CPMI-IOSCO Disclosure for Japanese Banks' Payment Clearing Network 2023

Responding institution: Japanese Banks' Payment Clearing Network

Jurisdiction in which the FMI operates: Japan

Authorities regulating, supervising or overseeing the FMI: Japan Financial Services Agency, Bank of Japan

The date of this disclosure: July 31, 2023

This disclosure can also be found at www.zengin-net.jp/en/

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I. Executive summary

Overview of FMI

The Japanese Banks' Payment Clearing Network (hereinafter, "Zengin-Net") is currently Japan's only Funds Clearing Agency under the Payment Services Act (Act No. 59 of 2009). Zengin-Net commenced operations in October 2010 when the operations of the Organization for Management of Domestic Fund Transfers (established in 1973) were succeeded from the Tokyo Bankers Association (currently, the Japanese Bankers Association) in the form of the National Domestic Funds Transfer System (hereinafter, "Domestic Funds Transfer System").

The purpose of Zengin-Net is to facilitate smooth, safe and efficient fund settlements between financial institutions, which are a foundation of society, and establish a reliable financial infrastructure to raise the standard of living for people living in Japan. To fulfill this purpose, Zengin-Net operates the Domestic Funds Transfer System.

The Domestic Funds Transfer System connects almost all deposit-taking financial institutions in Japan online and is structured to allow funds transfer transactions, such as wire transfers and remittances, to be carried out between financial institutions. The greatest feature of the Domestic Funds Transfer System is the speed of execution it offers, whereby in almost all cases on weekdays between the hours of 8:30 a.m. and 3:30 p.m. funds are deposited into beneficiary accounts almost in real time simultaneously with the transfer message being sent and received between financial institutions. In addition, even during weeknights, Saturdays, Sundays and national holidays, funds can be transferred between many financial institutions in real time in a similar way.

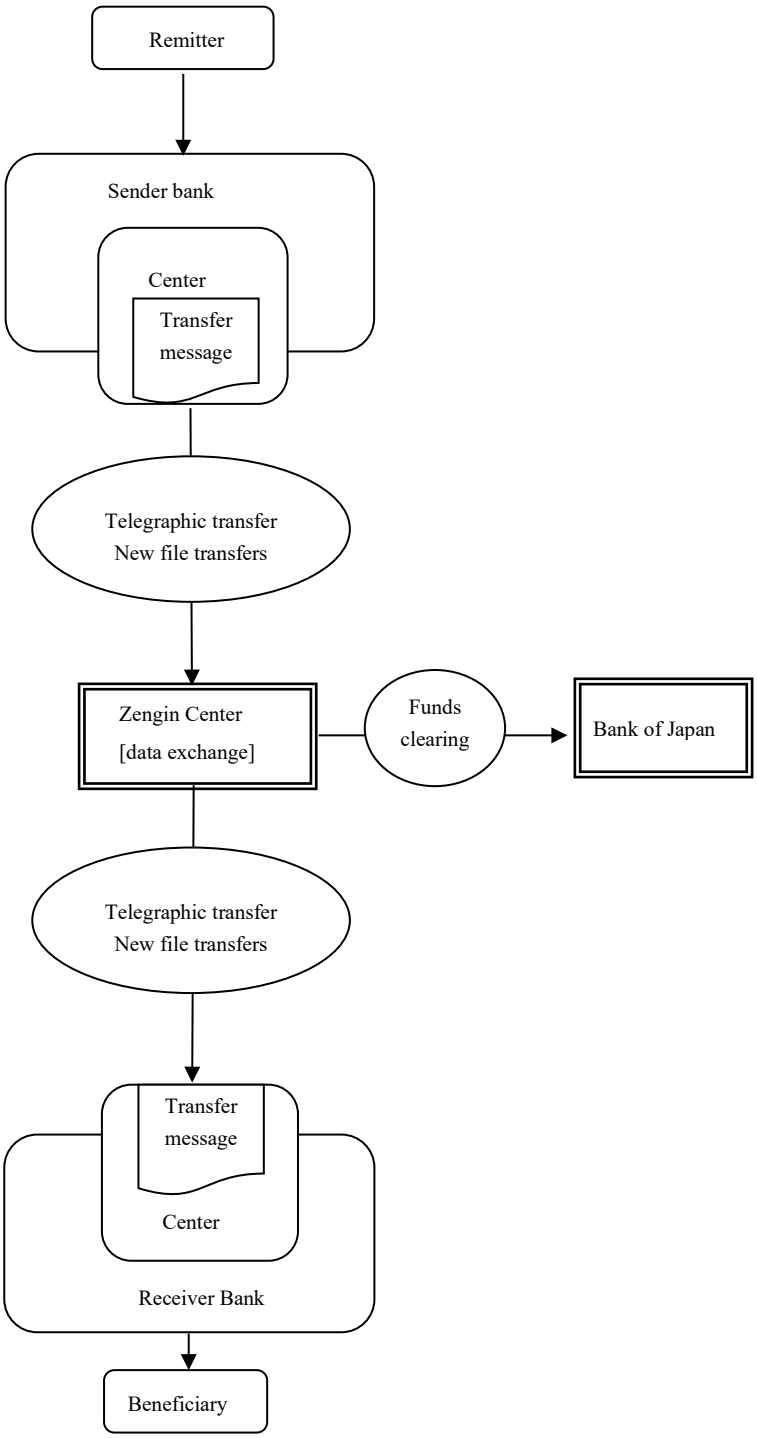
The core operating system of the Domestic Funds Transfer System is the Zengin Data Telecommunication System (hereinafter, "Zengin System"), which is operated by Zengin-Net.

The Zengin System links financial institutions in Japan through telecommunication lines for processing data in a concentrated manner. Zengin-Net utilizes the Zengin System to carry out funds clearing operations and data exchange operations in which data for funds transfer transactions from transfer messages is sent and received between financial institutions.

The term “funds clearing” refers to clearing funds by assuming the obligation in the debtor-creditor relationship between financial institutions that accompany funds transfer transactions. As the operator of the Domestic Funds Transfer System, Zengin-Net has obtained a license for funds clearing operations as its core business.

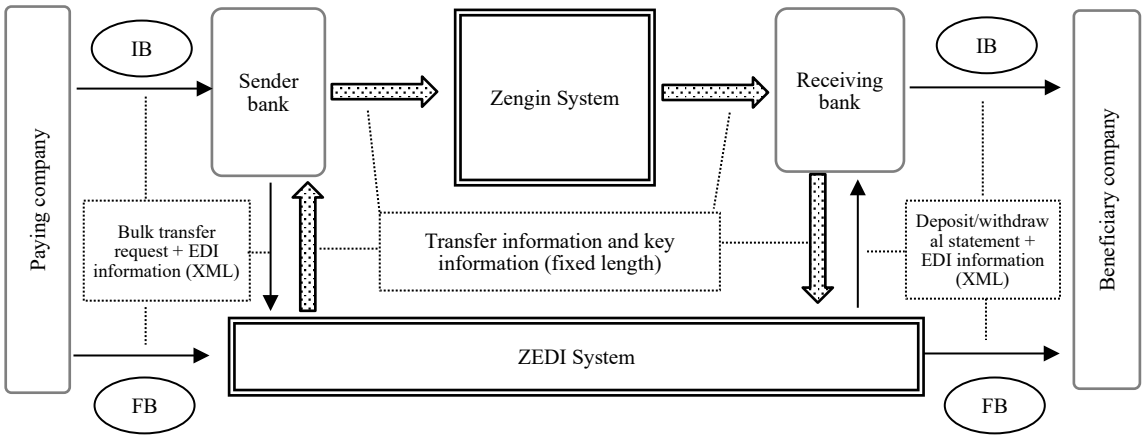
Moreover, Zengin-Net operates “Zengin EDI System (ZEDI)”, a new financial infrastructure which introduces XML messages (ISO20022) towards a next-generation international standard for financial transactions, to replace transfer messages sent by companies. Although ZEDI does not directly handle funds clearing, the aim is to realize financial EDI that allows commercial information to be attached to funds transfer messages. Zengin-Net shall implement data exchange operations with voluntary financial institutions and companies.

[Figure 1-1: Work Flow of Data Exchange Operations (Funds transfer transactions)]



●Center: Sends and receives transfer messages
●Telegraphic transfer: Transfer messages are each sent and received in real time
●New file transfers: Each data sent and received by MT data file transmission is managed and sent as an individual file

[Figure 1-2: Work Flow of Data Exchange Operations (Financial EDI Information)]



- → : Transfer request in XML format + Financial EDI information
- ⇨ : Transfer information of a fixed length and key information for finance EDI
- IB : Internet banking (file upload/download via browser)
- FB : Firm banking (Batch file transfer, individual access by a financial institution)

<Participants>

Almost all deposit-taking financial institutions in Japan, including banks, Shinkin banks (credit associations), credit cooperatives, labor banks and agricultural cooperatives and the Japan Post Bank, currently participate in the Domestic Funds Transfer System.

Specifically, currently over 1,100 financial institutions, including foreign banks, participate in the Domestic Funds Transfer System, with exchange transactions taking place between their approximately 30,000 branches in Japan.

Moreover, in addition to deposit-taking financial institutions, funds transfer service providers that have a separately prescribed financial foundation and system can participate in the Domestic Funds Transfer System since 2022. However, funds transfer service providers do not participate in the Domestic Funds Transfer System currently.

These deposit-taking financial institutions and funds transfer service providers that participate in Zengin-Net are collectively referred to as "Participating Banks."

Of these Participating Banks, those that conduct direct funds settlements with Zengin-Net through the current account of the Bank of Japan are referred to as "Clearing Participants" and Participating Banks that outsource funds settlements to these clearing participants are called "Agency Participants."

<Legal and Regulatory Framework>

The "Payment Services Act" enacted in April 2010 requires that entities engaging in funds clearing operations obtain a license from the Prime Minister of Japan. Zengin-Net obtained this funds clearing business license in September 2010.

The funds clearing business involves assuming the burden of obligations under funds transfer transactions occurring between banks by assuming obligations, making changes in obligations or using other methods for the clearing of debits-credits for funds transfer transactions. Zengin-Net executes final settlements through transfers via the current deposit accounts of Zengin-Net and Clearing Participants held at the Bank of Japan, which is Japan's central bank, after translating debits-credits between Clearing Participants into debits-credits between Clearing Participants and Zengin-Net.

The operations of a Funds Clearing Agency are restricted under the "Payment Services Act" and subject to the supervision and inspection of the Financial Services Agency.

Zengin-Net is also subject to oversight of financial markets infrastructure carried out by the Bank of Japan, as the country's central bank, under the objectives stipulated in the "Bank of Japan Act."

<Main Risks>

Zengin-Net is exposed to various risks, which include credit risk and system risk, among others.

Of each risk, the three main risks for Zengin-Net due to the nature of its operations are: (1) credit risk; (2) liquidity risk; and (3) operational risk. The scope of each of these risks is presented below.

(1) Credit risk

The risk that Zengin-Net will incur losses from the failure of a Clearing Participant to fulfill their obligation when Zengin-Net assumes the obligation borne by the Clearing Participant from their counterparty Clearing Participant during the process of funds clearing

(2) Liquidity risk

The risk that Zengin-Net will incur losses because the funds clearing counterparty cannot complete their obligation as per the limited time available, even in cases where the funds clearing counterparty will be able to fulfill its obligation at any point in the future

(3) Operational risk

The risk that Zengin-Net will incur losses due to the inoperability or inappropriate action of an internal process, personnel or system, or due to an exogenous event

Additionally, (3) operational risk is further categorized into the eight risks of administrative risk, system risk, information security risk, cyber security risk, legal risk, event risk, human resources risk, and reputational risk.

◆Table 1: Categories and Definitions of Operational Risk

Category	Definition
Administrative risk	The risk that Zengin-Net will incur losses due to the failure to carry out correct administrative functions or due to the cause of an incident or impropriety, etc., by Zengin-Net's executive officers or employees (including executive officers and employees of administrative outsourcing partners)
System risk	The risk that Zengin-Net will incur losses due to the failure or malfunction of a system and the risk that Zengin-Net will incur losses from the improper use of a system
Information security risk	The risk that Zengin-Net will incur losses due to the loss of security/integrity of its information assets
Cyber security risk	The risk that Zengin-Net will incur losses due to the leakage of information or system failure caused by a cyber attack
Legal risk	The risk that Zengin-Net will incur losses due to insufficient compliance with laws or ordinances
Event risk	The risk that Zengin-Net will incur losses due to exogenous factors such as a natural disaster, criminal or terrorism act, failure of social infrastructure, or epidemic, or the inappropriate use or management of tangible asset
Human resources risk	The risk that Zengin-Net will incur losses due to problems arising from human resources or labor management
Reputational risk	The risk that Zengin-Net will incur losses due to the degradation of its reputation from rumors

<Risk Management>

Zengin-Net carries out risk management in accordance with the annual action plan based on its Risk Management Policy and medium-term management plan. In addition, for comprehensive risk management, the Risk Management Group evaluate and summarize the status of each risk, based on management carried out on each risk area, and reports its findings to the executive management team.

The three main risks for Zengin-Net due to the nature of its operations are: (1) credit risk; (2)

liquidity risk; and (3) operational risk. The scope of each of these risks is presented below. These risks are managed as follows.

