

Report by the Task Force for the Next-
Generation Payment Systems

December 2020

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As of November 2, 2020

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Financial Services Agency	Director of the Banking Business Division I, Supervision Bureau	Masamichi	Yamashita
Japanese Banks' Payment Clearing Network	General Manager Planning & Coordination Dept.	Yuichi	Chiba

(Names are listed without honorifics and in the Japanese
syllabary order (except for the secretariat office))
End

1. Introduction

The environment surrounding payment and settlement is changing significantly and constantly across the world including Japan, as evidenced by the development in discussions concerning the possible introduction of new forms of digital money (e.g. CBDC and Diem) and the promotion of cashless payment services through public and private collaboration. In response to such changes, the Japanese Banks' Payment Clearing Network (the "Zengin-Net") that serves as an administrator of the Zengin Data Telecommunication System (the "Zengin System") is working on various initiatives in pursuit of an ideal infrastructure for Japan's payment system. Such initiatives include experimental studies related to new technologies, surveys on developments in other jurisdictions and dialogues with various domestic organizations and payment service providers.

As part of these initiatives, the Zengin-Net Expert Panel was established to invite views from experts in academics and industries along with those of the member banks. At the Zengin-Net Expert Panel held in FY2019, experts provided suggestions and recommendations to: (1) realize interoperability through allowing non-bank payment service providers (funds transfer service providers) to participate in the Zengin System; (2) continue discussions for the potential use of new technologies; and (3) establish a task force to explore these areas.

During FY2020, the "Council on Investments for the Future"¹ convened by the Japanese Government and the "Future of Payments Forum"² sponsored by the Bank of Japan (the "BOJ") also discussed possible participation of funds transfer service providers in the Zengin System and the development of a low-cost and efficient system for frequent, small-amount payments to adapt to the changing environment in payment and settlement services. Furthermore, the Japan Fair Trade Commission published the *Report of Survey on Cashless Payments Including Using QR Codes*.³ This report recommends that the Zengin-Net consider allowing funds transfer service providers to access the payment systems and enhance governance over the Zengin-Net and ensure its transparency.⁴

Given these developments, the Zengin-Net established the Task Force for the Next-Generation Payment Systems (the "TF") in FY 2020 and discussed the future model for the next-generation payment system (e.g. participation of funds transfer service providers in the Zengin System, and development of frequent, small-amount payment services). To facilitate discussions among various stakeholders, the TF members are composed of academics, payment-related organizations, system-

¹ The Council (chaired by the prime minister) was established in 2016. It intends to promote aggressive investments in the fields contributing to future growth, including the fourth industrial revolution, through public and private collaboration, and accelerate a growth strategy and structural reform to promote investments for the future.

² The forum was established by the BOJ to primarily discuss with experts solutions for issues in the existing payment services in both retail and wholesale areas.

³ https://www.jftc.go.jp/houdou/pressrelease/2020/apr/chouseika/200421_houkokusyo_2.pdf

⁴ Based on the discussions at the "Council on Investments for the Future," the same recommendation was made in the "Action Plan of the Growth Strategy" (approved by the Cabinet on July 17, 2020).

related business operators, think tanks, the Financial Services Agency (the “FSA”), the BOJ, banks and the Zengin-Net’s secretariat office (see the list on page 1 for the TF membership).

The following sections outline the results of discussions held by the TF.

2. Current status of payment services

This chapter provides an overview of the Zengin System and domestic trends in payment services to inform the background and basis of the TF’s discussions.

(1) Details of the Zengin System

(i) Overview of the Zengin System

The Zengin System operated by the Zengin-Net is a payment system that relays fund transfers between different financial institutions. Almost all deposit-taking financial institutions in Japan (i.e. over 1,000 institutions) currently participate in the Zengin System. Furthermore, the Zengin System ensures a high level of safety and reliability, demonstrated by the fact that system operation has never been disrupted during its operation since it launched in 1973. The overview of the Zengin System is described below.

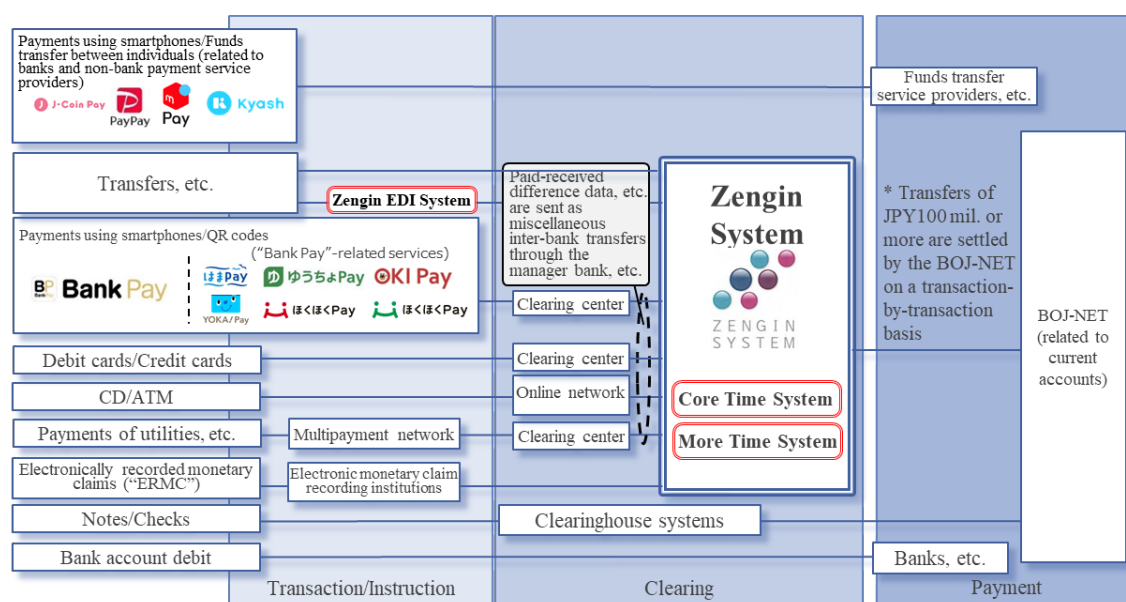
[Figure 1: Overview of the Zengin System]

Current participation qualification	Deposit-taking financial institutions engaged in domestic funds transfer services as part of their banking business, etc.
Settlement method	[Transfer of less than JPY100 million] Designated-Time Net Settlement (the member banks’ net debit amounts may not exceed the value of collateral posted) [Transfer of JPY100 million or more] Real-Time Gross Settlement (“RTGS”) (connected to the BOJ-NET for each transfer)
Functions	Telegraphic transfers (sending each transfer) New file transfer facility (sending multiple transfers in bulk)
Number of transactions (FY2019)	Telegraphic transfers: Approximately 1.6 billion New file transfer facility: Approximately 400 million
Total transaction amounts (FY2019)	Telegraphic transfers: Approximately JPY3,000 trillion New file transfer facility: Approximately JPY50 trillion
Others	<ul style="list-style-type: none"> Each member bank and the Zengin System are connected via

	<p>dedicated relaying computers (“RCs”).</p> <ul style="list-style-type: none"> • The system is upgraded every 8 years (six upgrades since 1973, and the 7th Generation Zengin System is in operation from 2019)
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In addition to fund transfers, the Zengin System executes settlements arising from transactions between financial institutions, such as credit cards, debit cards, bank-related QR settlement services and CD/ATM on-line services. Through these services, it supports the overall payment system in Japan.

[Figure 2: Payment environment surrounding the Zengin System]



(ii) Participation methods in the Zengin System

There are two access models in the Zengin System: (i) participation as “Clearing Participants” (directly connected settling participants) settling funds directly using the BOJ’s current account (“BOJ current account”); and (ii) participation as “Agency Participants” (directly connected non-settling participants) settling funds using the current account of other Clearing Participants.

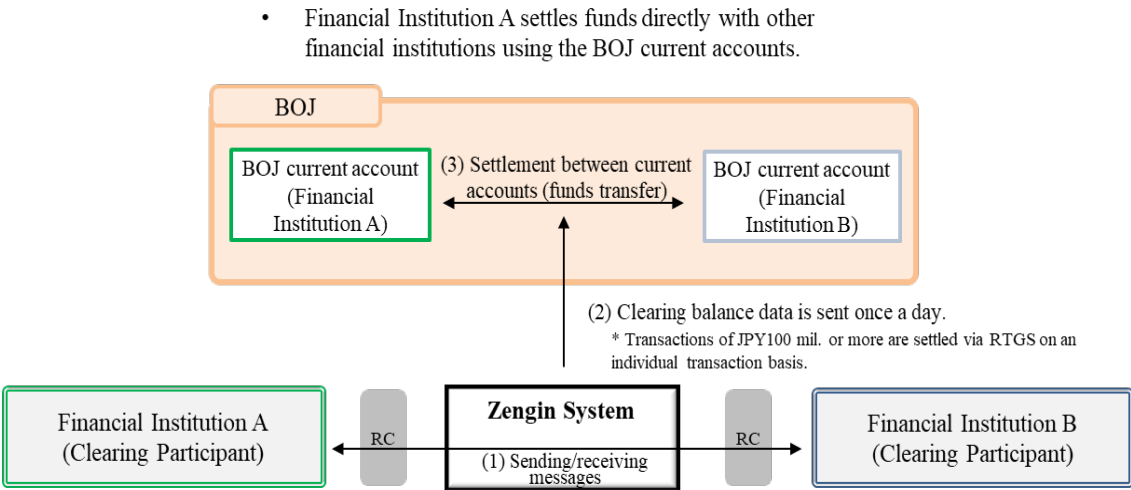
System-wide, there are two connection methods: (iii) “individual connection” where banks’ systems are directly connected to the Zengin System; and (iv) “joint connection” where a joint center is built with other member banks and their systems are connected to the Zengin System via this center.⁵

Combining these access models and connection methods, four participation methods are available

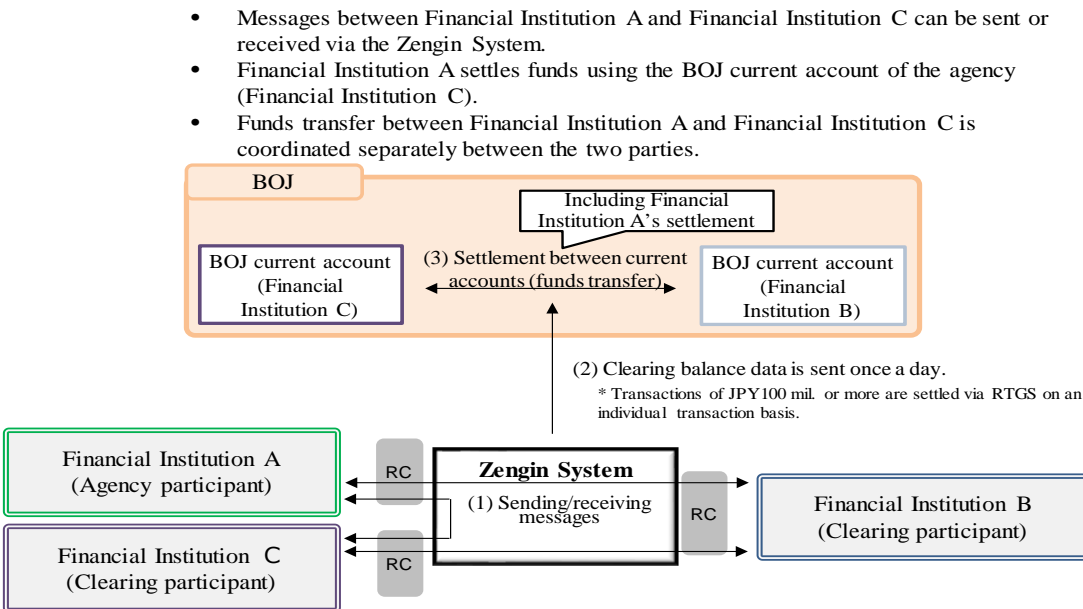
⁵ Another model similar to “joint connection” is the model to jointly use only a portion of the external connection system connected to the Zengin System with other member banks. In the case of joint use of the external connection system, in contrast to “joint connection,” telegraphic messages between the member banks are transmitted via the Zengin System.

under the current Zengin System. They are illustrated in the following figures.

