should be deepened as elaboration of CBDC design progresses.

Meanwhile, it is crucial that the three aspects of CBDC discussions (i.e. the design-related, legal and technological ones) should be well orchestrated. In particular, as technological progress will continue, it is essential that the CBDC design should be able to flexibly respond to potential technological innovation upon understanding how each technology affects the legal framework. At the same time, the legal framework should avoid preempting the application of specific technology.

(i) Currency framework arrangements

Cash (banknotes and coins) is stipulated as legal tender under the Bank of Japan Act and the Currency Act. In the currency legal framework, CBDC should be designated as legal tender founded by the law hence to be convertible with cash and accepted widely as a means of payment.

When CBDC is characterized as legal tender, monetary obligations would be discharged by the tender of CBDC. Creditors cannot refuse to accept it even in the case of statutory claims in which the monetary obligations are not based on any contract. It can be also pointed out that even when CBDC is designated

²⁹ The United Kingdom presents the idea that non-residents could have access to CBDC. In Europe, however, it is envisaged that only euro area residents may have access to CBDC at the initial release, and access for non-resident euro area citizens could be part of the subsequent release.

as legal tender, other payment services can be chosen for transactions when agreed between payers and payees which would allow stores not to accept CBDC. Therefore, it is necessary to consider how to establish an appropriate environment conducive to universal access, including the availabilities at stores.³⁰

(ii) Civil laws

In case of cash, its ownership and possession are deemed to be inseparable. However, as CBDC takes a digital form the notion of possession would not be immediately conceivable. Therefore, the legal foundation for the ownership and transfer of CBDC need to be clarified. This requires balancing the need to support smooth circulation of CBDC while protecting users who have incurred losses caused by illegitimate transfers.

In addition, the Civil Execution Law stipulates distinct methods of compulsory execution according to types of property, such as movables and claims; therefore, the procedures for seizure will differ depending on how to categorize CBDC as property. Accordingly, the way in which authorities seize CBDC should be considered, taking into account the existing procedures of compulsory execution against cash and deposit claims.³¹

(iii) Criminal laws

The current law prescribes that only tangibles such as banknotes are subject of the crimes of currency counterfeiting. Therefore, criminal penalties should be considered to cover unauthorized creation of intangible CBDC. Building upon discussions in the area of civil law, clarification should be also made for the ownership and transfer of CBDC in light of criminal law.

From the perspective of law enforcement against counterfeiting action, it is desirable that unauthorized creation is difficult and that counterfeiting is identifiable. Furthermore, criminal procedure of seizure and confiscation also need to be pursued from the perspective of depriving criminal proceeds and restoration of damage, building upon such discussions in the area of civil

³⁰ In Europe, there is an idea for setting safeguard measures to prevent intermediaries from charging excessive fees to merchants assuming that CBDC is legal tender.

³¹ In the current framework, cash is subject to the way for movable property execution, while deposit claims are subject to the way for claim execution.

procedural law.

(iv) Regulation for intermediaries

The government needs to review regulation for intermediaries from multiple perspectives,³² because it involves user protection, including personal information protection and security among others. It is necessary to examine the existing regulations and supervision as well as whether to introduce additional arrangements for the intermediation of CBDC according to further elaboration of the Design Outline of CBDC.

(5) Other issues

(i) Cost allocation

As the design of CBDC becomes more elaborated in the future after articulating the Design Outline of CBDC, a decision on whether or not to introduce CBDC would be made, following discussions with the public. When making such a decision, the overview of the costs for the CBDC, including the development and operation of the infrastructure system, should be presented in addition to clarifying the purposes and goals of the CBDC.

In the overview, not only the volume of the costs but also the way in which the costs are allocated should be assessed in the future. Possible approaches could be that various beneficiaries within the overall CBDC ecosystem bear its costs and that the public sector bears the costs for providing the public infrastructure.³³

In any case, it is necessary to carefully consider how the costs should be distributed from a wide range of perspectives, such as determining who will benefit from the use of CBDC and how to ensure an environment for fair competition for payment services, as the Design Outline of CBDC becomes more concrete.³⁴

³² See 3.(1)(iii) for the scope and regulation of intermediaries.

³³ With regard to public sector's costs, it should be noted that even if the BOJ bears any costs, the public will ultimately bear the costs even though it is hard for the public to recognize.

³⁴ If fees related to CBDC are to be introduced, both contents and levels of them should be set appropriately.

(ii) Cross-border payment

International fora, including the G7 and G20, and international organizations, such as the Financial Stability Board (FSB) and the BIS, have been taking initiatives to address global challenges on cross-border payments. Those initiatives aim to make such payments faster, cheaper, and more transparent.³⁵

Wholesale CBDC is seen as one of the possible options to address these issues. However, given that each jurisdiction could potentially introduce CBDC and use it for cross-border payments in the future, as the first step, promoting international cooperation in terms of technological standardization for ensuring interoperability among CBDCs should be considered.