<Credit Risk Management>

Zengin-Net has established the Sender Net Debit Cap Scheme in order to control unsettled balances and prevent them from becoming too large, as a countermeasure against credit risk.

This scheme uses a system to monitor and make sure the gross payment minus the gross receipt (net debit amount) of each Clearing Participant occurring from funds transfer transactions does not exceed the limit declared in advance by each Clearing Participant (net debit cap), which controls and prevents credit exposure from becoming too large.

The specific work flow of this scheme entails Clearing Participants establishing, in advance, a net debit cap by means of pledging Government bonds or other instruments to Zengin-Net in the form of collateral.

The scheme ensures that the net debit cap cannot exceed the total valuation of the collateral pledged to Zengin-Net. This increases the likelihood that funds can be recovered in the event funds cannot be settled (default), which in turn mitigates risk.

Next, once a Clearing Participant sends a transfer message, that particular Clearing Participant's net debit amount will increase.

The Zengin System monitors this net debit amount in real time, and if the above net debit cap is almost reached, the Clearing Participant is notified and they are prompted to stop the transmission of the transfer message (the net debit amount is the gross payment minus the gross receipt of each Clearing Participant, and this amount will decrease if a Clearing Participant receives a transfer message for an amount larger than the one it sent out) or temporarily increase the net debit cap.

When a transfer message is sent in which the net debit amount exceeds the net debit cap, despite the above notification, the transfer message is treated as an error by the system and returned to the bank.

Moreover, for the net debit cap of the More Time System, a framework has been established to monitor the ratio of total debit only in More Time System transactions to the net debit cap, and request banks whose ratio is likely to reach 100% to increase the net debit cap (collateral

pledged) in advance.

<Liquidity Risk Management>

Zengin-Net operates the Sender Net Debit Cap Scheme as outlined above. By establishing a ceiling in the form of a net debit cap, liquidity risk is managed within a predetermined level.

In addition, if at the time of funds settlement, liquidity is insufficient and the funds settlement cannot be executed, Zengin-Net will receive a supply of funds equivalent to the shortfall through "Liquidity Providing Banks" contracted with Zengin-Net in advance. This ensures that the day's settlements are executed according to schedule, whereby mitigating risk.

Subsequently, at a later date Zengin-Net repays the amount provided by the Liquidity Providing Banks by disposing of collateral extended by the defaulting bank.

<Operational Risk Management>

Zengin-Net manages each category of operational risk based on Zengin-Net's unique business characteristics per the table below. Management methods are continuously reviewed and reinforced.

◆Table 2: Main Management Methods of Operational Risk by Category

Category	Main Management Methods
Administrative risk	Each department identifies and evaluates risks, and based on these findings, revisions are made to administrative manuals and administrative processes, and if an administrative incident occurs, this information is accumulated, and consideration is given to changing systemization and administrative processes.
System risk	Based on standards to be complied with and system interruption examples of other companies, risk is monitored and evaluated regularly, and risk mitigation measures are taken, while project management is carried out thoroughly for system development from the perspective of risk management.

Category	Main Management Methods
Information security risk	Information assets are regularly identified, while risk is monitored and evaluated in an integrated fashion with the above system risk, and risk mitigation measures are carried out, in addition, employees are provided with training on information security regularly.
Cyber security risk	Pursuant to the Cyber Security Policy, appropriate cyber security measures are implemented, a management system is in place, and employees are provided with training on cyber security regularly.
Legal risk	Legal issues are mitigated, through monitoring by the Legal & Compliance Department, for decision making, contracts and external documents and consultations with legal professionals, while compliance training is also planned and implemented.
Event risk	Plans and manuals have been prepared based on various emergency scenarios, such as earthquakes and influenza epidemics, and a system is in place to ensure the minimum continuity of operations during an emergency.
Human resources risk	Regular monitoring is carried out through collaboration with the human resources department of the Japanese Bankers Association, such as checking for issues in terms of labor management.
Reputational risk	Together with the public relations department of the Japanese Bankers Association, measures are examined for minimizing loss in the event of media report is found about Zengin-Net.

II. Summary of major changes since the last update of the disclosure

Since its previous disclosure on July 30, 2021, Zengin-Net expanded the participation qualification for the Zengin System. Therefore, the disclosed content of "Principle 18: Access and participation requirements" was updated this time.

III. General background on the FMI

<History>

Zengin-Net commenced operations in October 2010 when the operations of the Organization for Management of Domestic Fund Transfers (established in 1973) were succeeded from the Tokyo Bankers Association in the form of the Domestic Funds Transfer System.

The historical highlights of the Domestic Funds Transfer System are presented in Table 3 below.

◆Table 3: History of the Domestic Funds Transfer System

Year	Summary
1943	Start of centralized settlement of domestic fund transfers at the Bank of Japan
1958	Revision of the Fund Transfers Settlement System and 27 Fund Transfer Offices were established in the regionally based bankers associations to facilitate exchange of transfer notification slips
1968	Launch of the Chigin (regional banks) Data Telecommunications System
1973	Establishment of the National Domestic Funds Transfer System Launch of the Zengin System [Participating Banks: domestic banks and the Shoko Chukin Bank comprising 88 banks and about 7,400 branches]
1979	Launch of the 2nd Generation Zengin System Sogo (mutual) banks, shinkin banks, the Norinchukin Bank and other financial institutions join [Participating Banks: 708 financial institutions with about 18,000 branches]
1982	Foreign banks operating in Japan joined the Zengin System for the first time
1984	Credit cooperatives, labour banks, agricultural cooperatives and other financial institutions joined [Participating Banks: 5,479 financial institutions with about 40,000 branches]

Year	Summary
1987	Launch of the 3rd Generation Zengin System [Participating Banks: 5,304 financial institutions with about 42,000 branches]
1993	Start of same-day settlements
1994	Revision of the Sender Net Debit Cap Scheme, which was first implemented in July 1990
1995	Launch of the 4th Generation Zengin System [Participating Banks: 3,552 financial institutions with about 44,800 branches]
2001	Launch of the New National Domestic Fund Transfer System
2003	Launch of the 5th Generation Zengin System [Participating Banks: 1,679 financial institutions with about 37,250 branches]
2009	Japan Post Bank joined the system
2010	Payment Services Act was enacted
	Operations transferred to Japanese Banks' Payment Clearing Network, which was established in the same year
2011	Launch of the 6th Generation Zengin System [Participating Banks: 1,371 financial institutions with about 32,500 branches]
2018	Launch of More Time System [Participating Banks: 504]
	Launch of ZEDI [Participating Banks: 321]
2019	Launch of the 7th Generation Zengin System [Participating Banks: 1,299 financial institutions with about 31,000 branches]
2022	Expansion of the qualification for participation in the Zengin System Start of linkage with the COTRA System

<Zengin-Net>

Zengin-Net, or the Japanese Banks' Payment Clearing Network, is a General Incorporated

Association under the Act on General Incorporated Associations and General Incorporated Foundations (Act No. 48 of 2006) and a Funds Clearing Agency under the Payment Services Act (Act No. 59 of 2009).

As of May 1, 2023, Zengin-Net was comprised of 140 financial institutions as Clearing Participants, 994 financial institutions as Agency Participants, and 1 corporation as Associate Member.

<Participating Banks>

Entities with the qualification of Participating Bank or that can succeed such qualification must be deposit-taking financial institutions or funds transfer service providers that have a separately prescribed financial foundation and system, and engage in domestic funds transfers as part of their banking operations and procedures to obtain approval of the Zengin-Net Board of Directors must be completed.

<Associate Members>

The Bank of Japan does not use the Domestic Funds Transfer System, but it participates as an associate member with the approval of the Zengin-Net Board of Directors. The Bank of Japan transmits data related to statements for pension transfers and statements for national tax refund transfers, using the Zengin System.

<Banks Participating in More Time System>

These are the financial institutions that are Participating Banks and utilize More Time System, which was established to expand the operating hours of the Zengin System, to transmit/receive data such as those for funds transfer transactions with the Zengin System during weeknights, Saturdays, Sundays, and national holidays.

<System Operator>

The system operator of the Zengin System is Zengin-Net.

<Customers>

Customers (remitters) of a Participating Bank (sender bank), regardless if they are individuals or corporations, carry out credit transfers through Zengin-Net under their agreement with the Participating Bank and customers (beneficiaries) receive these funds under their agreement with the Participating Bank (receiver bank).

For this reason, while there is no direct contractual relationship between Zengin-Net and the customers of Participating Banks, Zengin-Net organizes a meeting of experts in order to identify the needs of general consumers and corporations in terms of domestic funds transfer transactions and settlement systems, including bank remittances, and to utilize the results towards improving organizational management, as part of its efforts aimed at improving the convenience of the Domestic Funds Transfer System used by all domestic banks and the Zengin System. These meetings of experts are held every fiscal year and involve experts with in-depth knowledge of the timely themes that are selected for review, in order to work on ongoing and self-led efforts to utilize the findings of these meetings.

Moreover, in order to promote the advancement and efficiency of the payment system in Japan, Zengin-Net established the Task Force for the Next-Generation Payment Systems. It is composed of academics, payment-related organizations, and system vendors, in addition to banks and authorities. The goal is to explore the ideal direction that the Zengin System should aim for in the future, breaking away from the traditional framework of banks. In FY2022, based on the previous discussions, Zengin-Net established the Working Group for the Next-Generation Payment Systems and the Working Group for Promoting Use of ZEDI, and conducted discussions on a new connection method using API, the Basic Policy for the next-generation Zengin System, and utilization of the Zengin EDI System, which is triggered by the introduction of the invoice system.

<Domestic Funds Transfer Transactions>

Domestic funds transfer transactions consist of credit transfers, where funds are credited to the deposit account of the beneficiary, remittances, where the beneficiary is paid directly using a bank draft or other means, and collections, where bills or cheques are collected and the proceeds credited. These transactions are carried out through the sending and receipt of transfer messages between financial institutions.

Transfer messages can be sent or received using the Zengin System or by using postal mail or a clearing house.

The Zengin System's methods for sending transfer messages can be divided into two major categories: telegraphic transfers and new file transfers.

<Telegraphic Transfers>

A telegraphic transfer includes a number of transfer messages (see Table 4 below), such as credit transfer, remittance, collection, and other forms of funds transfers between financial institutions, because individual transfer messages are sent and received through the Zengin System online in

real time.

In the case of a credit transfer or remittance, a financial institution (sender bank) acting on the instruction of its customer (payer) sends a transfer message to the financial institution (receiver bank) designated by the customer. In the case of a collection, the financial institution that has collected a bill/cheque sends a transfer message to the financial institution that has requested the collection.

A transfer message prepared by the sender bank's branch is sent to a Zengin Center via the bank's center (in the case of agency participation, the joint center; hereinafter the same shall apply) and relaying computer set up in the bank's center by Zengin-Net. The Zengin Center checks the content of the message and the amount of the transaction, and then sends the transfer message to the receiver bank, which credits the amount to the payee's account in accordance with the content of the transfer message.

■Table 4: Types of Telegraphic Transfer Messages

Type	Transfer Message	Description
Credit transfer	Credit transfer (including government credit transfers)	Same-day credit transfer
		Post-dated credit transfer
Payroll transfer	Payroll or bonus transfer	Credit transfer of payroll or bonus
Remittance	Ordinary remittance	Remittance in general
	Remittance of government payment	Remittance of government payment
Collection	Collection	Payment advice of individual collections and dishonored collections
Miscellaneous inter-bank transfer	Credit advice	Same-day credit
		Post-dated credit
	Claim advice	Same-day claim
		Post-dated claim
		Claim of dishonored collection
Ordinary communication		Communication between banks related to domestic fund transfers
Government transfer		Credit transfer for government payments

<New File Transfer Facility>

New file transfer messages are sent and received collectively.

Credit transfers by a new file transfer facility are mainly used for payments that need to be processed in bulk on a specific date, such as the credit transfer for payrolls, pensions, benefits and stock dividends, otherwise known as credit transfer agency operations. This system is also used for document-based transfers and post-dated transfers (see Table 5 below).

Transfer message data files sent from financial institutions are edited and processed according to transaction type and receiver bank by a Zengin Center before being sent to each receiver bank. The receiver bank then credits the funds to the payee's account on the designated day.

The MT Data Transmission, which sent and received transfer messages until the 6th Generation Zengin System, was abolished after the launch of the 7th Generation Zengin System, due to the shift of most messages to the New File Transfer Facility as a result of the increased transaction volume among others.

■Table 5: Types of Data for the New File Transfer Facility

Type	Description
Document-based transfer	Document-based credit transfers
Postdated transfer	Post-dated credit transfers
Payroll transfer	Payroll or bonus credit transfers
Bonus transfer	
Stock dividend transfer	Transfers of dividends to shareholders
Loan-trust dividend transfer	Transfers of loan-trust dividends to beneficiaries
Benefit transfer from pension trust fund	Transfers of benefits to beneficiaries
Benefit transfer from public pension fund	
Benefit transfer from health insurance fund	
Statement for pension transfer	Statement for transfers of public pension
Statement for national tax refund transfer	Statement for transfers of national tax refunds

Note: MT data file transmissions also handle data files that do not accompany fund settlements, such as a list of payments using a bulk payment system and a payee's account verification.