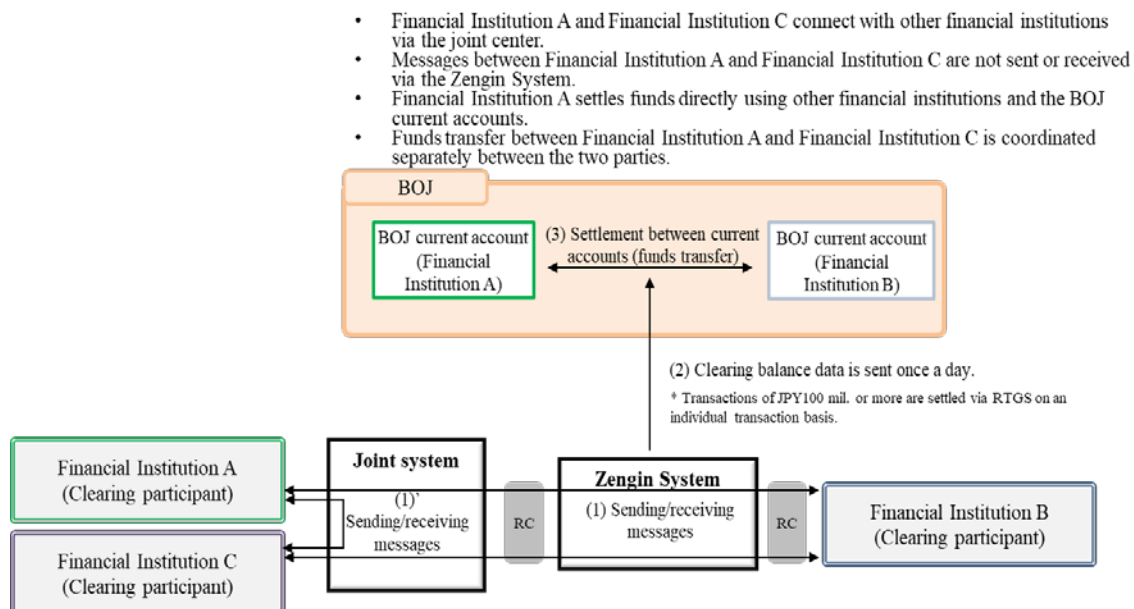
[Figure 3: Case where Financial Institution A is a “Clearing Participant” and adopts “individual connection”]



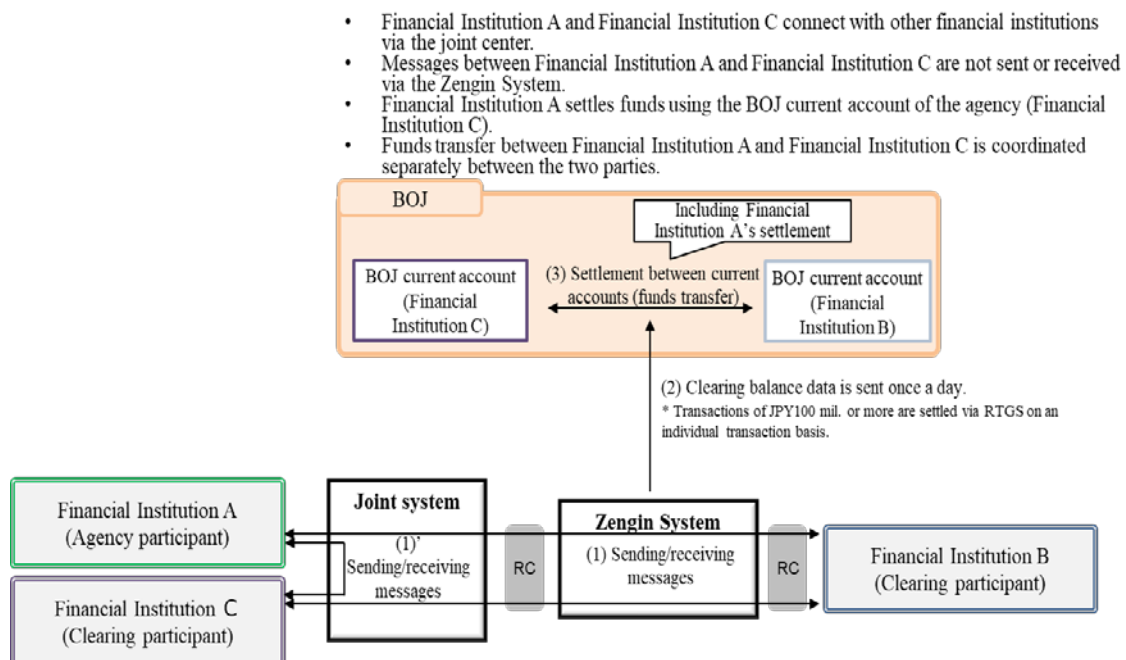
[Figure 4: Case where Financial Institution A is an “Agency Participant” (Financial Institution C is the agency) and adopts “individual connection”]



[Figure 5: Case where Financial Institution A is a “Clearing Participant” and adopts “joint connection”]



[Figure 6: Case where Financial Institution A is an “Agency Participant” (Financial Institution C is the agency) and adopts “joint connection”]



Participants in the Zengin System choose from these methods by taking into account their respective situations. Currently, financial institutions, which are subject to the Zengin-Net Rules (“member banks”) and have a banking license, participate in the Zengin System as Clearing Participants in the form of individual connection (see Figure 3). On the other hand, shinkin banks and credit cooperatives participate in the Zengin System in the form of joint connection via the joint system. Under this scheme, the central institution of those banks and cooperatives acts as the agency and individual financial institutions act as Agency Participants (see Figure 6).

(iii) Real-time payments and the network effect

The Zengin System has been delivering real-time payments (i.e. crediting to accounts is immediate upon the transfer of funds) since 1973. In other jurisdictions, real-time payments were introduced in the 2000s.⁶ This suggests that Japan pioneered the development of real-time payment systems ahead of the rest of the world. In the United States, multiple payment systems are operated by the public or private sector and not all financial institutions participate in a single payment system. By contrast, in Japan, the Zengin-Net is the only clearing agency that operates the payment system (the Zengin System) under the Payment Services Act. This ensures a high level of network effects, enabling fund transfers between almost all deposit-taking financial institutions in Japan.

The Zengin-Net has also been undertaking efforts to enhance the Zengin System and to improve the convenience of users. One example is the 24/7-operation of the Zengin System. Operating hours of the Zengin System had long been limited to daytime hours on weekdays. Since the operation of the More Time System in October 2018, the Zengin System has realized operation on a 24/7 basis, facilitating an environment which supports real-time transfers at nighttime on weekdays or on holidays. Another example is the launch of the Zengin EDI System in December 2018. This system is designed to enable attachment of various EDI information (e.g. payment notification number, invoice number) for sending transfer messages between companies.

(iv) Measures to mitigate settlement risk

The Bank for International Settlements (the “BIS”), an organization constituted by the central banks of major jurisdictions, and the International Organization of Securities Commissions (the “IOSCO”) established international standards (i.e. the Principles for Financial Market Infrastructures (the “FMI Principles”)) with the aim of designing the infrastructures that support global financial markets that are more robust and sufficiently resilient to financial crises. The FMI Principles, among other things, require financial market infrastructures (“FMIs”) to mitigate risks arising from participants in payment systems. Settlement risk associated with the Zengin System is addressed in a manner that satisfies the

⁶ Real time payments were introduced in the United Kingdom in 2008, the United States and Australia in 2017, and Hong Kong in 2018.

FMI Principles.

Specifically, the Zengin System has established a system for providing liquidity, the requirements for collateral posting to the Zengin-Net⁷ and the Sender Net Debit Cap Scheme⁸ to prevent the materialization of settlement-related systemic risk in the event that a member bank becomes short of settlement funds (i.e. contagion risk of such an event triggering other participants' bankruptcy, insolvency to customers, or other similar events). Furthermore, the Zengin Net has constructed a framework to limit the participation qualification to those deposit-taking financial institutions managing operational risk, including system risk, under the supervision of competent authorities so as to avoid risks associated with a member bank affecting other member banks and the stability of the Zengin System.

In particular, the Zengin Net designed the scheme for the system for providing liquidity in a manner consistent with BIS's "Lamfalussy+" standard to cover the amount of defaults by the top two members with the most significant impacts. Furthermore, the defaulter pay principle is applied to cover losses from a defaulting bank mostly by collateral posted by that bank. With these mechanisms, the Zengin System has established highly effective risk management comparable with the payment systems in other jurisdictions.

(2) Developments in payment services and regulations

With the enforcement of the Payment Services Act in April 2010, entities other than deposit-taking financial institutions (i.e. funds transfer service providers) are allowed to offer fund transfer services that had been limited to deposit-taking financial institutions. According to statistics provided by the Japan Payment Service Association (see Figure 7), the number of remittances processed by funds transfer service providers is increasing year by year, having exceeded 400 million transactions in FY2019.⁹ The use of the code settlement services¹⁰ offered by those service providers has also been increasing (see Figure 8).

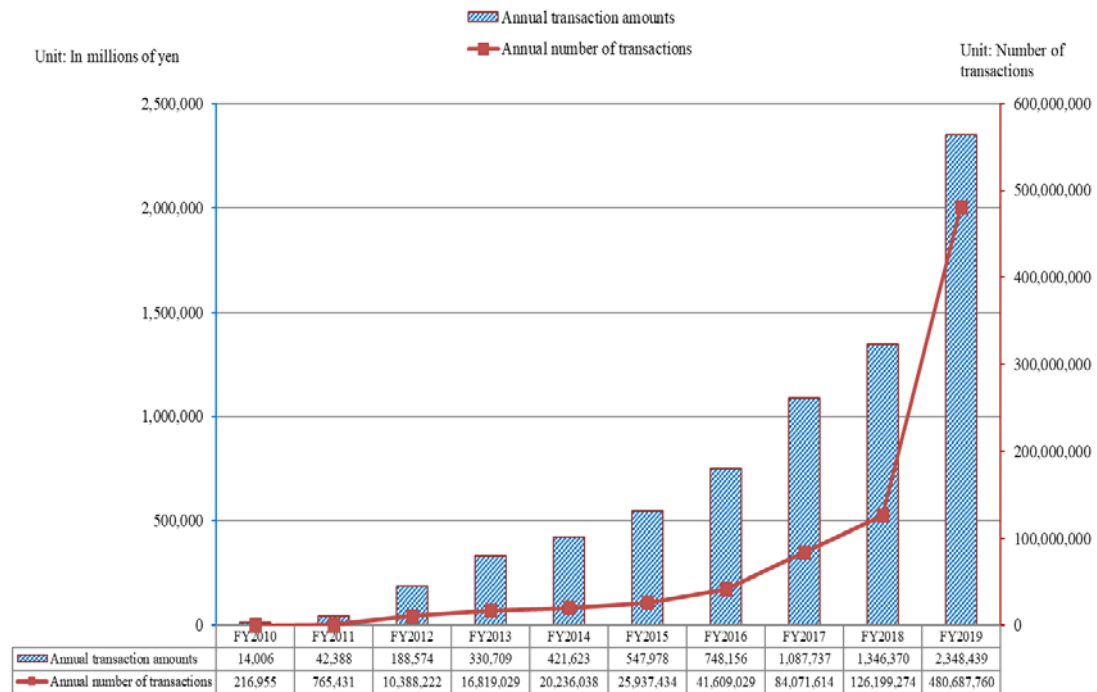
⁷ Under the system for providing liquidity, if a member bank defaulted due to, for example, a shortage of the current account balance at the time when the clearing balances are settled via the BOJ current account (i.e. normally at 16:15 on business days), "liquidity providing banks" contracted with the Zengin-Net provide funds to cover the net balance(s) of the defaulted bank during the day and provide final settlement by the end of the day. The liquidity providing bank is later reimbursed using the funds recovered from the disposal proceeds of the collateral posted by the bank in default on the Zengin-Net.

⁸ Under this scheme, the member banks' net debit amount (their gross payment minus their gross receipt) is monitored and managed by the system to ensure that it does not exceed the value of collateral posted by respective member banks. Transactions exceeding the collateral value are treated as an error and are not accepted by the Zengin System. With this scheme, it is possible to repay funds remitted to other member banks with the pledged collateral even if the sender bank defaults.

⁹ The number of fund transfer transactions processed by the Zengin System in FY2019 was approximately two billion.

¹⁰ A service that uses payment applications on smartphones to make payments by reading QR codes or bar codes.

[Figure 7: Remittances by funds transfer service providers]



(Source: Website of the Japan Payment Service Association)

[Figure 8: Number of code settlement transactions, etc.]



(Source: Website of the Payments Japan Association)

In June 2020, the Payment Services Act was revised to incorporate the views expressed in the report published in December 2019 by the Financial System Council's "Working Group on Regulations for Payment Services Providers and One-Stop Financial Services Brokers." This revised act intends to address the needs for highly convenient, secure and safe payment services that are compatible with the cashless era, and to enhance and protect the convenience of financial service users. As shown in Figure 9, the revised act classifies funds transfer service providers into three types (Type 1, Type 2 and Type 3) according to their remittance limits, and then applies requirements according to the risks associated with respective remittance limits.¹¹

[Figure 9: Regulatory framework for settlements by funds transfer service providers and banks]

Key settlement-related requirements	Type 1 (handling large-amount payments)	Type 2 (applicable to the existing framework)	Type 3 (handling only small-amount payments)	Banks
Participation requirements	Registration required (+ approval of the business plan)	Registration required		License required
Financial requirements	It is required to have a sufficient financial soundness necessary for providing funds transfer services appropriately and securely. (There are no quantitative thresholds.)			Capital requirements, liquidity requirements, large exposure limits, disclosure rules, on-site inspection by the BOJ, etc.
Regulation on the business scope	Fund transfer service providers are prohibited from allocating received funds to the loan business. The scope of business is not regulated (provided that it is not deemed as undermining public interest).			The scope of business is regulated.
Restriction on retention of funds	A specific remittance instruction is required. Retaining funds for more than an operationally or technologically necessary period is prohibited.	Procedures need to be in place to check that received funds of more than JPY1 mil. will be used for funds transfer transactions.	Acceptance of funds per person is limited to a few ten thousand yen.	Acceptance of deposits is defined as the banking business under the Banking Act.
Measures to secure funds and prompt resolution procedures for user protection (mitigation of settlement related systemic risk)	Required to secure funds in full but a certain time lag exists for securing funds. Calculate on every business day.	Required to secure funds in full but a certain time lag exists for securing funds. Calculate for each internally-determined period but within one week.	Required to secure funds in full but a certain time lag exists for securing funds. Calculate for each internally-determined period but within one week. (Segregated management of users' assets through deposits is allowed (but external audit is required).)	Safety net by the above financial requirements and the deposit insurance system
Requirements under the Act on Prevention of Transfer of Criminal Proceeds	Actions to address respective risks			

* Some of the requirements described above includes the revisions that incorporate discussions at the "Working Group on Regulations for Payment Services Providers and One-Stop Financial Services Brokers."

The following overview discusses the regulatory differences between funds transfer service providers and deposit-taking financial institutions.¹²

- In contrast to deposit-taking financial institutions, funds transfer service providers are prohibited from accepting users' funds unrelated to fund transfer transactions (prohibition of receipt of deposits) under the Act Regulating the Receipt of Contributions, the Receipt of Deposits, and Interest Rates.

¹¹ The revised Payment Services Act will take effect within one year from the publication date. Going forward, relevant cabinet orders, cabinet office ordinances and guidelines that stipulate detailed rules will be established.

¹² Note that, with respect to the issues related to the revision of the Payment Services Act, the discussions at the Financial System Council's "Working Group on Regulations for Payment Services Providers and One-Stop Financial Services Brokers" were not necessarily undertaken assuming funds transfer service providers' participation in the Zengin System.