In this regard, the BOJ has been actively participating in and contributing to international discussions on technological standardization and will continue its efforts.

It should be noted that achieving interoperability among CBDC or other payment systems alone does not entirely solve the challenges associated with cross-border payments. Those payments not only entail exchanges between national currencies but also impose operational requirements on financial institutions since AML/CFT and other regulatory standards differ from country to country.³⁶

In improving cross-border payments, therefore, future consideration should aim at ensuring the interoperability among CBDC and payment systems in each jurisdiction. Moreover, consideration should be given to addressing other issues, such as harmonization of regulations and legal systems among countries with international cooperation. In addition, it is necessary to analyze initiatives driven by the private sector to address cross-border payment issues.

³⁵ In order to improve cross-border payments, the BIS and central banks in each jurisdiction are conducting technical experiments on wholesale CBDC. In addition, initiatives for connecting instant payment systems are progressing mainly among Asian countries.

³⁶ The United Kingdom also indicated that CBDC would not themselves alleviate frictions caused by different AML/CFT standards between jurisdictions. In the United States, it is reported that there are issues regarding the compatibility of governance and regulations between various jurisdictions.

Furthermore, Japan should proactively contribute to discussions on international standards regarding cross-border payments in order to ensure greater transparency in cross-border payments and to appropriately address issues and risks such as privacy protection, AML/CFT, and measures for cybersecurity.

(iii) Other administrative issues

As for other administrative issues, how to leverage digital technology, such as in the area of identity verification process, should be explored. As CBDC will be used by diverse users, a vision; “Human-friendly digitalization: No one left behind” should be also pursued so that those who are familiar with digital technology can enjoy greater convenience and those who are not can also enjoy the benefits of digital technology.

In addition, consumer troubles on financial instrument and payment are occurring and reported to consumer affairs centers nationwide. Relevant ministries and the BOJ need to consider plans to alert people in order to prevent them from being victims of fraud and fraudulent business practices with introduction of CBDC. It is important to explore the remedies for those who have incurred losses caused by illegitimate transfers to ensure safe usage by consumers.

4. Conclusion

As currency is the foundation of daily economic transactions, the currency framework has a large impact on the people’s daily lives. Accordingly, the future of the currency framework should be explored further while incorporating broader perspectives.

Furthermore, developments in large economies, such as Europe and the United States, as well as other regions, including Asia with which Japan has close economic relationships, should be carefully analyzed. Meanwhile, technological progress will continue at a rapid pace.

Given the situation above, the Liaison Meeting will deepen its discussion based on this interim report to articulate the Design Outline of CBDC. Further

elaboration and updates should be made while assessing the developments in other jurisdictions and future technological advances. This preparation will help Japan introduce CBDC in the future without delay if the decision were made after discussions with the Japanese public.

It is essential to address the public using a simple and concrete language about how CBDC could overcome social challenges in the digital era and how security and privacy would be ensured. In addition, continued discussions based on opinions from a wide range of stakeholders, including related private entities, will play an important role in building a sound ecosystem for CBDC.

The government and the BOJ will continue to closely cooperate with each other in proceeding with their consideration of CBDC, bearing in mind that trust and confidence in the nation underpin the foundation of its currency.

(References)

1. List of members of the Liaison Meeting

(Chair)

Director-General of the Financial Bureau, Ministry of Finance

(Members)

Director-General for Economic and Fiscal Management, Cabinet Office

Director-General, Organized Crime Department, Criminal Affairs Bureau,
National Police Agency

Director-General of the Policy and Markets Bureau, Financial Services Agency

Director-General for Evidence-based Policymaking, Consumer Affairs Agency

Group Manager, Group of Strategy and Organization, Digital Agency

Director-General for Policy Coordination, Ministry of Internal Affairs and
Communications

Director-General, Postal Services Policy Department, Information and
Communications Bureau, Ministry of Internal Affairs and Communications

Director-General of the Civil Affairs Bureau, Ministry of Justice

Director-General of the Criminal Affairs Bureau, Ministry of Justice

Director-General of the International Bureau, Ministry of Finance

Director-General of the Employment Environment and Equal Employment
Bureau, Ministry of Health, Labor and Welfare

Director-General of the Management Improvement Bureau, Ministry of
Agriculture, Forestry and Fisheries

Director-General for Commerce and Service Industry Policy, Ministry of
Economy, Trade and Industry

Executive Director, Bank of Japan

(Observers)

Japan Fair Trade Commission

Personal Information Protection Commission

2. Meetings

1st meeting: January 26, 2024

- Establishment of the Liaison Meeting
- Upcoming workflow

2nd meeting: March 12

- Issues of the relevant ministries under the respective jurisdictions

3rd meeting: April 17

- Completion of Interim Report