<Fund Transfer Operational Costs>

Fund transfer operational costs are expenses paid by the sender bank to the receiver bank, to ensure the stable operation of the domestic funds transfer system.

Fund transfer operational costs are set at a socially reasonable level, reflecting costs required for

the receiver bank to process fund transfers, including crediting of funds. In order to maintain fund transfer operational costs at a reasonable level, the costs shall be reviewed once every five years by calculating the cost for dealing with the receiver bank and profits of the fund transfer business.

<Basic Information and Statistical Results for Administrative Processing>

The Zengin System started in April 1973 and today it covers virtually all of the deposit-taking financial institutions in Japan. Each day the Zengin System processes on average some 7.2 million transfer messages for transactions valued at around 14 trillion yen, fulfilling a critical role as a piece of core infrastructure of Japan's economy. The transaction volume of credit transfers by type for December 2022 is presented in Table 6 below.

Table 6: Transaction Volume of Credit Transfers by Type (Unit: 10,000 transfers, %, 100 million yen)

Type	Volume	Share	Value
Telegraphic transfer	13,560	97.6	2,883,226
MT data file transmission	290	2.1	16,483
Mail transfer	34	0.3	3,240
Exchange transfer	2	0.0	247
Total	13,889	100.0	2,903,197

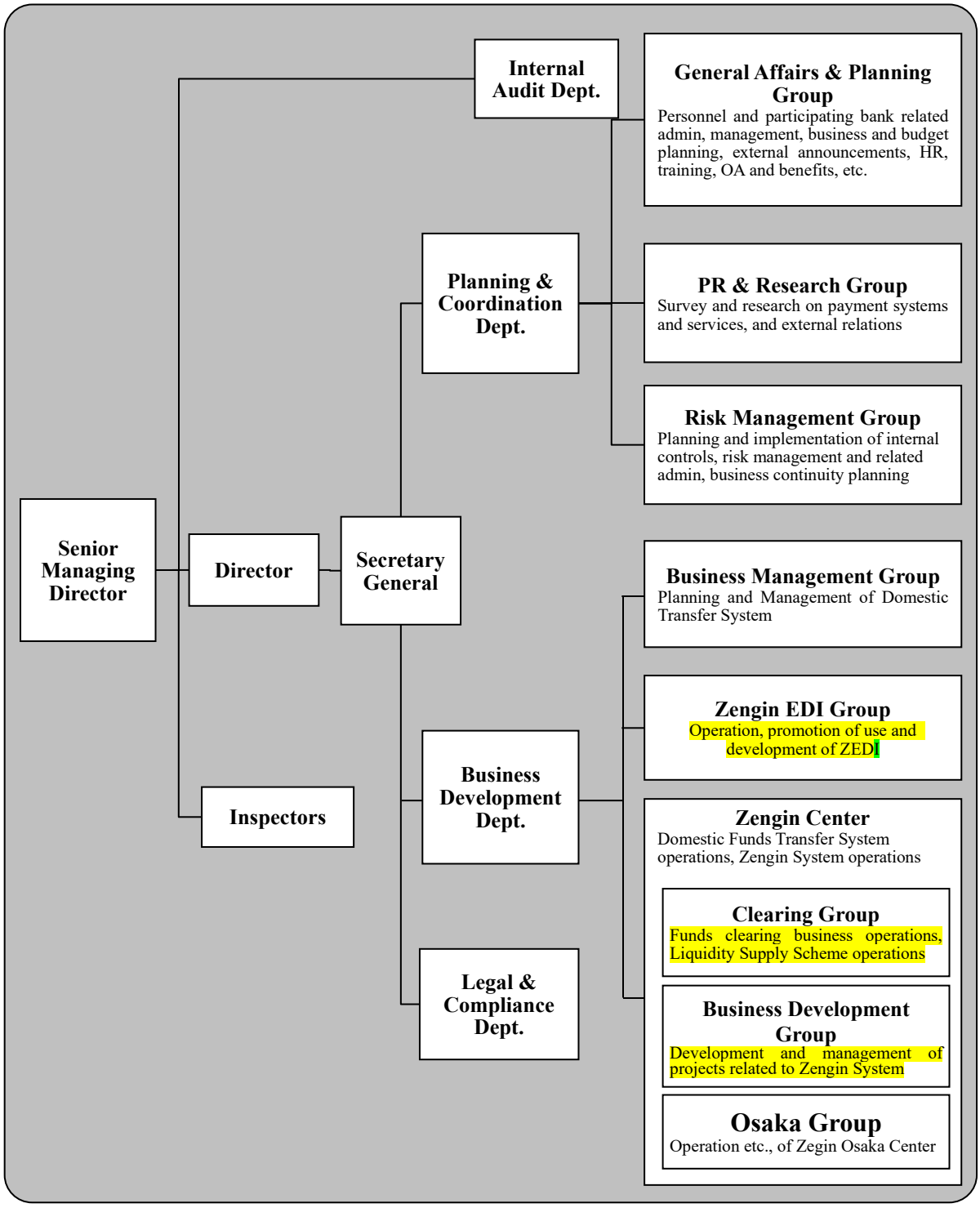
Notes:

1. Figures are for December 2022.
2. Figures for MT data file transmissions include files handled by the new file transfer facility (The MT data file transmission system was abolished due to the launch of the 7th Generation Zengin System).
3. Since the figures are rounded to the nearest whole unit, the totals do not always match.

<Overview of Zengin-Net's Organizational Structure>

Zengin-Net carries out operations under the following organizational structure in order to execute administrative work.

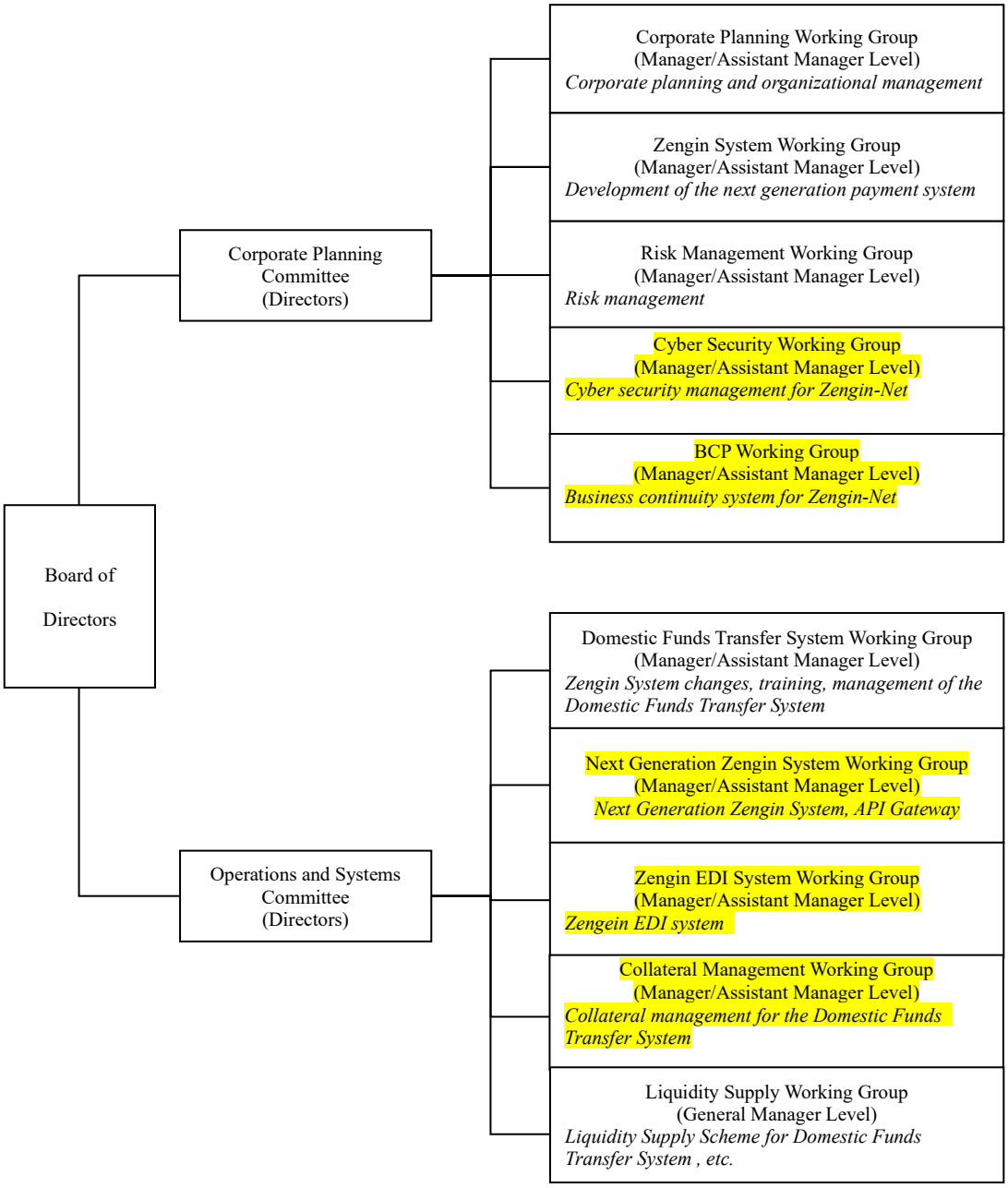
[Figure 2 – Zengin-Net Organizational Structure]



(As of April 2023)

[Figure 3 – Zengin-Net Committees and Working Groups]

In order to reflect the opinions and views of Participating Banks in operational management, committees comprised of representatives of Participating Banks and working groups based on themes have been set up under the board of directors, where reviews are carried out.



(As of April 2023)

<Legal and Regulatory Framework>

<Legal Structure of Zengin-Net>

Zengin-Net is a General Incorporated Association and is a Funds Clearing Agency under the Payment Services Act as licensed by the Prime Minister of Japan.

<Ownership Rights Structure>

The ownership rights of Zengin-Net belong only to the Japanese Bankers Association.

<Legal Basis for Important Aspects of Zengin-Net Activities>

Zengin-Net is a General Incorporated Association under the Act on General Incorporated Associations and General Incorporated Foundations and in legal terms it is considered as a corporation.

Unlike an incorporated for-profit company, the founders cannot be granted the right to receive distributions of surplus funds or residual assets.

Additionally, Zengin-Net is a Funds Clearing Agency under the Payment Services Act and licensed by the Prime Minister of Japan.

<Regulatory Supervision and Oversight Framework of Zengin-Net>

Zengin-Net is a Funds Clearing Agency licensed by the Prime Minister of Japan and its operations are regulated and overseen under the provisions of the Payment Services Act.

Zengin-Net is also subject to oversight of financial markets infrastructure carried out by the Bank of Japan, as the country's central bank, under the objectives stipulated in the Bank of Japan Act.

<System Design and Operations>

<Management of the Zengin System>

The Zengin System operator is Zengin-Net.

Procedures governing credit transfers and other transactions processed through the Zengin System and the clearing of inter-bank funds that results from these transactions are outlined in the rules of the Domestic Funds Transfer System established by Zengin-Net.

<Operating Hours of the Zengin System>

The Zengin System processes funds transfer notifications during the Core Time System starting at 8:30 a.m. and finishing at 3:30 p.m. in weekdays, which is the communication time zone for all of the Participating Banks. Operating hours may be extended on days when a high volume of data traffic is expected. In addition, operating hours are extended by one hour on the last business day of each month (except December).

Furthermore, the More Time System can be accessed by the Participating Banks at their discretion during weeknights, Saturdays, Sundays and national holidays. The system starts at 3:20 p.m. and finishes at 8:40 a.m. on the following business day. However, to ensure smooth communication between banks participating in the More Time System, the banks can access the More Time System from the service commencement time until 6:00 p.m. on the same business day.

<Funds Clearing for Transactions under 100 Million Yen>

Following a funds transfer transaction, the sender bank must pay the funds to the receiver bank.

In the case of transfer messages for transactions under 100 million yen, the debit-credit relationship is translated from debit-credit between the sender and receiver banks to one between the Zengin Center and each bank.

This limits the settlements of accounts to individual Clearing Participants and Zengin-Net, preventing impacts on other Clearing Participants in the event of settlement risk.

This method corresponds with “funds clearing” as stipulated by the Payment Services Act, and Zengin-Net is licensed by the Prime Minister to engage in the funds clearing business.

The net balance of transfers between Participating Banks is calculated and reported to Participating Banks using the Zengin System as well as the Bank of Japan.

Based on this notification, the Bank of Japan debits or credits the net balance from/to the current accounts of Zengin-Net and the Participating Banks at 4:15 pm of the same day.

Settlements for financial institutions such as shinkin banks, which are indirectly connected to Zengin Centers through respective joint centers, are made by the group’s parent financial institution, for instance, the Shinkin Central Bank for shinkin banks, which aggregates debits and credits of all its member financial institutions (Agency Participants).

In other words, in the case of shinkin banks, transactions between individual shinkin banks and other financial institutions are settled using the current account of the Shinkin Central Bank and the current account of Zengin-Net as credits or debits of the Shinkin Central Bank.

Settlements between the affiliated financial institutions of the parent financial institution are processed in the group by each intra-group system.