If, however, a funds transfer service provider is given a remittance instruction from a sender customer and funds received that are credited to the sender's account are linked to a specific remittance request, such funds are not deemed as deposits.¹³

- Funds transfer service providers are not subject to any quantitative prudential requirements equivalent to the minimum capital requirements and the capital adequacy requirements applicable to deposit-taking financial institutions¹⁴ for the following reasons: “Uniform capital rules requiring to maintain the prescribed amount of capital are not established for funds transfer service providers” because “they are permitted to concurrently engage in businesses other than the funds transfer service and therefore it cannot be presumed that the amount of their capital can be used as assets available only for the funds transfer service” and “the size and type of their services vary, and the amount of capital required also differs depending on the nature and business model of such services.”¹⁵ With regards to funds transfer service providers handling large-amount payments, the aforementioned report published by the Financial System Council states that “the proposed approach would be to first establish necessary rules and then consider whether to develop additional rules as necessary in consideration of current practice and status of the payment services used for payments between companies.”¹⁶ This is based on the view that, if excessively stringent rules are established to address the concern over significant social and economic impacts arising from the bankruptcy of a funds transfer service provider handling large-amount payments, such rules may impede the creation of new highly-convenient services in Japan and therefore such a potential scenario should also be paid attention to.
- Under the deposit insurance system, settlement obligations and specific settlement obligations of deposit-taking financial institutions are guaranteed in full to ensure the stability of the payment systems.¹⁷ The deposit insurance system, on the other hand, is not available for funds transfer service providers. However, with a view to minimizing the impact of their bankruptcy on users, the Payment Services Act requires funds transfer service providers to secure assets at the level sufficient to cover the sum of the “amount of outstanding obligations” and the “amount of costs related to the procedures for the fulfillment of the right” (the required amount as security for providing the funds transfer services) on each business day. Nevertheless, this obligation to secure assets under the Payment Services Act does not ensure the same level of stability for the payment systems as the

¹³ The finalized amendments to the cabinet orders and cabinet office orders pertaining to the enforcement of the Payment Services Act published by the FSA (February 23, 2010) (<https://www.fsa.go.jp/news/21/kinyu/20100223-1.html>)

¹⁴ However, the condition for rejecting the registration of funds transfer service providers include “a corporation which lacks the sufficient financial soundness deemed to be necessary for the proper and secure conduct of funds transfer services” (Article 40(1)(iii) of the Payment Services Act).

¹⁵ See p.160 of *Chikujyo Kaisetsu Shikin Kessai Hou [Zouho-ban]*, a book written and edited by Yasufumi Takahashi, explaining the Payment Services Act for each article.

¹⁶ https://www.fsa.go.jp/singi/singi_kinyu/tosin/20191220/houkoku.pdf

¹⁷ However, as described later, necessary risk management measures are taken under the Zengin-Net Rules.

deposit insurance system because (i) the amount of security deposits for providing the funds transfer services may fall short of the required amount as security for providing the funds transfer services due to a certain time lag¹⁸ in the timing of calculating the required amount as security for providing the funds transfer services which is used as an input for the amount of security deposits for providing the funds transfer services; and (ii) while the deposit insurance system employs the weekend approach,¹⁹ it takes about six months to reimburse the security deposits for providing the funds transfer services.²⁰

¹⁸ The revised Payment Services Act sets out the frequency of calculation according to the risks of each type of funds transfer service providers, and therefore such a time lag would be shortened.

¹⁹ An approach taken when a defaulted financial institution undergoes resolution proceedings. Under this approach, the defaulted financial institution takes necessary measures (e.g. aggregation of multiple accounts owned by a same individual or company/group) over the weekend after the end of business on Friday, and the successor financial institution to which the business is transferred resumes the service from Monday.

²⁰ In addition, there are other regulatory differences between deposit-taking financial institutions and funds transfer service providers, which will be discussed later in detail.

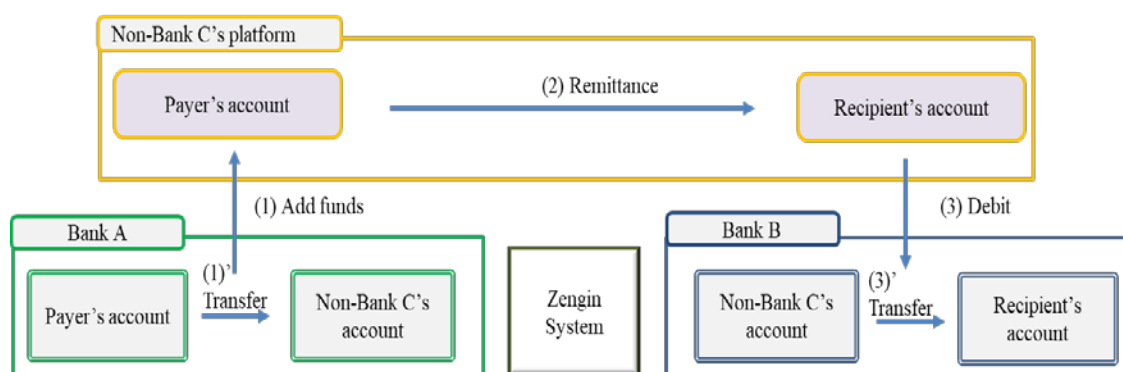
3. Participation of funds transfer service providers in the Zengin System

This chapter highlights the results of the considerations on participation of funds transfer service providers in the Zengin System.²¹

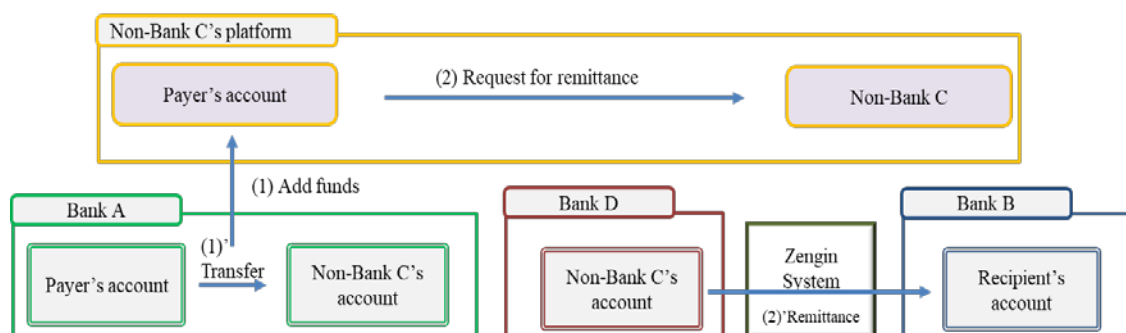
(1) Benefits of funds transfer service providers participating in the Zengin System

Funds transfer service providers are currently offering a variety of services, including remittances between accounts, payments at merchants (i.e. stores, restaurants etc.) and cross-border payments. As the current Zengin System does not allow their participation, these services are provided through bank accounts primarily in the following manners:

[Figure 10: Services of funds transfer service providers (remittance between accounts)]

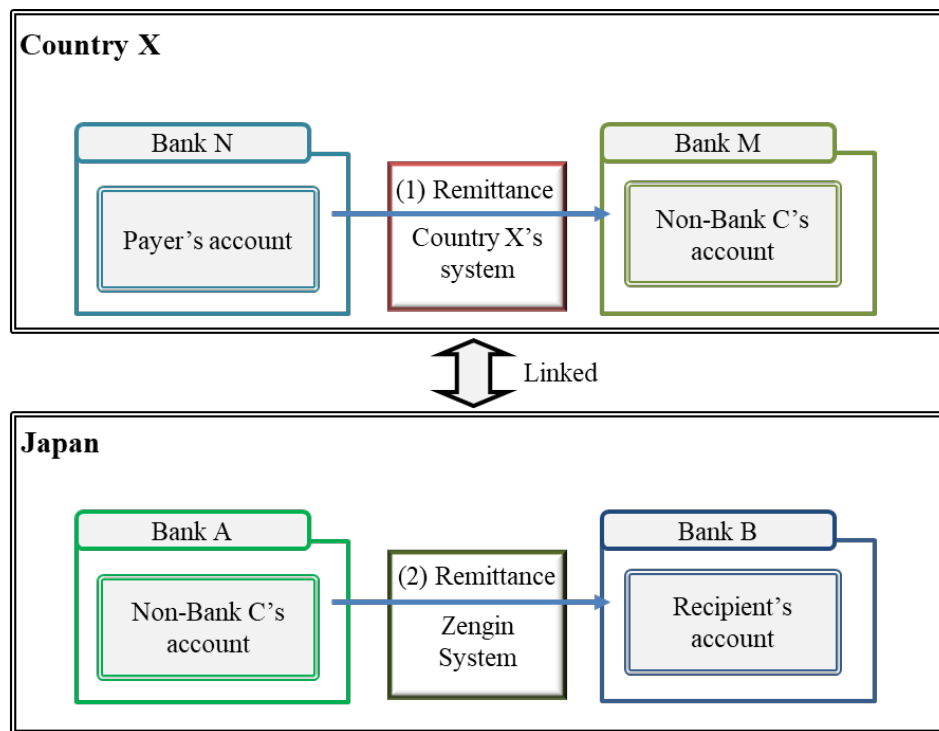


[Figure 11: Services of funds transfer service providers (credit transfer from an account to a bank account)]



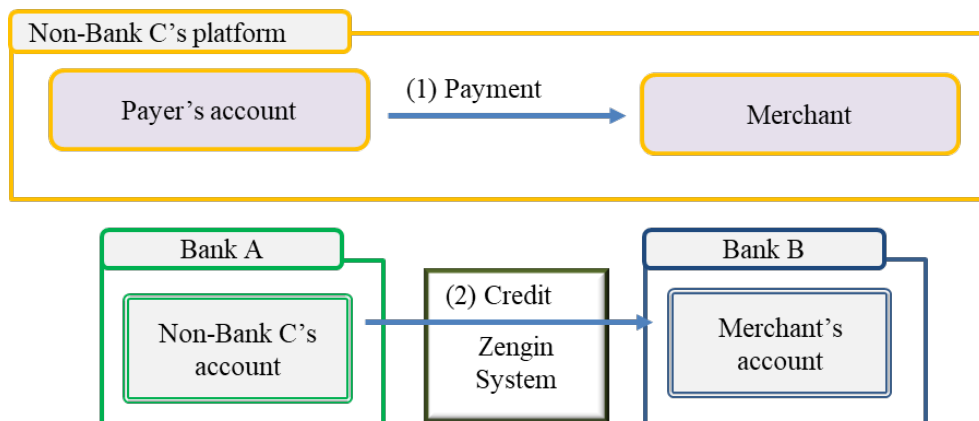
²¹ The following terms in this chapter, Chapter 4 and Chapter 5 mean:
 “Essential” means that, in light of the FMI Principles, etc., it is essential for the Zengin-Net or funds transfer service providers to take actions to address the issue.
 “Necessary” means that the Zengin-Net or funds transfer service providers are required to take actions to address the issue.
 “Preferable” means that it is preferable that the Zengin-Net or funds transfer service providers take actions to address the issue as much as practicable.
 “Expected” means that the issue needs to be addressed and the TF expects the relevant institution to take actions to address the issue.

[Figure 12: Services of funds transfer service providers (cross-border payment)]



* The arrows are reversed in the case of remittance from the payer in Japan to the recipient in Country X.

[Figure 13: Services of funds transfer service providers (payment at merchants and crediting merchants' accounts)]



* It is assumed that funds are credited to the merchant's account ((2)) collectively (for example, on a monthly basis.)

The TF conducted a hearing to gain insights into the needs of participating in the Zengin System by funds transfer service providers. As a result, while (i) some had a positive opinion that it could lead to reductions in time and costs associated with receipt of funds in the customers' accounts and crediting

the merchants' accounts, others (ii) argued that it is important to reduce participation costs to encourage participation by funds transfer service providers in the Zengin System; (iii) requested to enhance the flexibility of the Zengin System connection methods and to consider developing a payment system suitable for frequent, small-amount transactions; and (iv) indicated that posting collateral to the Zengin-Net when participating as Clearing Participants would be a burden.