<Real Time Gross Settlement for Funds Transfer of 100 Million Yen and above>

A different process from that previously described applies to the clearing of domestic fund transfers of 100 million yen and above (with the exception of credit transfers for payroll and bonus payments). Each time such a payment is made, a transfer message is sent to the receiver bank from Zengin-Net after the transaction has been settled between the current account of the sender bank and the current account of the receiver bank held at the Bank of Japan.

The transfer message is kept at a Zengin Center until each transaction is settled. Funds are cleared for each transfer message by the BOJ-NET through real-time gross settlement (RTGS) with liquidity saving features.

RTGS does not entail any settlement risk since funds are cleared before the transfer message is sent to the receiver bank.

<Configuration of the Zengin System>

The Zengin System consists of host computers at Zengin Centers that form the hub of the system, the Zengin relaying computers (RCs) installed in the computer centers of the Participating Banks (in the case of agency participation, the Zengin RCs are installed in the joint center), and the communication lines that connect these computers.

Zengin-Net is responsible for all infrastructures up to the RCs.
The host computer of Zengin Center has the Core Time System, which processes funds transfer notifications during the daytime on weekdays, and the More Time System, which processes funds transfer notifications during weeknights, Saturdays, Sundays and national holidays.

To assure the security and reliability of the Zengin System, redundancies are in place to back up every aspect of the system.

Zengin Centers are located in Tokyo and Osaka and both house the host computers for the Zengin System.

Each Zengin Center has adopted a multiple host computer structure, while Participating Banks have at least two sets of Zengin RCs installed.

The IP-VPN network is used as the main network and for backup.

Communication between the Zengin Centers and Zengin RCs is encrypted.

<Zengin Centers>

The Zengin Centers in Tokyo and Osaka are both equipped with three sets of host computers that operate simultaneously.

The separately installed host computers in Tokyo and Osaka enable member banks to continue transactions through the Osaka Center even in the event the Tokyo Center fails due to a natural disaster or other reasons.

Two sets of host computers are used by both centers for online processing and another set is used for offline processing and backup. Zengin-Net has adopted a hot-standby method to ensure that when online processing fails due to a damaged computer, this computer can be immediately replaced by the backup.

In addition, power supplies, data storage and other control peripherals have redundancies, securing security. The Zengin Centers in Tokyo and Osaka also mutually synchronize data at all times.

<Relaying Computers>

Participating Banks send and receive telegraphic messages with the details of transfer messages with the Zengin Centers through the Zengin relaying computers (RCs) installed in their computer centers.

Participating Banks have their own proprietary systems, which requires transmission protocols and data formats to be converted so that the Zengin Centers can accept them.

Zengin RCs convert the various transmission protocols and then transmit the data to the Zengin Centers. These RCs also serve as a backup system when a Participating Bank's computer system fails, by sending and receiving transfer messages directly to/from the Zengin Centers on behalf of the bank's host computers.

<Communication Lines>

In regard to adopting international standards, the telecommunication line between Zengin Centers and Zengin RCs is a logically independent IP-VPN (closed domain) that serves as the backbone network. Even if the backbone network is disconnected, the IP-VPN backup network can continue communications.

There are also several communications options, including the IP-VPN for the new file transfer facility and the IP-VPN or other options for the information servers.

<Information Server System>

The information servers form a separate system from the fund transfer system. This system is used by the Zengin Centers to transmit statistical information and other data to Participating Banks and by Participating Banks to send online requests and registration to a Zengin Center using the informant server system.

<ZEDI System>

The operating body of ZEDI is Zengin-Net.

By utilizing ZEDI, at the time of making a bulk transfer to a beneficiary company, the paying company can include financial EDI information (payment notification number, invoice number, etc.) in a transfer request. The beneficiary company can receive financial EDI information listed on a payment notification or deposit/withdrawal statement.

ZEDI converts a telegraphic transfer message in XML format sent by the paying company into a file in fixed-length format to send to the sender bank. When financial EDI information is attached to a telegraphic transfer message in XML format, financial EDI information is registered at ZEDI. The key information linked with the registered financial EDI information is included in a telegraphic transfer message sent to the sender bank.

A bulk transfer request to ZEDI, transfer request regarding a payment notification and deposit/withdrawal statement are usually made between 8:00 a.m. and 6:00 p.m. Participating Banks that have access to the system can change the time zone to accept requests for each task using settings.

As for system configuration, to ensure safety and reliability, the main equipment in the commercial environment is made duplicate through the use of multiple machines. In addition,

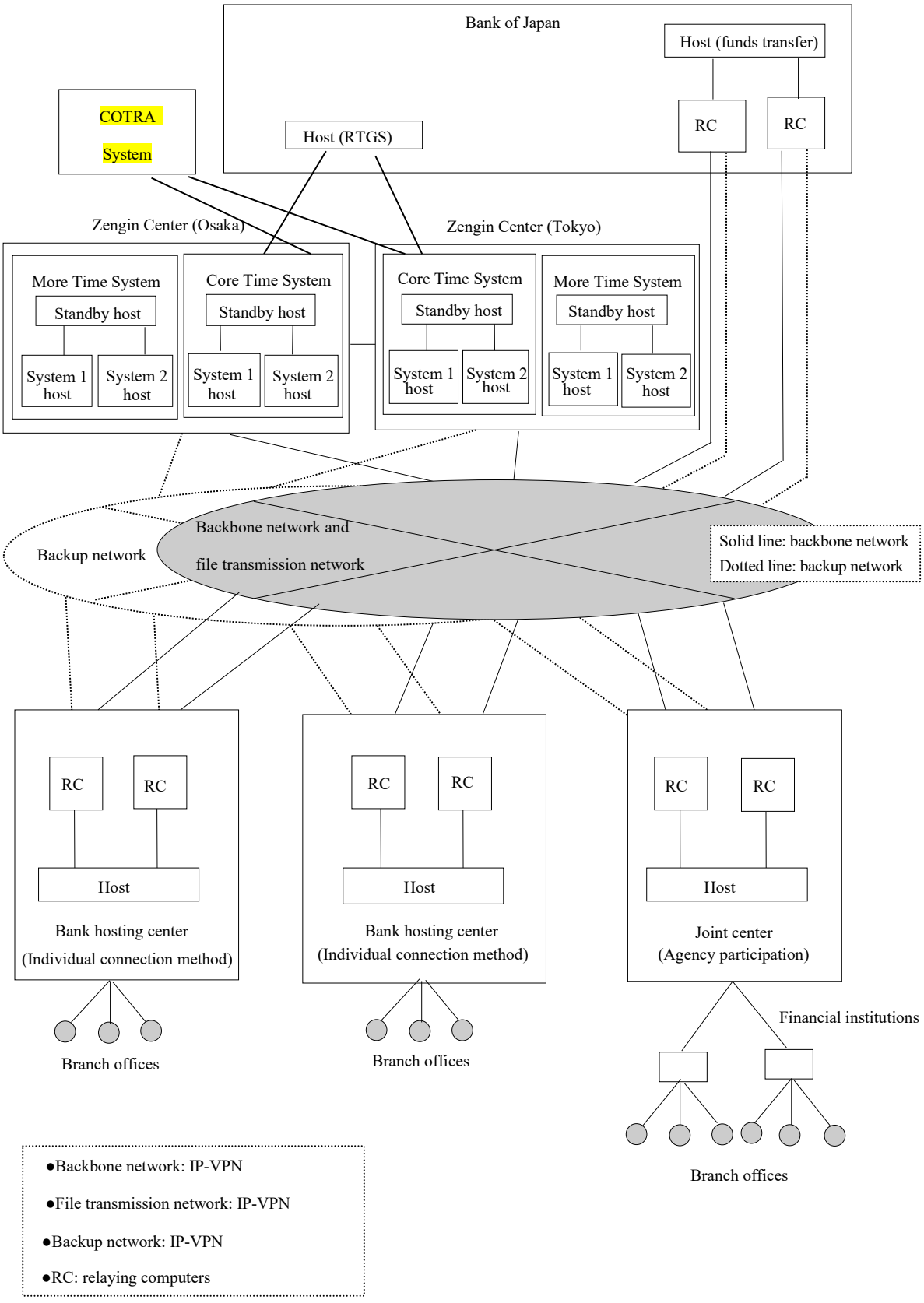
the Tokyo Center and Osaka Center are designated as the main and backup bases, respectively. Even if the main center goes down due to major disasters, etc., by switching the system to the Osaka Center, it is possible to recover operations swiftly.

<Linkage with the COTRA System>

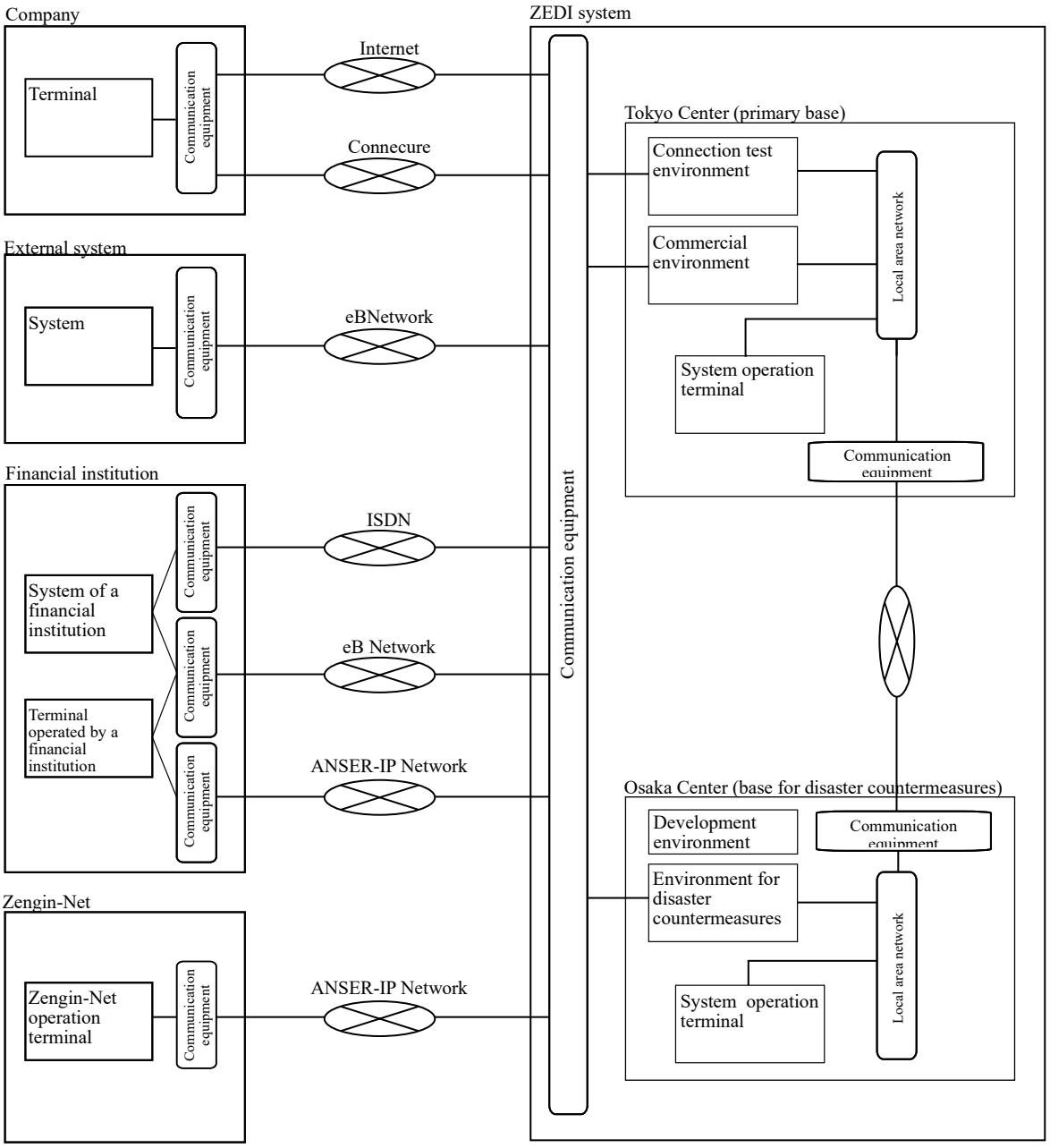
The Zengin System is linked with the COTRA System, operated by Cotra Ltd., which is a system to realize a peer to peer payments of 100,000 yen or less.

The COTRA System is a system that uses online real-time funds transfer to enable the sender to confirm the crediting of funds at the receiving account. Settlements of funds between institutions connected to the COTRA System are processed by the Zengin System twice in the daytime.

[Figure 4-1– Configuration of the Zengin System]



[Figure 4-2: Diagram of ZEDI]



IV. Principle-by-principle summary narrative disclosure

Within the Principles for Financial Market Infrastructures (PFMI), Zengin-Net corresponds to a payment and settlement system to which Principle 1, Principle 2, Principle 3, Principle 4, Principle 5, Principle 7, Principle 8, Principle 9, Principle 13, Principle 15, Principle 16, Principle 17, Principle 18, Principle 19, Principle 21, Principle 22 and Principle 23 apply.

However, since Zengin-Net is not a central counterparty (CCP) as defined by the PFMI, Principle 6 and Principle 14 do not apply, and since Zengin-Net is not a central securities depository (CSD), securities settlement system (SSS), or trade repository (TR), Principle 10, Principle 11, Principle 20 and Principle 24 do not apply as well.

Additionally, Zengin-Net is not an exchange-for-value settlement system, so Principle 12 does not apply.

Zengin-Net's disclosure of responses for each applicable principle is provided below.
Although ZEDI does not directly handle funds clearing, it is listed as a reference.

Principle-by-principle summary narrative disclosure	
Principle 1: Legal basis **An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.**	
Summary narrative	Zengin-Net engages in the funds clearing business only within Japan based on its license from the Prime Minister of Japan in accordance with the Payment Services Act. Zengin-Net has established Articles of Incorporation and a Statement of Operational Procedures as important rules governing specific material aspects of its activities. These rules have been verified by the legal opinion of an attorney as having a highly enforceable legal basis and consistency with laws and regulations. In addition, to obtain the aforementioned license, Zengin-Net submitted important rules to the regulatory authority that carried out a screening of these rules. Fundamental rules and procedures have been carried over from Zengin-Net's predecessor organization, the Organization for Management of Domestic Fund

Transfers (established in 1973), while transparency and clearness is ensured through the continual management of Zengin-Net using meeting bodies (committees) comprised of representatives from Participating Banks.

Zengin-Net's response to each individual key consideration is as follows.

<Key consideration 1: The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.>

The legal jurisdiction for Zengin-Net's activities is Japan (laws of Japan). Zengin-Net is a General Incorporated Association under the Act on General Incorporated Associations and General Incorporated Foundations and a Funds Clearing Agency as licensed by the Prime Minister of Japan under the Payment Services Act. Zengin-Net is supervised and audited by the Financial Services Agency (of Japan).

Zengin-Net has established Articles of Incorporation and Statement of Operational Procedures as important rules governing its activities. These rules and guidelines have been verified by the legal opinion of an attorney as having a highly enforceable legal basis.

<Key consideration 2: An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.>

Zengin-Net has published its Articles of Incorporation and Statement of Operational Procedures, and other important procedures and contracts are disclosed to financial institutions participating in Zengin-Net, while questions are accepted as necessary.

Additionally, Zengin-Net has obtained the legal opinion of an attorney with regard to important rules, procedures and contracts, which has confirmed that these are consistent with relevant laws and regulations of Japan.

Furthermore, Zengin-Net carries out funds clearing operations based on a license obtained under the Payment Services Act, which makes it subject to supervision and audits of the Financial Services Agency. Zengin-Net's Articles of Incorporation and Statement of Operational Procedures have been approved by

	the regulatory authority (Financial Services Agency) in advance. Article 85 of Zengin-Net's Statement of Operational Procedures requires that the Bank of Japan be contacted in advance in situations where necessary handling procedures are stipulated for the administration of the Statement of Operational Procedures or where revisions are made to these handling procedures. Article 86 requires consultation with the Bank of Japan for revisions made to material matters concerning the settlement of funds transfers. **<Key consideration 3: An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.>** The legal basis for Zengin-Net's activities is laid out in Article 51 of the Articles of Incorporation, while all matters not stipulated here in the Articles of Incorporation must be in compliance with the Act on General Incorporated Associations and General Incorporated Foundations and the Payment Services Act. The Articles of Incorporation are submitted to the Financial Services Agency when applying for licensing and whenever they are amended, and they are published on the Zengin-Net website and explicitly shared with Participating Banks and other stakeholders. **<Key consideration 4: An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed, or subject to stays.>** Zengin-Net, through its compliance with the Payment Services Act, has verified the high degree of legal certainty with regard to its Articles of Incorporation and Statement of Operational Procedures. Moreover, a legal opinion has been received from an attorney stating that Zengin Net's rules and procedures concerning material activities of its operations—its Articles of Incorporation and Statement of Operational Procedures—are legal because they are in full compliance with the Payment Services Act and there is no fact indicating that they are in violation of any other applicable laws. This verifies that within Japan, the only legal jurisdiction where Zengin-Net operates,

	Zengin-Net maintains a high degree of reliability with regard to enforceability. Additionally, a legal opinion has been obtained that interprets the rules and procedures concerning material activities of Zengin Net's operations to be legal. Accordingly, this verifies that a high degree of certainty is present, indicating actions taken under Zengin-Net's rules and procedures will not be voided, reversed, or subject to stays. **<Key consideration 5: An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.>** Zengin-Net operates only in Japan and since it does not carry out operations in multiple legal jurisdictions, Key Consideration 5 does not apply.

Principle 2: Governance

An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

Summary narrative	The purpose of Zengin-Net is "to implement smooth, safe and efficient fund settlements between financial institutions, which are a foundation of society, and business operations related thereto, and establish a reliable financial infrastructure to enhance user protection and convenience, and thereby contribute to raise the stability and standard of living of Japanese citizens" (Articles of Incorporation Article 3). To achieve this purpose, Zengin-Net has established a clear and transparent governance system. Specifically, the Articles of Incorporation, which are disclosed to the public, stipulate the composition of the board of directors and its authority, for which 11 directors are selected and two inspectors. Inspectors are responsible for auditing the performance of duties by directors in accordance with the Act on General Incorporated Associations and General Incorporated Foundations.

Directors that are appointed include individuals in responsible positions as representatives of the banking industry and board members of the Japanese Bankers Association, which includes the presidents of prominent Japanese banks. Inspectors that are appointed include an economic expert as well as the Full-time Auditor of the Japanese Bankers Association, who has a wealth of experience in examining banking system and operations and operating a General Incorporation Association. In each case, directors and inspectors maintain suitable skills, experience and knowledge concerning the operations of Zengin-Net.

Of the 11 directors, nine, which excludes the senior managing director and executive director, are independent directors and a legal opinion has been obtained from an attorney regarding the requirements of director's independence.

From the perspective of ensuring transparency, Zengin-Net reports on the result of its business and financial statements every fiscal year at the general meeting of members, and these documents are sent to Participating Banks after these meetings in order to make business conditions known to all stakeholders.

A report on the funds clearing business is also submitted every fiscal year to the Financial Services Agency, which is the regulatory authority, in order to report on business conditions.

Additionally, Zengin-Net submits regular reporting documents, including on the settlement of accounts, etc., along with its policy on risk management, to the Bank of Japan.

Zengin-Net considers public opinions and regularly solicits opinions when making important decisions, including those concerning system design, rules, and overall business strategy. This is achieved through reviews conducted by working groups and committees comprising representatives from Participating Banks. Zengin-Net organizes a meeting of experts in order to identify the needs of general consumers and corporations in terms of domestic funds transfer transactions and settlement systems, including bank remittances, and to utilize the results towards improving organizational management. This is done as part of its efforts for improving the convenience of the Domestic Funds Transfer System used by all domestic banks, the Zengin System, etc. These meetings are

held every fiscal year and involve experts with in-depth knowledge of the timely themes that are selected for review.

Moreover, in order to promote the advancement and efficiency of the payment system in Japan, Zengin-Net established the Task Force for the Next-Generation Payment Systems. It is composed of academics, payment-related organizations, and system vendors, in addition to banks and authorities. In FY2022, based on the previous discussions, Zengin-Net established the Working Group for the Next-Generation Payment Systems and the Working Group for Promoting Use of ZEDI, and conducted examinations on new connection systems assuming the API connection, the Basic Policy for the next-generation Zengin System, and utilization of the Zengin EDI System in anticipation of the enforcement of the invoice system among others.

Zengin-Net's response to each individual key consideration is as follows.

<Key consideration 1: An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations.>
The purpose of Zengin-Net is that which is stated in Article 3 of the Articles of Incorporation: "to implement smooth, safe and efficient fund settlements between financial institutions, which are a foundation of society, and business operations related thereto, and establish a reliable financial infrastructure to enhance user protection and convenience, and thereby contribute to raise the stability and standard of living of Japanese citizens."

As for safety and efficiency, Zengin-Net assigns priority rankings to objectives, which explicitly support the key consideration of financial stability and other relevant public interests, such as stability in the way of life of people living in Japan.

<Key consideration 2: An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.>
Zengin-Net stipulates the composition and authority of its board of directors, as well as the duties of the board of directors and executive director, which serve as

executive management, within its Articles of Incorporation, which also stipulate the senior managing director, chosen from directors, must execute his/her duties in compliance with laws and the provisions of the Articles of Incorporation.

The executive director is appointed based on a resolution of the board of directors and under the supervision of the senior managing director, assists the senior managing director and is assigned tasks for the operations of Zengin-Net. The executive director also carries out the duties of the senior managing director with regard to these business operations at times when the senior managing director cannot tend to his/her duties or is involved in an accident.

In accordance with Article 45 of the Articles of Incorporation, Zengin-Net has established a secretariat to carry out administrative work. The secretariat is managed by the senior managing director based on rules stipulated through resolutions passed by the board of directors.

The Articles of Incorporation are published on Zengin-Net's website and every year the business plan and income and expenditures budget are approved by the general meeting of members, comprising the members who are equivalent to owners.

<Key consideration 3: The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The board should review both its overall performance and the performance of its individual board members regularly.>

Zengin-Net, regarding the roles (authority) and responsibilities of its board of directors, which is equivalent to company's board of directors, explicitly states that the board of directors is to make decisions on the business execution of Zengin-Net and audit directors' duties in Article 30 of the Articles of Incorporation, and the board of directors is responsible for the performance of these duties.

Article 33 of the Articles of Incorporation stipulates the method of board of directors' resolutions. Resolutions require a majority of directors in attendance, excluding those directors with special interests, and must be approved by a

	majority of those in attendance. Furthermore, issues examined by the board of directors every fiscal year are organized and included in the business report, which is submitted to the general meeting of members. This process ensures verification from all members, such as that the function of the board of directors has been in line with the interest of Zengin-Net. The status concerning the performance of the senior managing director (representative director), who executes operations, and the executive director is reported to the board of directors once every three months pursuant to the Act on General Incorporated Associations and General Incorporated Foundations. **<Key consideration 4: The board should contain suitable members with the appropriate skills and incentives to fulfill its multiple roles. This typically requires the inclusion of non-executive board member(s).>** The board of directors, which is equivalent to a company's board of directors, comprises directors who are in responsible positions as representatives of the banking industry and board members of the Japanese Bankers Association, which includes the presidents of prominent Japanese banks. Inspectors include an economist as well as the Full-time Auditor of the Japanese Bankers Association, who has a wealth of experience in examining banking system operations and operating a General Incorporation Association. In each case, directors and inspectors maintain suitable skills, experience and knowledge concerning the operations of Zengin-Net. Of the 11 directors, nine, which excludes the senior managing director and executive director, are independent directors and a legal opinion has been obtained from an attorney regarding the requirements of director's independence. **<Key consideration 5: The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.>** The board of directors comprises directors who are in responsible positions as representatives of the banking industry and board members of the Japanese Bankers Association, which includes the presidents of prominent Japanese banks.

	Inspectors include an economist as well as the Full-time Auditor of the Japanese Bankers Association, who has a wealth of experience in examining banking system and operations and operating a General Incorporation Association. In each case, directors and inspectors maintain suitable skills, experience and knowledge concerning the operations of Zengin-Net. Additionally, the senior managing director prepares the business report and obtains the approval of the board of directors. The performance of their duties is also reported to the board of directors on a quarterly basis in accordance with Article 91 of the Act on General Incorporated Associations and General Incorporated Foundations. Other evaluations are performed by directors and inspectors, while audits are also carried out by the accounting auditor, to ensure the senior managing director is carrying out their work appropriately. **<Key consideration 6: The board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board.>** Zengin-Net has stipulated a management approach based on various definitions and classifications of risk stipulated in the risk management policy found in the Internal Control Basic Policy prepared by the Board of Directors. With regards to risk management, Zengin-Net has established a comprehensive risk management system that effectively controls various risks. Specifically, the Planning & Coordination Department, stipulated as the department in charge of overall risk management for Zengin-Net, carries out risk management. The board of directors maintains ultimate accountability with regard to risk management. In addition, the board of directors has established a Corporate Planning Committee in order to appropriately reflect the views of Participating Banks in operations. This committee is also in charge of risk management matters for Zengin-Net. Under this committee, Zengin-Net has established the Risk Management Working Group and the Cyber Security Working Group, which are

	charged with reviewing matters concerning risk management for Zengin-Net. Zengin-Net has established a Risk Management Council, comprising the full-time executive director, Director-General of the Secretariat, and the heads of each department, so that the senior managing director (representative director) can execute operations based on comprehensive recognition of Zengin-Net's risks. This council provides instructions for the execution of operations based on reports received from the departments it covers. In addition to this, audits are conducted by the Internal Audit Department and external professionals (accounting auditor) in the form of audits on the risk management system in order for the board of directors to maintain sufficient governance concerning the adoption and use of risk management models. The results of these audits are reported to the board of directors. Plans are then prepared for matters requiring improvement to ensure systemic improvement takes place. Through this internal audit function, the board of directors verifies the status of internal audits and reviews concerning the details of these internal audits are examined using outside experts. Inspectors also cover the status of internal audit activities within their inspector audits, with these models and methods examined. **<Key consideration 7: The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.>** Moreover, in order to promote the advancement and efficiency of the payment system in Japan,, Zengin-Net established the Task Force for the Next-Generation Payment Systems. It is composed of academics, payment-related organizations, and system vendors, in addition to banks and authorities. In FY2022, based on the previous discussions, Zengin-Net established the Working Group for the Next-Generation Payment Systems and the Working Group for Promoting Use of ZEDI, and conducted examinations on new connection systems assuming the API connection, the Basic Policy for the next-generation Zengin System, and utilization of the Zengin EDI System in anticipation of the enforcement of the invoice system among others.