[Figure 14: Main comments raised in the hearing with funds transfer service providers]

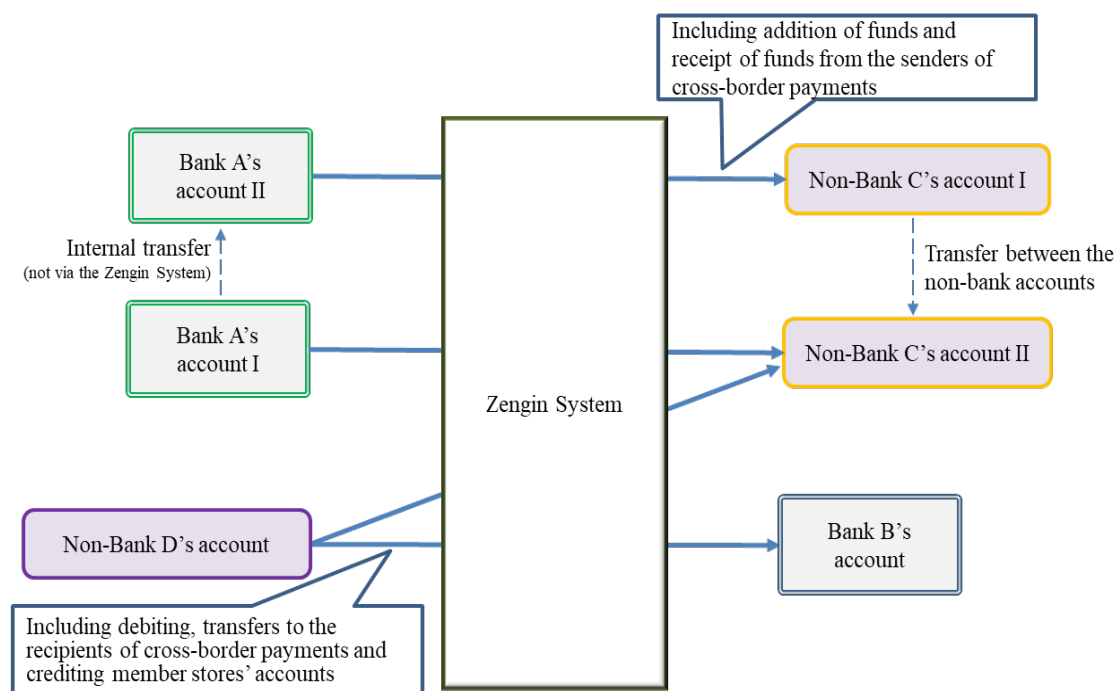
Companies	Comments
Company A	<ul style="list-style-type: none"> • We will consider participation if benefits outweigh participation and other costs. • Applying system requirements unique to Japan (e.g. it is essential to locate servers in Japan and necessary to install dedicated lines) would raise the hurdles in the participation consideration stage. Therefore, system design and specifications already employed in other developed jurisdictions are preferable.
Company B	<ul style="list-style-type: none"> • Participation of funds transfer service providers in the Zengin System would shorten the time taken for service users and merchants to receive cash and improve the convenience, and reduce costs incurred to connect to banks or bank transfers for crediting (addition of funds). These will lower merchants' fees and shorten the cycle of crediting proceeds to merchants' accounts and, in turn, may improve merchants' cash flows and promote cashless payments. • In addition to providing the connection requirements for connecting to the Zengin System via RCs, we request that API-based connection to the Zengin System by channels such as the use of transit gateway be also explored. • As proposed in the government's Action Plan of the Growth Strategy, etc., it is requested that the establishment of a new low-cost payment system, assuming frequent small-amount payments, be explored.
Company C	<ul style="list-style-type: none"> • We will make a final decision on whether to participate in the Zengin System in consideration of whether costs are appropriate to the size of outgoing and incoming remittances. The specific determination criteria include how to participate in a payment system with low marginal cost, and whether a new service offered using such a payment system can generate income from transactions with customers. • Given that funds transfer service providers need to comply with the

Companies	Comments
	<p>Zengin-Net Rules and meet the Zengin System's technical specifications, we think it is necessary to construct another fund transfer network suitable for frequent, small-amount transactions.</p>
Company D	<ul style="list-style-type: none"> • It is important that participation in the Zengin System is open to funds transfer service providers. However, the consideration on participation is dependent on whether benefits outweigh participation costs. • Participation in the Zengin System will enable direct remittances between a bank account and a funds transfer service provider account and between funds transfer service provider accounts. It will also reduce workload at both funds transfer service providers and corporate and individual users, thereby enhancing the user convenience. The same benefits can be generated from participating in a system for processing frequent, small-amount remittances, if constructed. • The Zengin-Net should clarify system developments (including the connection method), the required risk management level and other requirements that need to be addressed by funds transfer service providers that intend to participate in the Zengin System. • Although we understand that their purposes differ, it is burdensome to comply with both the protection obligation (deposits) under the Payment Services Act and the obligation to pledge collateral under the Zengin-Net Rules. • The consideration of a system for frequent, small-amount remittances should place the highest priority on the safety and efficiency. In addition, the system should be designed in a manner that market trends and the needs of end users (e.g. companies, consumers, stores) can be identified in a timely manner and promptly reflected in the services. • In connection with the next-generation Zengin System upgrade, we request that the Zengin Net consider drastic cost reduction and API-based connection. The Zengin-Net can first address the issues of participation as Agency Participants and the frequent, small-amount remittance system, and then consider those fundamental issues arising from the upgrading phase and the issue of participation as Clearing Participants.

Allowing funds transfer service providers to access to the Zengin System would enable them to execute remittances directly to existing financial institutions and other service providers in a manner

illustrated in the figure below. As commented in the hearing, this would lead to reductions in time and costs arising from receipt of funds or crediting merchants' accounts, thereby ensuring interoperability across multiple new payment services and improving the user convenience.

[Figure 15: Image of connection and remittance by funds transfer service providers]



The *Report of Survey on Cashless Payments Including Using QR Codes* published by the Japan Fair Trade Commission in April 2020 expressed views related to participation of funds transfer service providers in the Zengin System, stating that, from the perspective of the competition-enhancing policy, it is advisable for the Zengin-Net to define the eligibility requirements of business operators (legal eligibility), security level, financial soundness and other conditions for the membership of the Zengin-Net and consider allowing funds transfer service providers to participate in the Zengin System if such conditions are satisfied.

Furthermore, the government's Follow-up on the Growth Strategy (approved by the Cabinet on July 17, 2020) indicated that, given that non-bank payment service providers (non-banks) need to use banks as intermediaries for debiting and crediting accounts of users and merchants due to a lack of qualification to participate in the Zengin System, the government will consider the membership qualification and other issues to allow well-performing non-banks to participate in the Zengin System so that they can reduce their remittance costs through their own efforts.

(2) Developments in overseas jurisdictions

Some jurisdictions are also considering participation of non-banks in their respective payment systems, with the United Kingdom and Hong Kong already allowing non-banks to participate. The following table summarizes the participation by non-banks in those jurisdictions.

[Figure 16: Participation by non-banks in the United Kingdom and Hong Kong]

	United Kingdom	Hong Kong
Systems allowing participation by non-banks	FPS (small-amount payments) BACS (bulk transfer) CHAPS (large-amount payments)	FPS (small-amount payments)
Year of first participation by non-banks	FPS: 2018 BACS: 2019 CHAPS: 2019	2018
Participation requirements for non-banks	It is required to obtain a license for the electronic money institutions or payment institutions.	It is required to obtain a license for the electronic money institutions.
Central bank current account/ Settlement	Non-banks may open a central bank current account and directly execute settlements (or may outsource settlements to banks without opening a central bank current account).	Non-banks are prohibited from opening a central bank current account (and therefore need to outsource settlements to banks).
Number of participating non-banks (as of the end of September 2020)	FPS: 9 (e.g. Wise, CreDec) BACS: 2 (e.g. Modulr) CHAPS: None (There was a case of non-bank participation in the past.)	Hong Kong dollar settlement: 12 (e.g. Alipay, WeChatPay) RMB settlement: 8 (e.g. TNG)

(Prepared by the Secretariat based on the websites of each institution)

The United Kingdom initiated discussions on participation of non-banks in the payment systems ahead of the rest of the world with the aim of fostering innovation and competition in the payment services industry. The United Kingdom has taken a phased approach, initially allowing indirect participation and then shifting to direct participation by opening a current account in the central bank.

Such a phased approach that considers shifting to direct participation can be referenced as a solution to ensure the stable operation of the institutional framework.

In Singapore, a working group consisting of banks and non-banks have discussed participation of non-banks in a small-amount payment system (i.e. FAST). In November 2020, the Monetary Authority of Singapore (the “MAS”) announced that: (i) direct connection to FAST by non-banks will be initiated from February 2021; (ii) participation will be limited to those non-banks that are licensed as “Major Payment Institutions”²²; (iii) non-banks are able to connect through an API gateway developed by the working group; and (iv) in parallel with FAST, non-banks may also participate in PayNow (i.e. an overlay service that enables remittances using a mobile number, etc.).²³

In Australia, the central bank requested the New Payments Platform Australia (“NPPA”, the payment system administrator) to consider non-banks’ participation in the payment systems. NPPA has responded that: (i) it is not appropriate to allow those entities without a banking license to connect to the New Payments Platform (“NPP”) from the perspectives of governance, capital adequacy, liquidity, risk management, BCP and information security, and other existing licenses would not meet such eligibility; but (ii) if a new regulatory framework (licensing) is established and provided by authorities, NPPA would consider direct connection by such entities to the NPP.²⁴

In the United States, a public notice was issued in August 2019 regarding FedNow that is planned to be launched by the Federal Reserve System in 2023/24. In response to the public notice, many provided feedback that direct participation by non-banks would increase risks in the services and the payment systems as a whole.²⁵ Given such feedback, discussions related to FedNow is moving toward prohibiting non-banks from direct connection.

In sum, some jurisdictions have allowed participation of non-banks in their respective payment systems while other jurisdictions such as Australia and the United States have taken cautious approaches on the basis that the regulatory framework for non-banks differs from that of banks.

Some TF members pointed out that participation of non-banks in the payment systems was being discussed only in the area of small-amount payments and was not discussed from the viewpoint of participating in the large-amount payment systems (e.g. CHIPS in the United States and EURO1 in

²² Unlike the “Standard Payment Institution License,” while no restrictions are imposed on monthly transaction volume or customers’ account balances, this license is subject to stringent capital and other requirements.

²³ MAS website (<https://www.mas.gov.sg/news/media-releases/2020/non-bank-financial-institutions-to-have-access-to-fast-and-paynow>)

²⁴ NPP Australia Limited’s *Updated Response to the Reserve Bank of Australia’s NPP Functionality and Access Consultation: Conclusions Paper* (https://nppa.com.au/wp-content/uploads/2019/10/RBA-Functionality-and-Access-consultation-recommendations_NPPA-Response_October-2019-updated-response.pdf)

²⁵ *Service Details on Federal Reserve Actions To Support Interbank Settlement of Instant Payments* (<https://www.federalregister.gov/documents/2020/08/11/2020-17539/service-details-on-federal-reserve-actions-to-support-interbank-settlement-of-instant-payments>). Additionally, some commented that non-banks should be allowed to participate directly in FedNow as their dependency on banks would lead to additional costs and unfairness.

Europe) operated by the private sector (see Figure 17). Therefore, these discussions on participation of funds transfer service providers in the Zengin System can be an initiative taken ahead of the large-amount payment systems in the United States and Europe.

[Figure 17: Large-amount payment systems operated by the private-sector in the U.S., Europe and Japan]

	CHIPS (United States)	EURO1 (Europe)	Zengin System (Japan)
Administrator	TCH (The Clearing House)	EBA CLEARING	Zengin-Net
Participation qualification	Deposit-taking institutions	Deposit-taking institutions	Deposit-taking institutions
Number of transactions	470,831 transactions	207,007 transactions	6,876,000 transactions
Transaction amount	USD1.6 trillion	EUR208 billion	JPY12 trillion
Participation model	<ul style="list-style-type: none"> • Funding participant - Contributes funds in advance to a CHIPS pre-funded account at the Federal Reserve Bank of New York and directly executes settlements. • Non-funding participant - Directly sends/receives instruction messages to/from CHIPS. - Requests a funding participant to act as an agency for settlements. 	<ul style="list-style-type: none"> • Participant - Holds a special ECB account and directly executes settlements. • Sub-participant - Directly sends/receives instruction messages to/from EURO1. - Requests a participant to act as an agency for settlements (overseas branches of participants select which participation model to adopt because they can aggregate the balances with participants). 	<ul style="list-style-type: none"> • Clearing Participant - Holds the BOJ current account and directly executes settlements. • Agency Participant - Directly sends/receives instruction messages to/from the Zengin System. - Requests other clearing participant to act as the agency for settlements.

* The number of transactions and the transaction amount are the average of one business day and based on the 2019 results.

(3) Issues related to participation by funds transfer service providers

(i) Basic viewpoints

It is preferable to expand the Zengin System's membership qualification currently limited to deposit-taking financial institutions to include funds transfer service providers given that there are needs of such service providers to participate in the Zengin System and their participation would help enhance the funds transfer services and user convenience. However, it is necessary to consider a mechanism that provides better services for users and at the same time ensures the stability of the payment systems. Shortages of settlement funds by a funds transfer services provider will not only affect the funds transfer services provider itself but have spill-over effects on other member banks, their clients and the Zengin-Net, and eventually undermine the stability of the financial system as a whole unless appropriate protection measures are in place.

In view of the above, the TF reached a common understanding that the overarching goal is not to undermine the safety of settlements and the stability of the system and, based on this, discussed measures and issues with respect to enhancing the user convenience if funds transfer service providers are allowed to participate in the Zengin System.

(ii) Review of the membership qualification and determination of participation requirements

One of the issues arising from allowing participation by funds transfer service providers when reviewing membership qualification is what requirements should be applied to those service providers which intend to participate in the Zengin System. Risks to be considered in determining their participation requirements mainly include a. liquidity risk, b. credit risk and c. operational risk.

[Figure 18: Risks to be considered]

Risks	Definitions	Effects if the risk materializes
a. Liquidity risk	Risk that a participant may not be able to settle its funds within a predetermined time frame and may incur losses	<ul style="list-style-type: none"> • There is a possibility that necessary funds will not be transferred to other participants, thereby disrupting many other settlement activities and causing systemic risk. • Actions taken to mitigate liquidity risk (e.g. triggering of the system for providing liquidity) may impose burdens on other participants.
b. Credit risk	Risk that a participant may not be able to fulfill its obligations owed to the Zengin-Net due to deterioration in its financial condition or other reasons	<ul style="list-style-type: none"> • There is a possibility that the risk will cause a settlement failure and impose burdens on other participants as a result of actions taken to mitigate liquidity risk (e.g. triggering of the system for providing liquidity).
c. Operational risk	<p>Risk of incurring losses due to inappropriate or malfunctioning of internal processes, staff and systems, or other external events</p> <p>* The Zengin-Net further classifies operational risk into administrative risk, system risk, information security risk, cyber security risk or other risks.</p>	<ul style="list-style-type: none"> • There is a possibility that smooth execution of services by other participants may be affected by the failure to send or receive messages due to system breakdown/malfunction or a poorly established organizational structure. • If the risk leads to settlement failures attributable to a system, actions taken to mitigate liquidity risk (e.g. triggering of the system for providing liquidity) may impose burdens on other participants.