Principle 3: Framework for the comprehensive management of risks

An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

Summary narrative	Zengin-Net manages risk, based on various risk scenarios, with the goal of minimizing these effects in order to carry out stable and continuous operations of the Zengin System, etc. with certainty in accordance with Zengin-Net's risk management policy. Zengin-Net is exposed to various risks, including credit risk and operational risk, among others. With regards to operational risk, Zengin-Net further categorizes this into the seven risks of administrative risk, system risk, information security risk, cyber security risk, legal risk, event risk, human resources risk, and reputational risk. Risk management is carried out based on the unique characteristics of these risks. Moreover, in addition to management of these risk areas, the Planning & Coordination Department, which serves as the department in charge of risk, examines and assesses the status of each risk and reports its findings to executive management, which ensures that comprehensive risk management is being carried out, including on other risks not categorized at the current moment in time. Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI should have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be subject to periodic review.>** Risks that arise or are borne by Zengin-Net are managed in accordance with Zengin-Net's risk management policy.

	With regards to risk management, Zengin-Net has established a comprehensive risk management system that effectively controls various risks. Specifically, the Planning & Coordination Department, stipulated as the department in charge of overall risk management for Zengin-Net, carries out risk management. Risk management is also carried out in consideration of the relationship between each type of risk, including interdependence. For example, Zengin-Net's credit risk and liquidity risk in either case are interdependent because credit risk arising from the settlement default of a Clearing Participant in turn will lead to liquidity risk caused by the failure to clear funds as a result. Based on this, pursuant to Article 52 of the Statement of Operational Procedures, Zengin-Net requires that Clearing Participants pledge collateral to cover the Sender Net Debit Cap applied for the Clearing Participant. This comprehensively mitigates impacts at the time both risks emerge. Additionally, Zengin-Net has prepared an emergency response manual, which contains necessary action to be taken in responding to the emergence of not only event risks, such as natural disasters, but also system risk, such as a major system failure, and information security risks, including information leakages. Furthermore, the validity of the risk management policy is examined by the board of directors at least once per year based on changes in external environment and changes made to the medium-term management plan. Changes are then made to the policy as necessary. This ensures regular consideration is given toward major changes in risk. **<Key consideration 2: An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.>** Zengin-Net's Internal Control Basic Policy enables it to carry out monitoring of Participating Banks, when necessary, in order to encourage Participating Banks to mitigate risks caused to Zengin-Net. Additionally, pursuant to Article 52 and 53 of the Statement of Operational

	Procedures, Zengin-Net requires Clearing Participants to pledge collateral in the amount of the Sender Net Debit Cap, which corresponds to the exposure of credit risk. In the case of default, this collateral can be disposed of. This serves as an incentive for Clearing Participants to manage and control risk in order to reduce their burden. **<Key consideration 3: An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks.>** Other entities with interdependencies include the Bank of Japan, Participating Banks, Liquidity Providing Banks, and system vendors. Material risks borne from these entities include credit risk, liquidity risk as well as system risk within operational risk. This risk is managed based on Zengin-Net's risk management policy. Credit risk and liquidity risk borne from Participating Banks and Liquidity Providing Banks is managed using the Sender Net Debit Cap Scheme, Collateral Management Scheme, and Liquidity Supply Scheme. System risk is managed and monitored by instructing system vendors to carry out inspections. Risks borne from the interruption of services provided by related external institutions or providers is evaluated and necessary additional measures, such as Business Continuity Plan (BCP), are examined. The methods used to manage these risks are reviewed regularly at least once per year and they will be reinforced as necessary in the future. **<Key consideration 4: An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning.>**

	Zengin-Net, even when it bears a large obligation from assuming a debit for a settlement transaction, has a system in place to ensure that its obligation does not exceed the underlying Sender Net Debit Cap amount pledged as collateral. This ensures settlement risk is managed appropriately. Even if losses occur despite this, Article 60 of the Statement of Operational Procedures and other regulations provide that Zengin-Net can collect funds equivalent to losses from all Clearing Participants using cost burden criteria, in principle. Ultimately, a framework is in place as something equivalent to a recovery plan that ensures funds necessary for repayment and losses can be collected from virtually all banks in Japan, including foreign banks operating in Japan.

Principle 4: Credit risk

An FMI should effectively measure, monitor, and manage its credit exposure to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two largest participants and their affiliates that would potentially cause the largest aggregate credit exposures to the CCP in extreme but plausible market conditions. All other CCPs should maintain, at a minimum, total financial resources sufficient to cover the default of the one participant and its affiliates that would potentially cause the largest aggregate credit exposures to the CCP in extreme but plausible market conditions.

Summary narrative	Zengin-Net has a credit risk management policy in place and, pursuant to Article 49 of the Statement of Operational Procedures, defines credit risk as the risk that Zengin-Net will incur losses from the failure of a Clearing Participant to fulfill their payment obligation during the funds clearing process. To manage credit risk, Zengin-Net has established the Collateral Management Scheme and the Sender Net Debit Cap Scheme. Under these schemes, Clearing Participants are required to provide collateral appraised at an amount that exceeds the Sender Net Debit Cap. The sender net debit amount is managed to ensure that it does not exceed

	the appraised amount of the collateral. Thus, current exposure is covered in the appraisal, management, mitigation, and monitoring of credit risk. The 6th Generation Zengin System launched in November 2011 processes all credit transfers of 100 million yen and above, excluding payroll credit transfers, using real time gross settlement (RTGS) through current accounts held at the Bank of Japan, rather than subjecting them to funds clearing, in order to reduce risk. Transfer requests processed using RTGS average about 10,000 transactions every business day and are valued at around 10 trillion yen. The Zengin System's average transaction volume per business day is approximately 7.2 million transactions valued at around 14 trillion yen. Comparing the two, the ratio of RTGS transaction is smaller, but the ratio of value is roughly 70%. This indicates that credit risk has been reduced significantly. Assets with little liquidity or assets considered to be subject to large price fluctuations are excluded from eligible collateral in order to minimize losses borne from settlement defaults and fluctuations in collateral price, while revaluation is carried out for collateral every business day based on market prices. This covers potential future exposure. In the event that credit risk does emerge, Zengin-Net will dispose of collateral or recover fund from the settlement default bank, but in cases where credit obligations cannot be fully recovered, ultimately at the approval of the board of directors, all Clearing Participants will be required to provide the funds following cost burden criteria, in principle. Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its payment, clearing, and settlement processes. Credit exposure may arise from current exposures, potential future exposures, or both.>** Zengin-Net, pursuant to Article 49 of the Statement of Operational

	Procedures, defines credit risk as the risk that Zengin-Net will incur losses from the failure of a Clearing Participant to fulfill their payment obligation when Zengin-Net assumes the liability and obligation borne by the Clearing Participant from their counterparty Clearing Participant during the process of funds clearing. In addition, Zengin-Net has established the collateral management scheme under which each Clearing Participant provides collateral with an appraisal amount that exceeds the Sender Net Debit Cap. Under this scheme, credit risk is evaluated, managed, mitigated and monitored. Zengin-Net examines the validity of this risk management policy at least once per year based on changes in external environment and changes made to the medium-term management plan, and makes changes when necessary. **<Key consideration 2: An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.>** The source of credit risk for Zengin-Net is, pursuant to Article 49 of the Statement of Operational Procedures, the failure of a Clearing Participant to fulfill their payment obligation when Zengin-Net assumes the liability and obligation borne by said Clearing Participant from their counterparty Clearing Participant during the process of funds clearing. Zengin-Net has introduced the Sender Net Debit Cap Scheme to ensure that the ender amount never exceeds the appraised value of the pledged collateral. Specifically, the net debit amount of each Clearing Participant is calculated as needed using the system and whenever the net debit amount breaches 70%, 80%, 90% and 100% of the Sender Net Debit Cap, the Clearing Participant is notified and they are prompted to stop the transmission of the transfer message (the net debit amount is the gross payment minus the gross receipt of each Clearing Participant, and this amount will decrease if a Clearing Participant receives a transfer message for an amount larger than the one it sent out) or temporarily increase the

	net debit cap. When a transfer message is sent in which the net debit amount exceeds the Sender Net Debit Cap, despite the above notification, the transfer message is treated as an error by the system and returned to the bank. Moreover, for the Sender Net Debit Cap of More Time, a framework has been established to monitor the ratio of total debit only in More Time transactions to the net debit cap, and to request banks whose ratio is likely to reach 100% to increase the net debit cap (collateral pledged) in advance. To ensure that the Sender Net Debit Cap Scheme maintains its effectiveness, the market value of the actual collateral must not fall below the appraised value of the collateral. Every business day, revaluation is carried out for collateral based on market prices to reduce the risk of variance between the market price of collateral and its appraised value. **<Key consideration 3: A payment system or SSS should cover its current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources (see Principle 5 on collateral). In the case of a DNS payment system or DNS SSS in which there is no settlement guarantee but where its participants face credit exposures arising from its payment, clearing, and settlement processes, such an FMI should maintain, at a minimum, sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest aggregate credit exposure in the system.>** Zengin-Net, pursuant to Article 52 of the Statement of Operational Procedures, requires that Clearing Participants apply for the Sender Net Debit Cap Scheme and simultaneously pledge collateral to cover the net debit amount. This covers current exposure. Losses incurred from non-payment and fluctuations in collateral price are considered potential future exposure. To minimize price fluctuation risk, bonds with low liquidity are excluded from eligible collateral and bonds

	considered to have large price fluctuations are also omitted. Specifically, straight bonds must fulfill a certain rating to be considered eligible and a limit on pledged collateral has been set for individual issuers. Also, a proportional limit has been set for stocks to ensure that stocks do not account for an excessive ratio of pledged collateral. The scope of this eligible collateral is reviewed regularly at least once every year. In addition, Zengin-Net has established a collateral weight for each collateral type per Principle 5. Every business day, a revaluation of collateral is carried out based on the market price and haircut in order to reduce the impact from fluctuations in collateral price. The liquidity supply system is used by Zengin-Net to guarantee settlement obligations are carried out. **<Key consideration 4: A CCP should cover its current and potential future exposures to each participant fully with a high degree of confidence using margin and other prefunded financial resources (see Principle 5 on collateral and Principle 6 on margin). In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. In all cases, a CCP should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount of total financial resources it maintains.>**

	Zengin-Net is a payment and settlement system. Therefore, this key consideration does not apply. **<Key consideration 5: A CCP should determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions through rigorous stress testing. A CCP should have clear procedures to report the results of its stress tests to appropriate decision makers at the CCP and to use these results to evaluate the adequacy of and adjust its total financial resources. Stress tests should be performed daily using standard and predetermined parameters and assumptions. On at least a monthly basis, a CCP should perform a comprehensive and thorough analysis of stress testing scenarios, models, and underlying parameters and assumptions used to ensure they are appropriate for determining the CCP's required level of default protection in light of current and evolving market conditions. A CCP should perform this analysis of stress testing more frequently when the products cleared or markets served display high volatility, become less liquid, or when the size or concentration of positions held by a CCP's participants increases significantly. A full validation of a CCP's risk-management model should be performed at least annually.>** Zengin-Net is a payment and settlement system. Therefore, this key consideration does not apply. **<Key consideration 6: In conducting stress testing, a CCP should consider the effect of a wide range of relevant stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions.>** Zengin-Net is a payment and settlement system. Therefore, this key consideration does not apply.

	<Key consideration 7: An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner.> Zengin-Net, pursuant to Article 52 of the Statement of Operational Procedures, requires that Clearing Participants pledged collateral that exceeds their self-declared Sender Net Debit Cap. If a latent credit risk event occurs, such as a settlement default, Zengin-Net either disposes of the collateral or collects funds from the settlement default bank. In cases where sufficient obligations cannot be collected, despite this, Zengin-Net can ultimately collect funds, following cost burden criteria, in principle, from all participants after obtaining approval of the board of directors pursuant to Article 60 of the Statement of Operational Procedures. If Zengin-Net determines that it cannot complete repayment of funds received from a Liquidity Providing Bank by the deadline due to a shortage of funds based on the disposal value of the collateral or other reasons, Zengin-Net can collect funds required to make the repayment from all participants pursuant to Article 61 of the Statement of Operational Procedures.

Principle 5: Collateral

An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.

Summary	Zengin-Net, pursuant to Article 52 of the Statement of Operational

narrative	Procedures, requires Clearing Participants to pledge collateral it deems eligible. In consideration of price fluctuations and safety, Zengin-Net has established restrictions on the percentage of straight bonds and stock provided as pledged collateral, while it requires that the percentage of government bonds, government-guaranteed bonds and cash exceed a certain level, which reduces risk. Even after collateral is pledged, Zengin-Net, at the time of marking to market every business day, checks for compliance with the restriction on percentages of individual stock, restriction on the value of individual stock, restriction on value of all stock, and restriction on the value of bank bonds, straight bonds and local government bonds, and adjusts the appraisal amount to ensure that collateral is not over weighted toward collateral with high price fluctuation risk. Additionally, Zengin-Net excludes bonds issued by Clearing Participants and bonds and stocks issued by specified affiliates from eligible collateral to reduce risk in a similar manner. Zengin-Net carries out a stress test once every year and makes sure that the rate of decline of collateral price does not exceed the haircut in stressed market environments. This ensures that the sufficiency of weightings is continually examined. In addition, for some collateral, Zengin-Net has verified that even if the rate of decline exceeds the haircut, its impact will remain limited when the risk becomes apparent. Zengin-Net's collateral management system enables weightings to be changed as needed, and changes to the tolerable ratio of each collateral type, too, can be implemented by making a request to the system vendor. Rules stipulate that security interest be assigned to Zengin-Net for government bonds and cash when they are transferred to Zengin-Net's Bank of Japan account and for ordinary bonds and stocks when they are transferred to Zengin-Net's account with the Japan Securities Depository Center. The transfer status for Zengin-Net's accounts can be checked instantaneously.

	Zengin-Net maintains a processing capacity to handle around double the past peak administrative volume of collateral cases in terms of collateral pledges and returns. Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.>** Zengin-Net determines the type of collateral that can be pledged from Clearing Participants to Zengin-Net by majority approval of the board of directors and rules are in place with regard to eligible collateral. Zengin-Net reduces risk by not allowing the pledge, as collateral, of bank bonds and corporate bonds issued by Clearing Participants and bank bonds and corporate bonds issued by specified affiliates (specified affiliates stipulated in Article 4-2-1 of the Banking Act Enforcement Ordinance) as well as the stock of specified affiliates. In addition to this, Zengin-net reduces risk by allowing bank bonds, bank issued corporate bonds, straight bonds and stocks as eligible collateral only when issued by an issuer deemed to be eligible based on a credit review and other measures. **<Key consideration 2: An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.>** Zengin-Net has established a collateral weight for each collateral type and carries out the revaluation of collateral every business day based on the market price and the collateral weight. In addition, Zengin-Net carries out a stress test once every year and make sure that the rate of decline of the collateral price does not exceed the haircut in stressed market environments. This ensures that the sufficiency of weightings is continually examined. In addition, for some collateral, Zengin-Net has confirmed that if the rate of decline exceeds the haircut, its impact will be limited when the risk materializes.

<Key consideration 3: In order to reduce the need for procyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.>

Zengin-Net carries out a stress test once every year. Pursuant to an extreme but realistic stress scenario, checks are carried out on the rate of decline of the collateral price does not exceeds the haircut in stressed market environments. This ensures that the validity of weightings is continually examined.

As for the method, Zengin-Net adopts the method employed for the stress test conducted with an outside expert hired by Zengin-Net in fiscal 2015 in order to identify and evaluate the inherent procyclicality of weighting calculations.

<Key consideration 4: An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.>

Zengin-Net has established a certain percentage of the collateral that the total appraised value of government bonds, government-guaranteed bonds and cash must exceed to ensure pledged collateral is not overweight in terms of local government bonds or other bonds.

As for straight bonds and stock, a limit on pledged collateral has been set for individual issuers, which prevents overconcentration of collateral on specified assets. As for stock, Zengin-Net has established a measure to reduce the appraised value to avoid overconcentration in specified stocks by requiring the pledging of bonds above a certain level of the total appraised value of collateral excluding stock.

On top of this, Zengin-Net monitors pledged collateral every month by type and by remaining maturity. Especially, Zengin-Net monitors the proportion of assets with relatively higher risk of price fluctuation, which it classified as necessary to pay close attention. Those assets are reviewed once every year, taken into account the rate of decline of collateral prices

	calculated in the stress test. **<Key consideration 5: An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner.>** Zengin-Net does not accept cross-border collateral. **<Key consideration 6: An FMI should use a collateral management system that is well-designed and operationally flexible.>** Zengin-Net's collateral management system allows for changes in the Sender Net Debit Cap, marks to market collateral, and allows for the pledging/return of collateral, while changes in haircuts can be made as needed. The system can also be modified to change the tolerance ratio for each type of collateral (e.g., the total appraised value of government bonds, government-guaranteed bonds, and cash must exceed 30% of the collateral, etc.) and to add types of collateral.

Principle 7: Liquidity risk

An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.

Summary narrative	Zengin-Net defines liquidity risk and carries out risk evaluations, management, reduction, and monitoring in accordance with its liquidity risk management policy defined in its Internal Control Basic Policy. Zengin-Net defines liquidity risk as the risk that Zengin-Net will incur losses because the funds clearing counterparty cannot complete the payment obligation as per the limited time available (funds are cleared normally by 4:15pm), even in cases where the said funds clearing counterparty will be able to fulfill its obligation at any point in the future,

	within its current account held at the Bank of Japan due to the failure of the other Clearing Participant to carry out the funds settlement. Zengin-Net carries out liquidity risk evaluations, management, mitigation, and monitoring along with credit risk. With regards to monitoring, Zengin-Net, pursuant to Article 51 of its Statement of Operational Procedures, always calculates the net debit amount of Clearing Participants in the system for each funds transfer transaction, which enables the monitoring of liquidity risk and ensures that the net debit amount of each Clearing Participant does not exceed the Sender Net Debit Cap. As for reducing risk, Zengin-Net sets forth procedures to respond to a settlement default, assuming the scenario of a bankruptcy involving a Clearing Participant and its affiliates, in Article 58 of its Statement of Operational Procedures, which also establishes the Liquidity Supply Scheme to secure a source of liquidity for the settlement of funds transfers. Specifically, Zengin-Net selects Liquidity Providing Banks from Clearing Participants, and in case there is nonpayment of funds by a Clearing Participant, Zengin-Net receives a supply of funds from the pre-determined Liquidity Providing Bank, which makes it possible to clear the funds transfer settlement. Additionally, even if there is a settlement default by the top two Liquidity Providing Banks, a liquidity supply cap has been determined for each bank to ensure that the shortfall in liquidity from these two banks can be received from other Liquidity Providing Banks. This arrangement has been confirmed as providing access to sufficient liquidity even if there is a settlement default by the largest Liquidity Providing Bank and its affiliates once every three months. Furthermore, pursuant to Article 57 of the Statement of Operational Procedures, the top 25 Clearing Participants in terms of domestic funds transfer transaction volume from the previous year are selected as

	Liquidity Providing Banks. The liquidity supply cap for each of these banks is explicitly stated in the liquidity supply agreement concluded with each bank. Moreover, the feasibility of the Liquidity Supply Scheme is verified once every three months during which time the ability of Liquidity Providing Banks to supply funds is assessed. Stress tests are carried out on potential stress scenarios once every year. These tests verify the sufficiency of liquidity and the effectiveness of current risk management methods with regard to liquidity risk, based on scenarios involving the most stressful environment at least in the past ten years. In the event that the amount of funds provided by the Liquidity Providing Bank is not enough for the required funds to complete the day's settlements, pursuant to Article 58 of the Statement of Operational Procedures, Zengin-Net can request all Clearing Participants to supply the shortfall of funds. Additionally, at least once every year Zengin-Net holds a training exercise for a settlement default with Liquidity Providing Banks participating. This has confirmed that the procedures of the Liquidity Supply Scheme can be carried out quickly and with certainty. Even if there is a settlement default bank, as demonstrated above, a system is in place to complete the day's settlements, albeit with a slight delay from the initially scheduled time. Zengin-Net only handles Japanese yen and it is able to conduct settlements within its current account held at the Bank of Japan. Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks, nostro agents, custodian banks, liquidity providers, and other**

	entities.> Zengin-Net has defined liquidity risk and carries out liquidity risk assessments, management, mitigation, and monitoring. Article 57 of the Statement of Operational Procedures sets forth Liquidity Providing Banks and Article 58 stipulates the processing of settlements during the occurrence of a settlement default. Based on these provisions, Zengin-Net has established Handling Guidelines for Procedures when a Settlement Default Occurs, which sets forth the procedures to follow in the event of nonpayment. Zengin-Net selects Liquidity Providing Banks from Clearing Participants and even if there is a settlement default by the top two Liquidity Providing Banks resulting in a liquidity shortfall, a liquidity supply cap has been determined for each bank to ensure that the shortfall in liquidity from these two banks can be received from other Liquidity Providing Banks (confirmation is made once every three months that this amount is larger than if there was a nonpayment by the largest Liquidity Providing Bank and its affiliates). **<Key consideration 2: An FMI should have effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.>** With regards to liquidity risk, Zengin-Net, pursuant to Article 51 of its Statement of Operational Procedures, always calculates the net debit amount of Clearing Participants in the system for each funds transfer transaction, which enables the monitoring of liquidity risk and ensures that the net debit amount of each Clearing Participant does not exceed the Sender Net Debit Cap. Moreover, in order to verify the feasibility of the Liquidity Supply Scheme, the ability of Liquidity Providing Banks to supply funds is assessed once every three months. **<Key consideration 3: A payment system or SSS, including one employing a DNS mechanism, should maintain sufficient liquid**

	resources in all relevant currencies to effect same-day settlement, and where appropriate intraday or multiday settlement, of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions.> Zengin-Net, under its defined Liquidity Supply Scheme, establishes the ceiling of the Sender Net Debit Cap every fiscal year at its board of directors meeting based on the status of net debit amounts of Clearing Participants. Based on this, the total liquidity supply cap of Liquidity Providing Banks is calculated. Specifically, the total liquidity supply cap is set to cover any failure by the top two banks in terms of Sender Net Debit Cap to fulfill an obligation (confirmation is made once every three months that this amount is larger than if there was a settlement default by the largest Liquidity Providing Bank and its affiliates). Moreover, the feasibility of the Liquidity Supply Scheme is verified once every three months during which time the ability of Liquidity Providing Banks to supply funds is assessed. Stress tests are carried out once every year. These tests verify the sufficiency of liquidity and the effectiveness of current risk management methods with regard to liquidity risk, based on scenarios involving the most stressful environment at least in the past ten years. **<Key consideration 4: A CCP should maintain sufficient liquid resources in all relevant currencies to settle securities-related payments, make required variation margin payments, and meet other payment obligations on time with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions. In addition, a CCP that is involved in activities with a more-complex risk profile or that**

	is systemically important in multiple jurisdictions should consider maintaining additional liquidity resources sufficient to cover a wider range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions.> Zengin-Net is a payment and settlement system. Therefore, this key consideration does not apply. **<Key consideration 5: For the purpose of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps, and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transactions with) the relevant central bank. All such resources should be available when needed.>** Zengin-Net, pursuant to Article 57 of the Statement of Operational Procedures, selects Liquidity Providing Banks in advance and has secured sources of liquidity so that the day's settlements can be completed, even if the top two banks in terms of Sender Net Debit Cap go bankrupt. Additionally, Zengin-Net, under Article 53 of the Statement of Operational Procedures, is able to dispose of collateral pledged by a Clearing Participant according to a method, timing and price generally deemed acceptable without advanced notification or reminding of the Clearing Participant in cases where the Clearing Participant fails to fulfill an obligation to Zengin-Net. As a result, there is no particular barrier present to converting collateral to cash.

	Depending on the market environment, it may take time to sell collateral, but Zengin-Net will receive funds from Liquidity Providing Banks on the same day as the settlement, making it possible to complete the settlement, posing no problem in terms of funds clearing. Additionally, Zengin-Net has a system in place where it can execute sell procedures through multiple securities companies selected in advance for the disposal of pledged collateral. Zengin-Net can also request liquidity providing banks to purchase such collateral. **<Key consideration 6: An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as a part of its liquidity plan.>** Zengin-Net, in case of settlement default by a bank, will receive funds from predetermined Liquidity Providing Banks based on Article 57 of the Statement of Operational Procedures. Moreover, in the event that the amount of funds provided by the Liquidity Providing Bank is not enough for the required funds to complete the day's settlements, Zengin-Net can request all Clearing Participants to supply the shortfall of funds. Stress tests are carried out once every year. These tests have verified the sufficiency of liquidity and the effectiveness of current risk management methods with regard to liquidity risk, based on scenarios involving the most stressful environment at least in the past ten years **<Key consideration 7: An FMI should obtain a high degree of**

	confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.> Zengin-Net, once every three months, requests each Liquidity Providing Bank to provide information on the balance of its current account with the Bank of Japan and conducts a feasibility analysis, which has confirmed that each Liquidity Providing Bank maintains the liquidity capacity to continually provide more funds than the liquidity supply cap. During this time, Zengin-Net also requests each Liquidity Providing Bank to provide information on the balance of its shared collateral pledged to the Bank of Japan and takes into account Liquidity Providing Banks' potential access to credit from the Bank of Japan supported by this balance. Additionally, at least once every year Zengin-Net holds a training exercise for settlement default with Liquidity Providing Banks participating. This has confirmed that the procedures of the Liquidity Supply Scheme can be carried out quickly and with certainty. **<Key consideration 8: An FMI with access to central bank accounts, payment services, or securities services should use these services, where practical, to enhance its management of liquidity risk.>** Zengin-Net has been selected by the Bank of Japan, Japan's central bank, as a counterparty of current deposit transactions within the Bank of Japan, making it possible for Zengin-Net to settle transactions in its Bank of Japan current account. **<Key consideration 9: An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous**

	stress testing. An FMI should have clear procedures to report the results of its stress tests to appropriate decision makers at the FMI and to use these results to evaluate the adequacy of and adjust its liquidity risk-management framework. In conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers, and linked FMIs), and where appropriate, cover a multiday period. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.> Stress tests are carried out once every year. These tests verify the sufficiency of liquidity and the effectiveness of current risk management methods with regard to liquidity risk, based on scenarios involving the most stressful environment at least in the past ten years The results are reported to the board of directors. As for the method, Zengin-Net adopts the method employed for the stress test conducted with an outside expert hired by Zengin-Net in fiscal 2015. **<Key consideration 10: An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking, or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity**

	resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner.> Zengin-Net, pursuant to Article 58 of the Statement of Operational Procedures, settlement rules have been established for the handling of a settlement default bank, and a system is in place to ensure that settlements are completed on the same day, even when there is a settlement default bank. In the case of a settlement default bank, Article 57 of the Statement of Operational Procedures stipulates that funds are to be supplied by Liquidity Providing Banks, and in the event that the amount of funds provided by the Liquidity Providing Bank is not enough for the required funds to complete the day's settlements, Zengin-Net can request all Clearing Participants to supply the shortfall of funds. These procedures are defined in Zengin-Net's Handling Guidelines for Procedures when a Settlement Default Occurs and Handling Guidelines for Collection and Recovery of Obligation from Settlement Default Banks. These guidelines are disclosed to Participating Banks.