Currently, only deposit-taking financial institutions are allowed to participate in the Zengin System. As mentioned earlier, there are regulatory differences between deposit-taking financial institutions and funds transfer service providers. It is therefore necessary to consider whether additional requirements should be applied to funds transfer service providers in light of such regulatory differences as measures to mitigate the risks above. The following summarizes the approaches

discussed at the TF:

a. Approach to liquidity risk

The Zengin-Net has established the system for providing liquidity and the Sender Net Debit Cap Scheme as measures to avoid liquidity risk. As a precondition of these measures, each participant is required to implement appropriate risk management and compliance with this requirement is ensured by the Zengin-Net's monitoring.²⁶ Since these measures are fundamental to the prevention of systemic risk, it is essential that they will also be applied to funds transfer service providers if their participation in the Zengin System as Clearing Participants is allowed.

The FMI Principles also require that the FMI prioritizes its claims against collateral provided to it by a participant.²⁷ If, therefore, a funds transfer service provider participates as a Clearing Participant, consistent with the treatment for the existing member banks, it is essential that the service provider be required to post collateral to cover the net debit amount in full to the Zengin-Net.

Some funds transfer service providers commented in the hearing that the posting of collateral for the net debit amount will impose higher burdens given that this will be an add-on to the security deposits for providing the funds transfer services required under the Payment Services Act. However, the Payment Services Act requires such security deposits to protect users by securing funds available for remittances held by funds transfer service providers.²⁸ By contrast, the posting of collateral to cover the net debit amount is intended to secure funds necessary for the Zengin-Net to clear net balances. Accordingly, the claims being secured are essentially different between the two. In light of the FMI Principles above, the TF considers it inappropriate to reduce the amount of collateral posted to cover the net debit amount on the basis that security deposits are posted.

Burdens arising from collateral may be reduced to a certain extent by effectively using funds under the agency scheme. For example, a funds transfer service provider serves as the agency and adjusts funds of individual service providers.²⁹

²⁶ See the FMI Principle 18, key consideration 3.

²⁷ FMI Principle 3.1.5 sets out that “[a]lso, the FMI should structure its operations so that its claims against collateral provided to it by a participant should have priority over all other claims, and the claims of the participant to that same collateral should have priority over the claims of third-party creditors (...).”

²⁸ Guidelines for the Administrative Processes I-2-2-2-1, (Note 3) set out that “[a] Funds Transfer Service Provider needs to note that it is indebted to the sender until the recipient actually receives funds by any of the methods listed in (a) to (d) below. (...) (b) Funds credited to the deposit account held by the recipient at a bank, etc. (including persons equivalent thereto in foreign jurisdictions (...))”

²⁹ Another option would be that an individual deposit-taking financial institution acts as an agency and a funds transfer service provider uses collateral of the agency, without requiring posting collateral to the Zengin-Net. However, as this scheme is offering credit to the service provider from the agency's perspective, the agency may require the service provider to post a certain amount of cash collateral or other security measures.

b. Approach to credit risk

Even when credit risk of a member bank materializes, the possibility of triggering a significant systemic risk is minimized if the aforementioned measures to mitigate liquidity risk are taken. Nonetheless, if the system for providing liquidity is triggered as a result of actions taken to mitigate liquidity risk, it may impose significant burdens on other participants. It is therefore important to detect and prevent credit risk from materializing in order to ensure the stability of settlement.

To mitigate credit risk, deposit-taking financial institutions are subject to supervisory monitoring including the capital adequacy ratio, and market monitoring through disclosures of their financial statements, thereby ensuring their financial soundness. By contrast, funds transfer service providers are supervised by the FSA, but are not subject to quantitative requirements such as the capital adequacy ratio, and do not necessarily disclose their financial statements. It is therefore necessary for the Zengin-Net to require the service providers to disclose their financial statements.

c. Approach to operational risk

The Zengin System has never experienced a disruption to its online trading since it was launched and has never failed to execute settlements intraday. This achievement owes not only to the Zengin Center³⁰ which is the center of the system but also to member banks that have robustly managed incidents including failures, when they occurred, through prompt communications and actions, and cooperated to ensure the stable operation of the Zengin-Net Rules.

If operational risk of a member bank materializes, its failure in sending or receiving messages or settlement may affect other member banks. Accordingly, funds transfer service providers are required to manage operational risk at the same level as the member banks.

The above represents our conclusion on the approaches to respective risks. The TF considers it necessary for all participants to establish frameworks that appropriately address each risk. In the medium to long term, the TF is expected to continue exploring the implementation of rules that will contribute to all participants in reference to practices in other jurisdictions.

To appropriately address these risks, competent authorities also play a critical role in addition to funds transfer service providers participating in the Zengin System and the Zengin Net serving as the fund clearing agency.

The FSA and Local Finance Bureaus monitor funds transfer service providers based on the

³⁰ Centers that carry out day-to-day management of the Zengin System.

Payment Services Act from the perspectives of protecting users, enhancing the safety, and increasing the efficiency and convenience of the payment systems. Specifically, they review their financial soundness and the status of establishing an organizational structure necessary for ensuring an appropriate execution of business activities, and exercise legal authority to take a disciplinary action, where necessary.

At the TF, the FSA expressed its views regarding actions to be taken if funds transfer service providers are allowed to participate in the Zengin System as follows: “The FSA has been monitoring funds transfer service providers according to their size and profiles. If they are allowed to participate in the Zengin System, the FSA will further take necessary monitoring measures to address changes in the risk environment surrounding them. Specifically, in collaboration with the Zengin-Net and the BOJ, the FSA will consider specific risk management and other requirements for those service providers that will participate in the Zengin System and then explore possible measures to avoid undermining the stability of the payment systems.”

(iii) Requirements for participating as Clearing Participants

Another issue in considering participation of funds transfer service providers is whether to allow participation as Clearing Participants.

a. Option to not allow participation as Clearing Participants

The first option is to not allow participation of funds transfer service providers as Clearing Participants. In such a case, in order for those service providers to participate in the Zengin System, it will enter into an agency agreement with a financial institution currently participating in the Zengin System to request settlements to that financial institution (i.e. agency). By doing so, the funds transfer service provider will be able to access the Zengin System through the agency but will be required to pay certain fees to the agency and may be subject to access restrictions. It should also be noted that the service provider will be subject to the agency’s settlement limit or will need to implement risk management activities separately.

b. Option to allow participation as Clearing Participants

The second option is to allow participation of funds transfer service providers as Clearing Participants. Providing such a participation opportunity is preferable from the perspective of ensuring fairness in accessibility to the payment system. In fact, funds transfer service providers expressed the needs for participating as Clearing Participants in the TF’s discussions.³¹

³¹ A funds transfer service provider interviewed by the TF has currently reached Phase 3 (opening a current account in the central bank and directly connect to the system) after it went through Phase 1 (connection as a bank customer (at the stage of offering the services)) and Phase 2 (connection through other Clearing Participants) in an overseas

If funds transfer service providers would participate as Clearing Participants, the risks discussed in the previous chapter, if they were to materialize, are likely to have a more significant impact on the activities on the payment systems since those service providers will execute settlements by themselves. Therefore, in considering the issue associated with those service providers participating as Clearing Participants, it is necessary to engage in thorough discussions on the fairness, the required financial soundness and risk management and other relevant matters.

Furthermore, funds transfer service providers will need to open a BOJ current account if they are allowed to participate as Clearing Participants. The TF received the comment from funds transfer service providers to consider the issue of opening a BOJ current account. In this regard, the BOJ expressed its view at the TF as follows: “The BOJ selects counterparties to current account transactions in a manner to comply with the mandate stipulated in Article 1 of the Bank of Japan Act (i.e. “the Bank of Japan’s purpose is to ensure smooth settlement of funds among banks and other financial institutions, thereby contributing to the maintenance of stability of the financial system”). In relation to the Zengin System, the BOJ has been working to mitigate settlement risk of large-amount transactions (i.e. JPY100 million or more per transaction). We will appropriately consider our approach for funds transfer service providers’ access to the BOJ current account in consideration of the TF’s discussions, our mandate and the institutional framework.”

(iv) Connection method

Funds transfer service providers commented that it would be difficult for them to participate in the Zengin System if connection costs were high even if they were allowed to participate in the system. Given such a comment, it is preferable to review the current connection method in a manner that will enable easier participation by funds transfer service providers and at the same time benefit existing participants as much as practicable. Drawing on proposals by multiple vendors at the TF, the TF discussed this issue focusing on the following four proposed schemes.

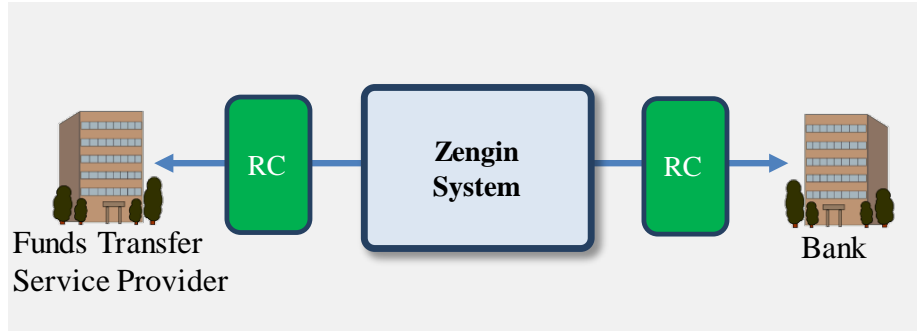
a. Current scheme

- Funds transfer service providers connect to the Zengin System via RCs (in the case of joint connection, via the joint system; the same shall apply hereinafter).
- Advantages include: (a) the participation can be realized at an early stage because this scheme maintains the existing connection method; and (b) no additional costs are incurred by the Zengin System and existing participants. On the other hand, disadvantages include the burden on funds transfer service providers to purchase RCs, similarly to existing participants.
- Since the majority of funds transfer service providers have their system servers built on the

jurisdiction that has already realized connection of funds transfer service providers to the payment systems.

cloud, even if they are able to purchase RCs, they will incur development costs for connection.

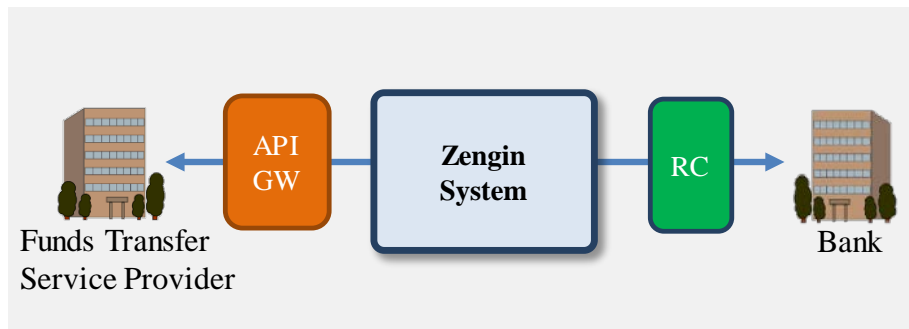
[Figure 19: Current scheme]



b. Scheme to develop a common platform (API gateway (APIGW))

- Funds transfer service providers connect to the Zengin System via a new common platform that converts the connection methods (i.e. APIGW). Additional functions can be added to APIGW and existing participants can also connect.
- As advantages, those service providers may be able to connect to the Zengin System with less costs than the current scheme that uses RCs and existing participants do not need any system developments. Disadvantages, on the other hand, include costs for developing the common platform.

[Figure 20: Scheme to develop a common platform (APIGW)]

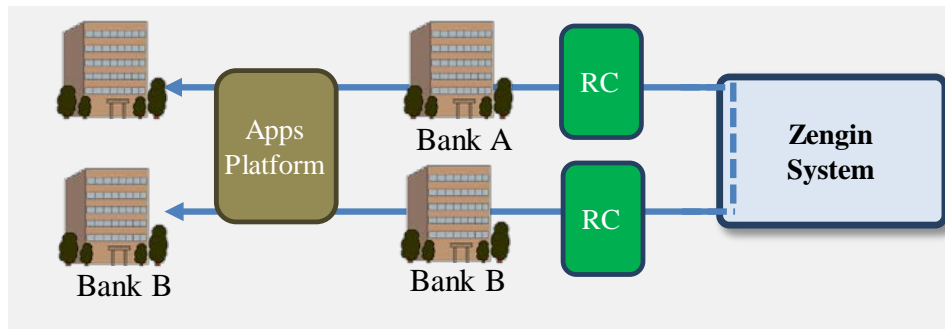


c. Scheme to develop a dedicated application connection platform and use the Zengin System

- Funds transfer service providers connect to the Zengin System via a dedicated application platform and through existing participants. Processing of remittances after passing through the application platform is carried out by existing participants which use the Zengin System to transfer funds (it is also an option to aggregate remittances from the application platform to the Zengin System to reduce participating costs).
- As advantages, this scheme may be less costly for funds transfer service providers relative to the current scheme that uses RCs. On the other hand, disadvantages include: (a) existing

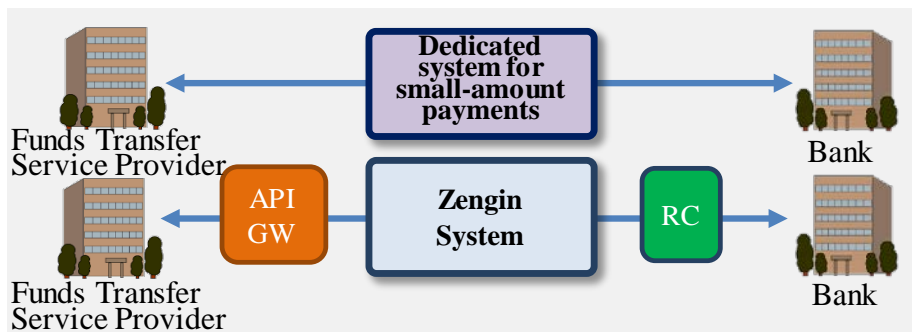
participants which intend to connect to the application platform need to modify their systems, incurring additional costs; and (b) as this scheme is designed to process settlements through existing participants, there is a vertical relationship between funds transfer service providers and existing participants.

[Figure 21: Scheme to develop a dedicated application connection platform and use the Zengin System]



- d. Scheme to develop a dedicated system for small-amount payments, co-existing with the Zengin System
- Depending on their business model, funds transfer service providers connect to either a dedicated system for small-amount payments specializing in telegraphic transfers (“new system”) or the Zengin System, or both. Connection to the Zengin System will be made using the “current scheme” or the “scheme to develop a common platform (APIGW).”
 - Similar to the “scheme to develop a dedicated application connection platform and use the Zengin System,” the advantage is that this scheme is less costly for funds transfer service providers relative to the current scheme that uses RCs. On the other hand, disadvantages include incurring development costs for the new system and costs incurred by existing participants to connect to the new system. However, depending on what actions are taken to develop a new system, such costs could be made relatively low.

[Figure 22: Scheme to develop a dedicated system for small-amount payments, co-existing with the Zengin System]



Of the above four schemes, the TF considered “b. scheme to develop a common platform (APIGW)” as some service providers requested for the use of an API. Additionally, “d. scheme to develop a dedicated system for small-amount payments, co-existing with the Zengin System” was considered in light of the United Kingdom’s practice where a dedicated system for small-amount payments is operated separately from a bulk transfer system and a large-amount payment system. Under the United Kingdom’s practice, non-banks can select the system that they wish to connect to.

Comparison of the proposed schemes above based on the aspects including costs and realization speed is summarized in the table below:

[Figure 23: Comparative summary of proposed schemes]

	a. Current scheme	b. Scheme to develop a common platform (APIGW)	c. Scheme to develop a dedicated application connection platform and use the Zengin System	d. Scheme to develop a dedicated system for small-amount payments, co-existing with the Zengin System
Cost (Central)	○Low • No additional costs (however, depending on the requirements, some modification will be needed).	△Medium • Costs to be incurred for the development of the common platform. However, cost allocation needs to be considered separately.	△Medium • Costs to be incurred for the development of the application platform. However, it may contribute to cost reduction of the current system in the future.	△Low to High • Additional costs to be incurred according to the size of the new system. However, it may contribute to cost reduction of the current system in the future.
Cost (Existing participants)	○Low • No additional costs (however, depending on requirements, some modification will be needed).	○Low • No additional costs if maintaining a RC-based connection (however, depending on requirements, some modification will be needed).	△Medium • Costs to be incurred for modifying banks' own systems to align with the application platform.	△Low to High • Costs to be incurred (according to the specification of the new system) for modifying banks' own systems to align with the new system.
Cost (Funds transfer service providers)	△High • The same level of connection costs as under the current practice will be incurred.	△Medium • It may be possible to realize connection with less costs than the current practice.	○Low • Costs may be lower than connecting to the current system.	○Low • Cost may be lower than connecting to the current system.
Realization speed	○Fast • As this scheme maintains the current connection via RC, it will be fast to realize.	Realizable during 7Z • Time for consideration and development for building the common platform will be necessary.	Realizable during 7Z • Time for consideration and development for building the application platform will be necessary.	Realizable during 7Z • Time for consideration and development for building the new system will be necessary.
Other issues	• This scheme will not eliminate burdens on funds transfer service providers.	• It is necessary to assess whether the level of functions/costs that would reduce burdens on funds transfer service providers can be realized.	• If the application platform is bulked, it is necessary to take actions for outstanding balances (credit).	• Existing participants need to manage settlement risk and operation for the two systems.

* "7Z" represents the 7th Generation Zengin System. The next-generation system is scheduled to be launched in 2027.

As the landscape of settlement is changing rapidly, it is expected that the participation of funds transfer service providers shall be realized as early as possible. For this reason, and given the timeframe needed to assess each scheme and other relevant factors, it is preferable to consult primarily with existing vendors about actions to be taken by them under "a. current scheme" so that they can participate in the Zengin System as soon as they satisfy the participation requirements. In addition, it is preferable to engage in specific discussions on "b. scheme to develop a common platform (APIGW)" because the time required for its consideration and development is relatively short and this scheme is expected to benefit existing participants as well.

For the remaining two schemes, namely "c. scheme to develop a dedicated application connection platform and use the Zengin System" and "d. scheme to develop a dedicated system for small-amount payments, co-existing with the Zengin System," it is preferable to continue their discussions from a medium to long-term perspective because these schemes would contribute to optimizing and significantly enhancing the efficiency of the Zengin System as a whole. "d. scheme to develop a dedicated system for small-amount payments, co-existing with the Zengin System" will be further discussed in Chapter 4, as it is an effective measure for enhancing the convenience of frequent, small-amount payments.

(4) Future considerations

The TF identified the following issues and challenges to be considered in order to take specific measures for funds transfer service providers to participate in the Zengin System.

[Figure 24: Summary of main issues and challenges]

Participation requirements	<ul style="list-style-type: none"> • Consideration of participation requirements that help ensure the stability of the payment systems by taking into account elements including differences in both the legal systems and actual practices between funds transfer service providers and deposit-taking financial institutions
Connection method	<ul style="list-style-type: none"> • Consideration of details of connections with RCs, and necessity and timing of implementing a new common platform, such as the API GW (the timing to start developing the new common platform). • Measures to support funds transfer service providers to smoothly take actions for participating as Agency Participants (e.g. standardizing terms and conditions to be included in the agreement)
Costs	<ul style="list-style-type: none"> • Cost allocation when the common platform is developed
Additional requirements to participate as Clearing Participants	<ul style="list-style-type: none"> • If funds transfer service providers are allowed to participate as Clearing Participants, consideration of additional requirements including their respective financial soundness and risk management
Other issues and challenges related to the Zengin System	<ul style="list-style-type: none"> • Assigning a code based on the uniform financial institution coding system to funds transfer service providers • Differences in user identification information between bank accounts and funds transfer service provider accounts and a solution to eliminate such differences • Implementation of the recipient's account confirmation process

* The above is limited to main issues and challenges that need to be discussed when considering participation of funds transfer service providers.

The TF expects the Zengin-Net, the FSA and the BOJ to cooperate appropriately and consider the issues related to participation as Clearing Participants, as well as those related to participation as Agency Participants. The latter issues may include a point in which even if funds transfer service providers are allowed to participate as Clearing Participants, some of them may prefer to participate as Agency Participants. The TF considers that the effective solution to this is for Zengin-Net to

collaborate with relevant authorities and implement initiatives to support funds transfer service providers to smoothly perform procedures for using an intermediary acting as an agency, including standardizing terms and conditions to be included in the agency agreement and clarifying their details. This is based on the fact that, except for cooperative financial institutions (e.g. shinkin banks and credit cooperatives) that use their central institution as the agency for settlements, there are only limited cases where member banks participate in the Zengin System as Agency Participants.

Furthermore, while fund transfers between deposit-taking financial institutions are currently executed under a common account numbering system based on uniform financial institution coding and branch coding, if a funds transfer service provider which does not have an account number, which is consistent with such an existing uniform coding system used by deposit-taking financial institutions intends to connect to the Zengin System, it is necessary for the service provider to separately take actions to conform to that existing coding system. In addition, to prevent additional operational burdens arising from a failure to credit funds to the recipient's account, it is necessary to discuss whether to require funds transfer service providers to use the "Confirmation of Payee" during the nighttime and on holidays, which is mandatory under the current practice. Accordingly, the TF considers it necessary to have in-depth discussions on these specific operational issues.³²

³² For example, since the deposit insurance system is not available for funds transfer service providers, it is necessary to consider the treatment of fund transfers (treatment of forward-dated transfers) in the event of bankruptcy.

4. Enhancing the convenience of frequent, small-amount payments

This chapter describes the results of considerations on the enhancement of convenience of frequent, small-amount payments.

(1) Current status and future options of frequent, small-amount payment services

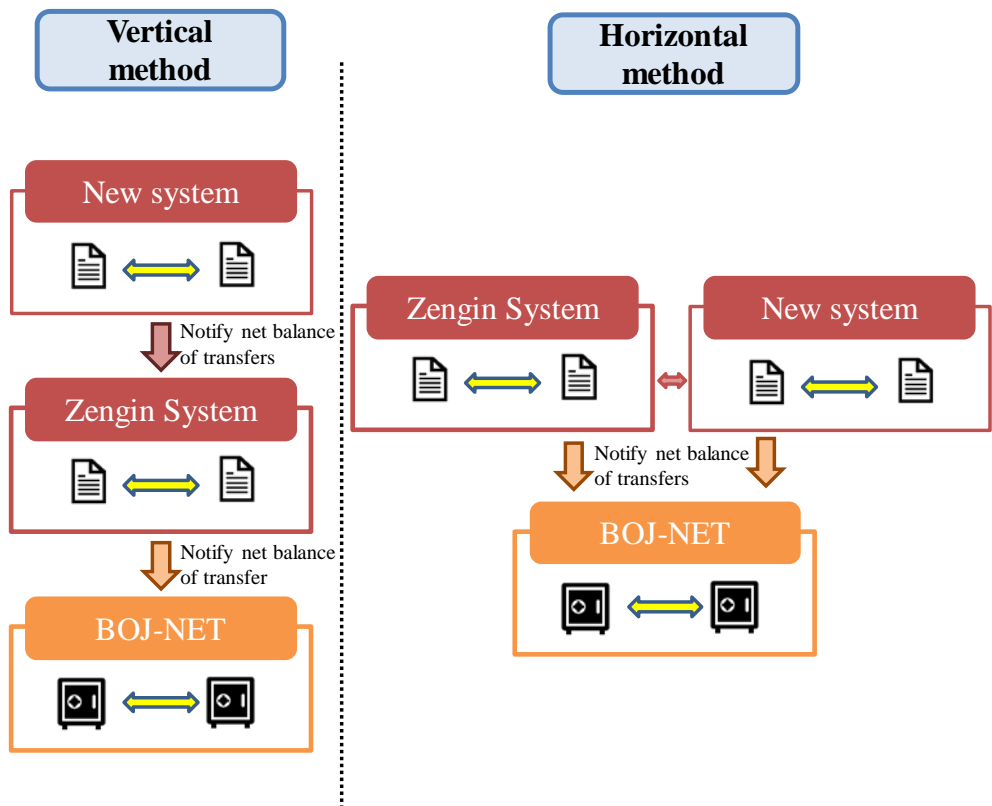
With the growing popularity of cashless payments, the volume of high-frequent, small-amount payments and remittances is increasing. Some entities adopt a business model which provides such services free of charge to customers and at a low rate to merchants. Against this background, as indicated in the Action Plan of the Growth Strategy, there are needs for a payment infrastructure which supports low-cost, efficient, frequent and small-amount payments. At the same time, taking into consideration that peer-to-peer remittances and payments related to medical and nursing care are still heavily dependent on cash, and given the current domestic situation where multiple payment services are being offered, it is preferable to build a frequent, small-amount payment system that can also be used as solutions to address social challenges associated with users' needs. The functions of such a system may include cash alternatives, interoperability between payment service providers and credit transfers using mobile phone numbers and other codes that are already implemented in other jurisdictions.

In addition to small-amount payments, the Zengin System also supports large-amount payments and bulk transfers (e.g. payroll transfer, collective transfer). Due to this feature, while it ensures a very high level of reliability and stability, it is difficult to respond with agility to changes in system costs and needs required for frequent, small-amount payment services. One possible solution to address this issue is to develop a low-cost infrastructure dedicated to frequent, small-amount payments separately from the Zengin System and deliver the required functions in a timely manner. As stated in the considerations on participation of funds transfer service providers, some service providers commented in the hearing by the TF that they expect a separate system dedicated to frequent, small-amount payments to be established.

The proposed approaches for building such a dedicated system are (a) a method to develop the system in a vertical manner similar to “Cotra”³³ explained at the fourth TF; and (b) a method to develop the system in a horizontal manner similar to “d. scheme to develop a dedicated system for small-amount payments, co-existing with the Zengin System” described in the previous chapter.

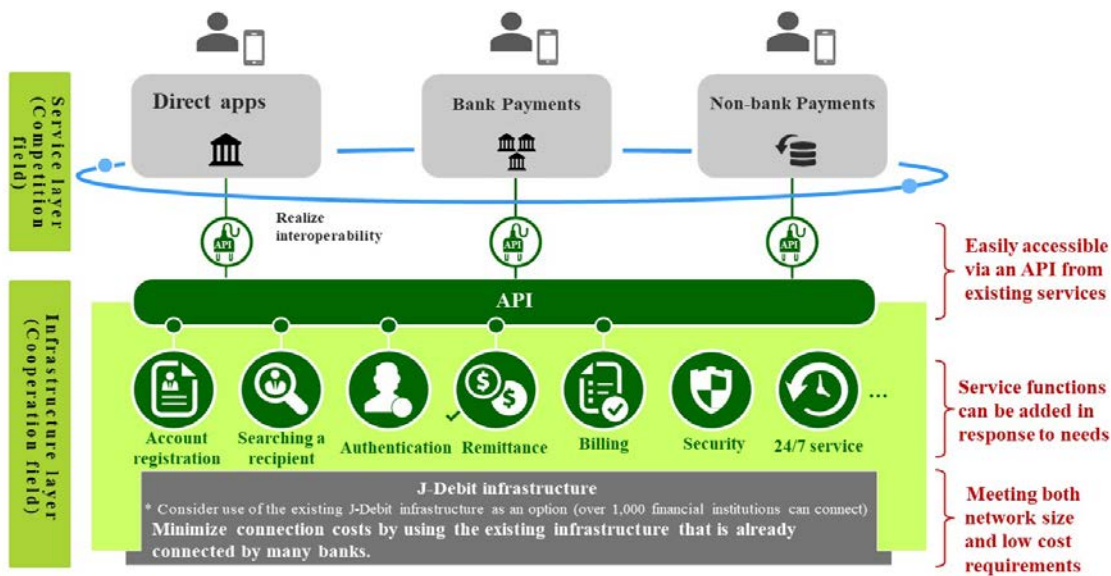
³³ Small-amount payment infrastructure that is currently considered by the five city banks. This option intends to use the existing infrastructure (J-Debit infrastructure) that are already connected by more than 1,000 financial institutions and be an alternative tool for exchanging cash between individuals. For further information, see the minutes of the fourth TF (https://www.zengin-net.jp/company/pdf/200929_summary.pdf).

[Figure 25: Vertical and horizontal methods]



(Source: Professor Kobayakawa’s presentation materials)

[Figure 26: Overview of “Cotra”]



(Source: Cotra’s Project Presentation Materials)

The vertical and horizontal methods have the following advantages and disadvantages. While both methods have considerable advantages, the challenge will be how to maintain the relationship and balance with the existing Zengin System.

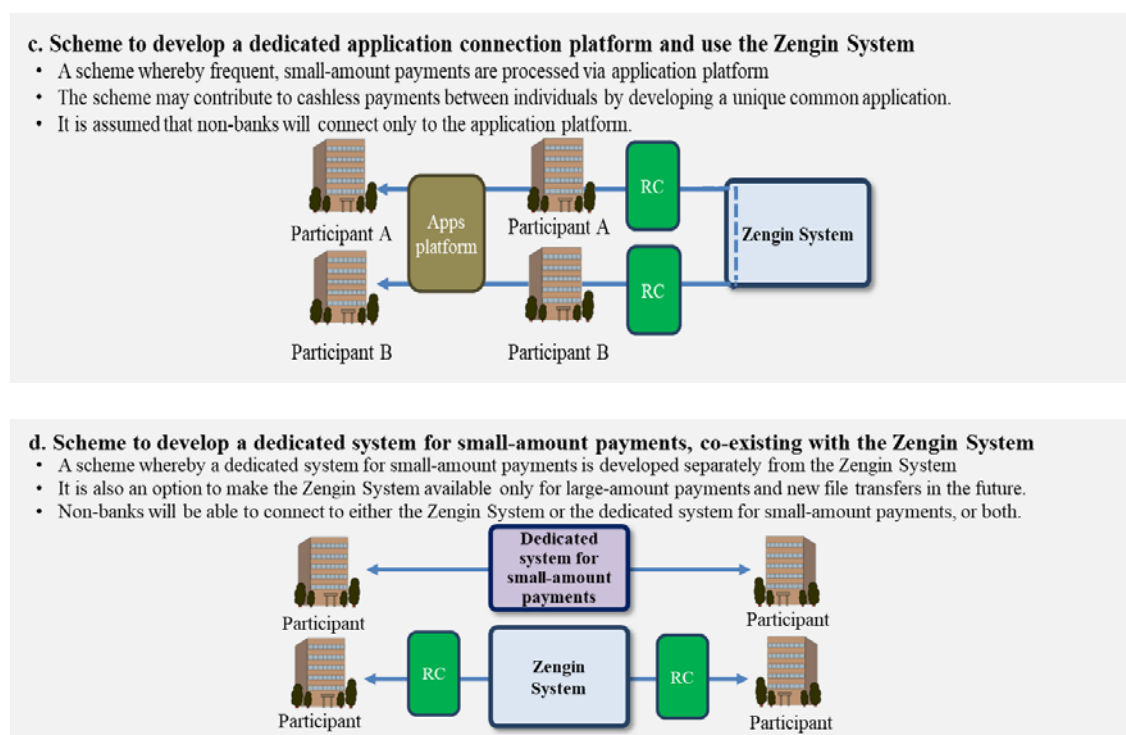
[Figure 27: Vertical method versus horizontal method]

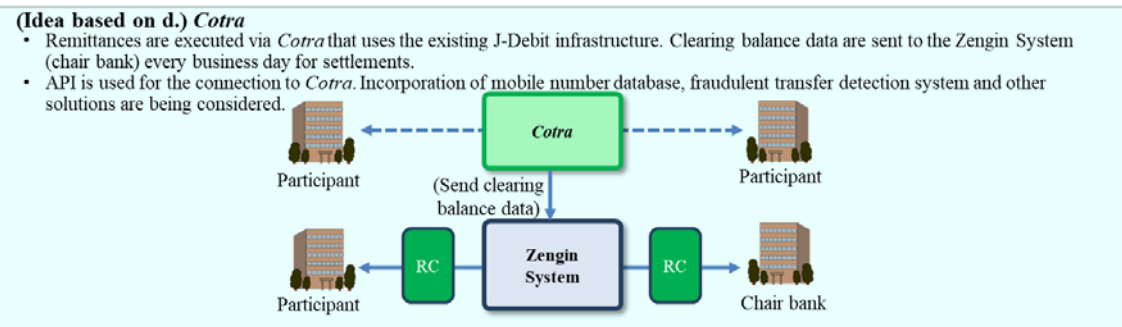
	Vertical method	Horizontal method
Advantages	<ul style="list-style-type: none"> • Similar to other retail payment systems, the net balance of transfers is linked with the Zengin System, and therefore high compatibility is ensured. • Interfacing with the BOJ-NET is realized via the Zengin System. • If, in addition to cash and ATM transactions, the new system provides a clearing service for some small-amount transactions via the Zengin System, burdens on banks participating in the Zengin System arising from posting collateral are likely to be reduced. 	<ul style="list-style-type: none"> • This method allows a certain degree of discretion to develop a new system for frequent, small-amount payments that is completely separated from the existing Zengin System. • This method allows funds transfer service providers to flexibly select from the methods to participate in the Zengin System. For example, they can participate in the Zengin System and not in the new system, or participate in the new system but not in the Zengin System.
Disadvantages	<ul style="list-style-type: none"> • Needs to consider the balance between the Zengin System and the new system (there are overlapping roles and functions with the Zengin System, transaction limits need to be set and a risk management framework needs to be explored). 	<ul style="list-style-type: none"> • Needs to consider the balance between the Zengin System and the new system (there are overlapping roles and functions with the Zengin System). • Needs to assess whether a framework equivalent to the Zengin System can be established in a short timeframe. • Needs solutions to address increased burdens on the Zengin-Net (e.g. managing positions of bank participants in both systems, multi-layering of final settlements on the BOJ-NET).

“Cotra,” that will be operated under the vertical method, aims to build a frequent, small-amount payment system expeditiously and with low costs by using the existing payment infrastructure. Therefore it could be an effective option meeting the needs of a new payment infrastructure to support frequent, small-amount payments (see Figure 28 and 29 for the details of combining *Cotra* with “c. scheme to develop a dedicated application connection platform and use the Zengin System” and “d. scheme to develop a dedicated system for small-amount payments, co-existing with the Zengin System” described in the previous chapter and the comparison of costs and realization speed).

At the same time, it is expected that issues such as to what extent the system will contribute to cost reduction, how many financial institutions will participate in the new system and whether it will have the network effect will be further explored. Payment-related organizations expressed their views at the TF that “key points of future discussions will be (i) the timeframe until realization; (ii) costs (incurred by end-users and financial institutions (including costs for existing participants and new participants, respectively)); and (iii) the number of participants among existing financial institutions.”

[Figure 28: Details of methods for realizing a frequent, small-amount payment system]





[Figure 29: Comparison of schemes of a frequent, small-amount payment system]

	c. Scheme to develop a dedicated application connection platform and use the Zengin System	d. Scheme to develop a dedicated system for small-amount payments, co-existing with the Zengin System	(Idea based on d.) <i>Cotra</i>
Cost (Central)	△Medium <ul style="list-style-type: none"> Costs will be incurred for the development of the application platform. It may contribute to cost reduction of the current system in the future. 	△Low to High <ul style="list-style-type: none"> Additional costs will be incurred according to the size of the new system (and depending on requirements). It may contribute to cost reduction of the current system in the future. 	<ul style="list-style-type: none"> It may be developed at low cost by using the existing J-Debit infrastructure. Interfacing with the BOJ-NET can be executed via the Zengin System.
Cost (Existing participants)	△Medium <ul style="list-style-type: none"> Costs will be incurred for modifying banks' own systems to align with the application platform. 	△Low to High <ul style="list-style-type: none"> Costs will be incurred for modifying banks' own systems to align with the new system. 	<ul style="list-style-type: none"> More than 1,000 financial institutions are already participating, and modification costs incurred by existing participants are expected to be minimal.
Cost (Funds transfer service providers)	○Low <ul style="list-style-type: none"> This assumes an API connection and may be less costly than connecting to the existing system. 	○Low <ul style="list-style-type: none"> This assumes an API connection and may be less costly than connecting to the existing system. 	<ul style="list-style-type: none"> This uses the API connection and may be less costly than connecting to the existing system.
Realization speed	Realizable during 7Z <ul style="list-style-type: none"> This needs consideration and development phases for building an application platform. 	Realizable during 7Z <ul style="list-style-type: none"> This needs consideration and development phases for building a new system. 	<ul style="list-style-type: none"> This needs consideration and development phases for additional development (can be realized in 7Z).
Other challenges	<ul style="list-style-type: none"> If bulking is implemented on the application platform, need to address outstanding balances (offering credit). 	<ul style="list-style-type: none"> Existing participants and Zengin Net need to manage settlement risk and implement operation for the two systems. Need to take actions to solicit participants in a new payment network. 	<ul style="list-style-type: none"> Details (e.g. settlement risk management approach) need to be explored for <i>Cotra</i>.

(2) Future considerations

As the solutions to enhance the convenience of frequent, small-amount payments, it is necessary to encourage further discussions on the specifics of “*Cotra*” since it is an effective infrastructure platform, and for the Zengin-Net to provide appropriate support and facilitate cooperation for the launch of the “*Cotra*” service.

5. Upgrading and improving efficiency of payment systems

(1) Proposed approaches

The previous chapters discussed the results of considerations regarding funds transfer service providers' participation in the Zengin System and enhancement of the convenience of frequent, small-amount payments. The following table highlights the results of considerations and the proposed approaches for each issue.

[Participation of Funds Transfer Service Providers in the Zengin System]

- The TF recommends that the requirements for participating in the Zengin System, whose membership qualification is currently limited to deposit-taking financial institutions (i.e., banks), be revised. The target of revision is to enable funds transfer service providers (i.e., non-banks) to apply for its membership by FY2022. Accordingly, further details on membership requirements and necessary institutional framework for expanding membership qualification will be worked out.

1. Requirements for participation

- Non-banks which intend to participate in the Zengin System should be subject to the same terms and conditions as the existing member banks from the perspective of ensuring the stability of the payment systems. These include the application of the “collateral system” and “system for providing liquidity” required under the Zengin-Net Rules. The Zengin-Net, the Financial Services Agency and the Bank of Japan will closely cooperate and discuss the way forward for setting up a monitoring framework and standards of those non-banks from the perspective of stability of the payment systems.
- In the medium to long term, further rules and institutional frameworks, if any, that contribute to all participating entities will be explored.³⁴

2. Participation method

- Two access models to join the Zengin System are expected to be implemented from the perspective of ensuring the fairness in accessibility to the payment system. Those models are namely “Agency Participants” (directly connected non-settling participants) and “Clearing Participants” (directly connected settling participants).
- Non-banks executing settlement as Clearing Participants are likely to have a more significant impact on the payment systems including the activities of the Zengin System. The requirements on their financial soundness and risk management for Clearing Participants should be more stringent compared to those intended for Agency Participants.
- Non-banks joining the Zengin System as Agency Participants will have to make an agreement with Clearing Participants who will provide settlement services on their behalf.

³⁴ Based on these measures, consider participation requirements in detail without distinguishing the types of funds transfer service providers defined under the revised Payment Services Act.

Accordingly, terms and conditions included in the agreement are expected to be standardized.

3. Connection method

- In the short term, participants connecting to the Zengin System's infrastructure will use the current method (i.e. connecting through relay computers). In parallel, however, a new method using an application programming interface (API) should be explored for use in the medium term. This method is expected to benefit both the existing member banks and non-banks.
- At the same time, other new information technologies and possible measures will be explored from medium- to long-term perspectives, with a view to further enhancing the efficiency gains from modernizing the whole Zengin System.

[Enhancement of convenience of frequent, small-amount payment s]

- The TF has concluded that the Cotra Project is a feasible solution for the short-term revision perspective. The project is led by five city banks aiming to build a new infrastructure for small-amount payments. The Zengin-Net and Cotra Project Team will closely cooperate and discuss the way forward in order to launch the Cotra operation in early FY2022.
- In parallel with the Cotra Project, it is desirable to continue discussions on the frequent, small-amount payments in medium to long term, keeping in mind the timeframe of the next-generation Zengin System upgrade.

To introduce interoperability appropriate for the advent of the digital age, in the short term, it is required that realistic solutions for these issues be built to realize participation of funds transfer service providers based on the current Zengin System and infrastructures (including consideration of API GW) and frequent, small-amount payments.

In the medium to long term, the TF believes that one of the ideal forms is to realize efficient and low-cost operation of integrated systems that satisfy diversity, flexibility and convenience while maintaining security, safety and stability, which are the underlying attributes of the payment systems.

At the same time, “c. scheme to develop a dedicated application connection platform and use the Zengin System” and “d. scheme to develop a dedicated system for small-amount payments, co-existing with the Zengin System” that were discussed as options for the connection methods and for realizing a frequent, small-amount payment system for participation by funds transfer service providers are likely to facilitate the optimization of the whole Zengin System and fundamentally improve efficiency. Accordingly, the TF recommends that these options continue to be discussed from medium-to-long perspectives with a view to upgrading to a next-generation Zengin System, including an ideal form of the frequent, small-amount payment system. A suggested approach would be to discuss a new system

in parallel with “*Cotra*” and then integrate them efficiently in the future. The presentation on the future of the payment systems from medium- to long-term perspectives was made by three member vendors at the TF. The details of their presentation are provided for reference at the end of this report.

To respond to the ever-changing environment surrounding payment and settlement services, the TF believes it necessary to carefully monitor developments both in Japan and overseas and make ceaseless efforts to pursue an ideal form of the payment infrastructure in Japan.

(2) Timeline and approaches to considerations

The TF considers it necessary to take an approach to explore the issues keeping in mind the timeframe and flexibly review and revise the ideal form of the payment systems to reflect changes in the environment in payment and settlement services, including users’ needs.








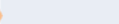
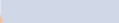

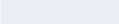
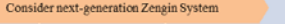
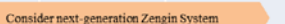

The proposed approach for the areas that are identified as future considerations is to establish working groups for rule-related and system-related issues, and continue discussions among members well-versed in respective issues. Examples of key considerations to be addressed by such new working groups include the following.

[Figure 30: Considerations in FY 2021]

Examples of rule-related issues	Examples of system-related issues
<ul style="list-style-type: none"> Partial amendments to relevant rules (e.g. Operational Procedures) Consideration of participation of funds transfer service providers as Clearing Participants Standardization of terms and conditions included in the agreement if non-banks join the Zengin System as Agency Participants and will have to make an agreement with Clearing Participants who will provide settlement services on their behalf Monitoring of developments related to a frequent, small-amount payment system (e.g. <i>Cotra</i>). Clarification of relation with the Zengin System, and actions to establish rules 	<ul style="list-style-type: none"> Funds transfer service providers’ connection methods, including API GW Consideration of detailed operational issues, such as how to identify funds transfer service provider’s accounts and use of the “Confirmation of Payee”, and system-related actions Enhancing efficiency of the Zengin System in the medium to long term (e.g. introduction of new technologies) Consideration of system-related policies on the next-generation Zengin System upgrade, including an ideal form of a frequent, small-amount payment system, based on discussions at the rule working group

Examples of rule-related issues	Examples of system-related issues
<ul style="list-style-type: none"> Consideration of institutional framework-related issues (e.g. the Zengin-Net Rules, risk management) associated with the next-generation Zengin System upgrade, including an ideal form of a frequent, small-amount payment system 	

[Figure 31: Consideration timeline]

Actions	Considerations	WG	FY2021	FY2022	FY2023 to FY2027
Overall roadmap	(1) Participation of non-banks in the Zengin System	—		   ★ Expand participation	
	(2) Enhancement of convenience of frequent, small-amount payments (<i>Cotra</i> PJ)			  ★ To launch the operation	
	(3) Consideration of the next-generation Zengin System				★ ditto
Establishment of an institutional framework for new participants in the Zengin System	(1) Consider partial amendments to relevant rules (e.g. Operational Procedures)	Zengin -Net (Rule WG)	Consider amendments	Amendment procedures	
	(1) Consider matters including monitoring items	Zengin -Net (Rule WG) FSA/BOJ	Consider monitoring framework and amendments	Amendment procedures	
	(1) Consider participation as Clearing Participants	Zengin -Net (Rule WG) FSA/BOJ	Consider monitoring framework and amendments		
	(1) Consider standardizing terms and conditions included in an agreement when Clearing Participants provide the settlement service to the Agency Participants	Zengin -Net (Rule WG)	Consider matters to coordinate	Standardize	
Development/upgrading of systems for new participants in the Zengin System	(1) Consider system-related issues to be addressed to connect non-banks (e.g. identification info., function to check recipients' accounts)	Zengin -Net (System WG)	Consider actions Coordinate with stakeholders	Prepare for participation	
Enhancement of flexibility of connection methods	(1) Further improve flexibility of, and enhance, connection methods (Consider an API gateway)	Zengin -Net (System WG)	Consider necessary functions, etc. Conduct PoC	PoC verification Preliminary consideration	Requirements definition, etc.
Realizing “ <i>Cotra</i> ”	(2) Prepare for operation of “ <i>Cotra</i> ” (including cooperation with the Zengin System)	Zengin -Net (Rule WG) <i>Cotra</i> PJ	Consider governance, risk management, etc.		
Consideration of the next-generation Zengin System	(3) Consider institutional framework-related issues associated with upgrading to the next-generation Zengin System	Zengin -Net (Rule WG)		Consider next-generation Zengin System	
	(3) Consider further improving efficiency of the Zengin System (e.g. usability of new technologies)	Zengin -Net (Rule WG)		Consider next-generation Zengin System	
	(3) Consider system-related policies on upgrading to the next-generation Zengin System	Zengin -Net (System WG)		Consider next-generation Zengin System	

To ensure transparency of discussions and strengthening information dissemination, it is preferable to take the following actions going forward: (i) create other opportunities to collaborate with relevant bodies in addition to the Panel of Experts and the new working groups; and (ii) publicly disclose costs associated with the Zengin-Net Rules and the Zengin System and the progress of payment system enhancement initiatives.

6. Review of inter-bank fees

The TF's discussions did not directly cover inter-bank fees³⁵ addressed in the *Report of Survey on Cashless Payments Including Using QR Codes* published by the Japan Fair Trade Commission in April 2020 and the Action Plan of the Growth Strategy. However, the TF has been updated on the direction of review of inter-bank fees. The overview of the review is summarized below:

[Figure 32: Overview of the inter-bank fee review]

Excerpts from the Action Plan of the Growth Strategy	“(…) inter-bank fees, (…) having not changed for more than 40 years, should be reviewed. For the review, from the perspective of securing stable and efficient operation of nationwide payment network infrastructure, inter-bank fees should be integrated to the system mandated by the Japanese Banks’ Payment Clearing Network (Zengin-Net), and should be lowered to a reasonable level that properly reflect costs, while visualizing cost structures.”
Concepts of the review	<ul style="list-style-type: none"> Consider shifting to a new scheme under the Zengin-Net Rules managed and operated by the Zengin-Net based on the Operational Procedures by taking into account the proposals in the Action Plan of the Growth Strategy and other initiatives. As a direction of consideration, it is assumed that the new scheme will regard related costs as “costs required for the receiver bank to process fund transfers in order to operate the Zengin-Net in a stable manner” (“fund transfer operational costs”) and set out rules on such costs in the Operational Procedures. In calculating the fund transfer operational costs, it is also assumed to consider (i) costs to be borne by receiver banks and (ii) costs leading to enhancement of convenience (network externality) and efficiency of the Zengin-Net and the Zengin System.
Timeline of actions (planned)	<ul style="list-style-type: none"> Conduct a preliminary survey of costs to be borne by receiver banks (up to August 2020) (based on the results of the preliminary survey, consider the direction on the calculation method of the Fund transfer operational costs) [Completed] Conduct a survey on costs to be borne by receiver banks to implement the new scheme targeting all banks (up to November 2020) [Completed]

³⁵ “Inter-bank fees” are paid by the sender bank to the receiver bank in funds transfer transactions and are determined by consultation between individual banks. Considering the nature of funds transfer transactions, the inter-bank fees are construed as costs required for agency operations between banks (e.g. crediting of funds to the recipient’s account). The receiver bank bears various costs associated with crediting operations (e.g. actions to resolve a failure to credit funds to the account, AML measures) but does not collect any fees from the recipient. Therefore, the receiver bank receives inter-bank fees from the sender bank and appropriates them for such costs.

	<ul style="list-style-type: none"> • Explore each issue based on the results of the survey above, consider the calculation method for each cost and determine its direction, and consider draft amendments to the Operational Procedures, etc. (November 2020 to February 2021) • Apply for resolution and approval by the board of directors for the amendments to the Operational Procedures, etc., including the amount of fund transfer operational costs (=> FSA's approval of the amendments to the Operational Procedures) (February to March 2021) • Explain the new scheme to member banks to gain their understanding, and member banks prepare for the implementation (e.g., system development and revising the agreement to reflect new inter-bank fees) (from March 2021 onward) • Start to apply fund transfer operational costs (release) (from March 2021 onward)
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7. Conclusion

The TF members are composed of not only banks but also academics, payment-related organizations, system-related business operators, think tanks, the FSA and the BOJ. All the recommendations in this report were proposed as a result of discussions among those stakeholders with various background.

Looking at developments abroad, not many jurisdictions have set up a group which consists of various stakeholders to discuss whether to increase access to payment systems whose membership has been limited to deposit-taking financial institutions and to allow non-banks (funds transfer service providers) to participate. This demonstrates that Japan has been undertaking highly progressive initiatives. Such initiatives could significantly contribute to the digitization of the society.

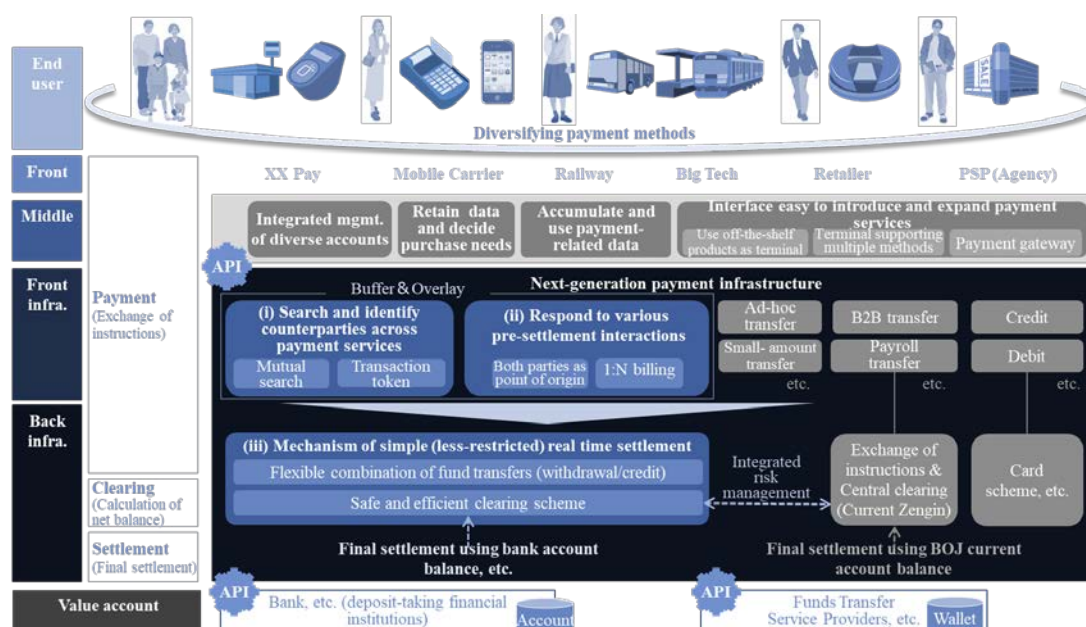
The TF expects that the issues identified as future considerations in this report will be further discussed in the next fiscal year onwards and that the preferable “next-generation payment systems” will be determined.

Reference

This section introduces presentations made by each member vendor at the TF regarding the future image of the payment systems from medium- to long-term perspectives as they can be referenced in the consideration phase for the next fiscal year and beyond.

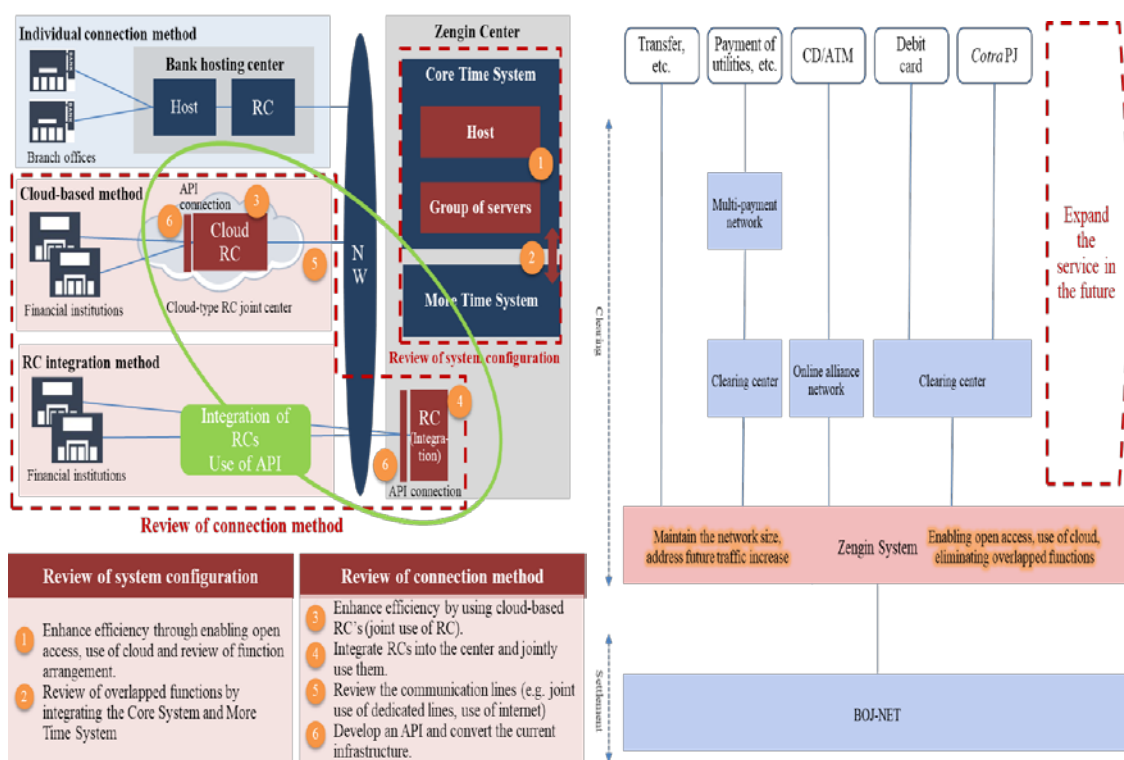
① NTT DATA

NTT DATA gave a presentation on the creation of a two-tier structure as a future form of the next-generation payment infrastructure aimed at realizing a “more convenient cashless society” that address market and social issues. This structure consists of (1) front infrastructure focusing on “diversity” and “flexibility to changes” and (2) back infrastructure focusing on “security and safety” and “simplicity (easily interfacing with the front infrastructure).”



② Hitachi, Ltd.

Hitachi, Ltd. introduced in its presentation a solution that can achieve both objectives of maintaining the safety and reliability of the Zengin System and reducing costs. Specifically, this can be achieved by reviewing the system configuration (eliminating overlapped functions) and the connection method according to the architecture of the payment systems, while leveraging the current business logic.



③ Fujitsu

In its presentation, Fujitsu remarked that incorporating *Cotra*'s clearing function to a newly built small-amount payment infrastructure and thereby increasing frequency of payments could mitigate settlement risk and serve as the foundation of the next Zengin System.