Principle 8: Settlement finality

An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.

Summary narrative	The Core Time System for domestic funds transfer transactions normally starts at 8:30 a.m. on the day, and finishes at 3:30 p.m. The More Time System starts at 3:20 p.m. on the same day and finishes at 8:40 a.m. on the following business day. The settlement of transactions by Core Time System among Clearing Participants takes place at the Bank of Japan at 4:15 p.m. after adding the funds transfer transactions made during the More Time System of the previous business day. This is the final settlement for domestic funds transfer transactions. This information is clearly stipulated in Article 48 of the Statement of Operational Procedures, which is published on the Zengin-Net website.

	Irrespective of the above, credit transfers of 100 million yen and above, excluding payroll and bonus payments, are settled at the Bank of Japan using real time gross settlement (RTGS), with final settlement being immediate. This information is published on Zengin-Net's website and details are explicitly stipulated in the Domestic Funds Transfer Handling Regulations which is disclosed to Participating Banks. For clearing transactions, Zengin-Net, pursuant to Articles 49 and 50 of the Statement of Operational Procedures, shall assume the debits that a Clearing Participant owes to another Clearing Participant whereby the Clearing Participant is discharged from such debits and simultaneously acquire the credits corresponding to such debits from the Clearing Participant that is discharged from such debits. Additionally, all of the credits Zengin-Net has acquired from a Clearing Participant and all the debits Zengin-Net assumes from the Clearing Participant are offset by the opposing amount at the time settlements begin. Zengin-Net's relevant legal jurisdiction for the settlements of domestic funds transfer transactions is only Japan, and Clearing Participants, who are the counterparty in settlements of domestic funds transfer transactions, submit a written pledge that they will comply with the Statement of Operational Procedures, Domestic Funds Transfer Handling Regulations, and the Zengin System Rules. Following these rules and regulations, the Bank of Japan, which is the central bank that received the transfer request for settlement amount of funds transfer transaction calculated by Zengin-Net, carries out the final settlement by transfer between current accounts at the Bank of Japan. Additionally, a legal opinion has been obtained that the Articles of Incorporation and Statement of Operational Procedures, which regulate the clearing of funds, are not in violation of the Payment Services Act or

	other applicable laws. Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI's rules and procedures should clearly define the point at which settlement is final.>** The Core Time System for domestic funds transfer transactions normally starts at 8:30 a.m. on the day, and finishes at 3:30 p.m. The More Time System starts at 3:20 p.m. on the same day and finishes at 8:40 a.m. on the following business day. The settlement of transactions by Core Time System among Clearing Participants takes place at the Bank of Japan at 4:15 p.m. after adding the funds transfer transactions made during the More Time System of the previous business day. This is the final settlement for domestic funds transfer transactions. This information is stipulated in the "Operation Procedures," Article 48, and publicized on the website. Irrespective of the above, credit transfers of 100 million yen and above, excluding payroll and bonus payments, are settled at the Bank of Japan using real time gross settlement (RTGS), with final settlement being immediate. This information is published on the Zengin-Net website and details are explicitly stated in the Domestic Funds Transfer Handling Regulations, which is disclosed to Participating Banks, as "The credit and debit of large-value domestic funds transfer transactions are settled within settlement accounts at the Bank of Japan (simultaneous settlement account) for each individual large-value domestic funds transfer transaction." **<Key consideration 2: An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or multiple-batch processing during the settlement day.>** For the Core Time System, the settlement date is stipulated for every credit transfer request. Funds are transferred between current accounts at the Bank of Japan and fund movement takes place, with the final settlement taking place on the same day for same-day settlements or the

	designated date for forward dated settlements. For credit transfers of 100 million yen and above, excluding payroll and bonus payments, the real time gross settlement is carried out at the Bank of Japan, with the final settlement immediate, in the case of same day settlements immediately and in the case of forward dated settlements at the start of operations on the designated date. For the More Time System, the settlement date of a transfer request is limited to the following business day. Funds are transferred between current accounts at the Bank of Japan, with the final settlement taking place by adding the requests to those of the Core Time System on the same day. **<Key consideration 3: An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.>** Zengin-Net completes calculating the funds transfer amounts for the day including those generated with the More Time System of the previous business day immediately after the communication time for the Core Time System, which normally finishes at 3:30 p.m. on the same day. After this, it is impossible to send a cancellation request for a telegraphic message which will be settled on the same day and a cancellation acceptance and funds return telegraphic message based on this request. The cancellation of funds transfer transactions via the More Time System of the previous business day may be processed from the start of the Core Time System communication time, which is 8:30 a.m. on the same day. This cancellation request is not finalized simply by the Zengin System sending the telegraphic message to the sender bank, as the sender bank has to notify the receiver bank of the telegraphic message. If this notification does not take place the funds transfer settlement amount will not be revised. Details regarding this handling are found in the Domestic Funds Transfer Handling Procedures and Zengin System Rules, which are disclosed to

	Participating Banks and the Bank of Japan.

Principle 9: Money settlements

An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.

Summary narrative	All funds transfer settlements are conducted with central bank money. Credit transfers of 100 million yen and above, excluding payroll and bonus payments, are not subject to funds clearing, but these, too, undergo real time gross settlement at the Bank of Japan and are settled in Japanese yen. Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.>** Zengin-Net calculates the funds transfer amounts for each Clearing Participant for the day, notifies the Clearing Participant and Bank of Japan, and the settlement is then carried out by the Bank of Japan. Credit transfers of 100 million yen and above, excluding payroll and bonus payments, are not subject to funds clearing, but these, too, undergo real time gross settlement at the Bank of Japan and are settled in Japanese yen. **<Key consideration 2: If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk.>** Zengin-Net uses central bank money for all settlements (settlements within current accounts at the Bank of Japan). **<Key consideration 3: If an FMI settles in commercial bank money,**

	it should monitor, manage, and limit its credit and liquidity risks arising from the commercial settlement banks. In particular, an FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation and supervision, creditworthiness, capitalisation, access to liquidity, and operational reliability. An FMI should also monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks.> Zengin-Net does not use commercial bank money. It uses central bank money for all settlements (settlements within current accounts at the Bank of Japan). **<Key consideration 4: If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.>** Zengin-Net does not conduct money settlements on its own books but uses central bank money for all settlements (settlements within current accounts at the Bank of Japan) **<Key consideration 5: An FMI's legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks.>** Article 48 of the Statement of Operational Procedures explicitly states that the settlement of funds transfers is to be conducted at 4:15pm through current accounts at the Bank of Japan, and the final settlement is to be at this time.

Principle 13: Participant-default rules and procedures

An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

Summary narrative	Zengin-Net has established a system to address settlement defaults that may occur from bankruptcy and the handling of a bankruptcy as procedures to manage a participant default. The handling at the time of a participant default including procedures for the handling situations where a settlement default bank that begins proceedings for civil rehabilitation continues to participate in domestic funds transfer transactions, the handling of the transfer of operations stipulated in the Deposit Insurance Act for defaulted banks, the handling of temporary stoppages of use of the Domestic Funds Transfer System by defaulted banks, and the handling of the beginning of bankruptcy proceeds by a defaulted bank and its loss of participant qualifications due to dissolution. Zengin-Net, if it receives notice from the Bank of Japan that at the time of settlement that there is a Clearing Participant for which the funds transfer settlement amount cannot be debited, can treat the Clearing Participant as settlement default bank regardless of the reason. Additionally, Zengin-Net, if a settlement default occurs at the time of Participating Bank bankruptcy or before or after this, has a system in place to receive funds immediately from a Liquidity Providing Bank to complete the day's settlements. In particular, with regard to the system to address settlement default, Zengin-Net's contract with Liquidity Providing Banks states that they must supply liquidity by a predetermined time, which makes it possible to use a liquidity facility immediately. With regards to the failure of a settlement default bank to fulfill its payment obligation for the funds transfer settlement, Zengin-Net can carry out necessary procedures for collateral to be disposed of and other credits collected, and with the approval of the board of directors, Zengin-Net can also collect the amount of the losses in funds from all Clearing Participants without collecting the credit. Important matters regarding this are stipulated in Articles 55, 57, 58 and

	60 of the Statement of Operational Procedures, which is published on Zengin-Net's website. Zengin-Net has prepared a manual on the handling of settlement defaults within the Domestic Funds Transfer System, as equivalent to an in-house plan that indicates the role and obligations at the time of a settlement default. This manual also covers documents to be prepared, information to be collected, and communication/adjustments to be made with the Financial Services Agency and Bank of Japan at the time of a settlement default. Additionally, at least once every year Zengin-Net holds a training exercise for a settlement default with Liquidity Providing Banks participating, in order to foster greater operational experience, and procedures are reviewed based on the results of the training. Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default.>** Article 16 of the Statement of Operational Procedures sets forth the loss of participant qualifications, Article 21 the temporary stoppage of use of the Domestic Funds Transfer System, and Article 33 the continued participation in domestic funds transfer transactions after filing to begin civil rehabilitation proceedings and settlement default. Additionally, Article 57 of the Statement of Operational Procedures contains provisions on the Liquidity Supply Scheme. Zengin-Net, if nonpayment occurs at the time of Participating Bank bankruptcy or before or after this, has a system in place to receive funds immediately from a Liquidity Providing Bank to complete the day's settlements. Article 58-2 of the Statement of Operational Procedures requires that Liquidity Providing Banks receiving a request to pay the requested amount from Zengin-Net into Zengin-Net's Bank of Japan current

	account by the stipulated deadline, which ensures immediate access to a liquidity facility. Additionally, Article 61 of the Statement of Operational Procedures stipulates that funds supplied from Liquidity Providing Banks are to be repaid after the settlement is completed. **<Key consideration 2: An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.>** Zengin-Net, as procedures for handling at the time of a participant default, stipulates the handling of the Domestic Funds Transfer System for temporary stoppages of use funds transfer system and loss of participant qualifications, handling situations where a settlement default bank that begins proceedings for civil rehabilitation continues to participate in domestic funds transfer transactions, the handling of the transfer of operations stipulated in the Deposit Insurance Act for defaulted banks. Administrative procedures are organized for funds transfer transactions and funds transfer settlements for Zengin-Net as well as each defaulted bank and Participating Bank. Zengin-Net has prepared a manual on the handling of settlement defaults within the Domestic Funds Transfer System, as equivalent to an in-house plan that indicates the role and obligations at the time of a settlement default. This manual also covers documents to be prepared, information to be collected, and communication/adjustments to be made with the Financial Services Agency and Bank of Japan at the time of a settlement default. **<Key consideration 3: An FMI should publicly disclose key aspects of its default rules and procedures.>** Zengin-Net has established rules and procedures for the handling of a settlement default that may occur due to bankruptcy or addressing a Clearing Participant default. Important matters are cited in the Statement of Operational Procedures, which is published on the Zengin-Net website.

	<Key consideration 4: An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close-out procedures. Such testing and review should be conducted at least annually or following material changes to the rules and procedures to ensure that they are practical and effective.> Zengin-Net, when reviewing and examining its rule and circulars for the Statement of Operational Procedures, carries out deliberations and reviews in committees and working groups comprising representatives of Participating Banks. When amending the Statement of Operational Procedures, the approval of the Prime Minister of Japan is necessary and discussions must be held with the Bank of Japan primarily on matters concerning funds settlements, such as the handling of settlement defaults. Amendments are shared with relevant regulatory authorities (Article 86 of the Statement of Operational Procedures). Zengin-Net recognizes that facilitating the completion of the day's funds transfer settlements is of the utmost importance, even when handling a bankruptcy. Additionally, at least once every year Zengin-Net holds a training exercise for settlement default with Liquidity Providing Banks participating, in order to foster greater operational experience, and procedures are reviewed based on the results of the training.

Principle 15: General business risk

An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

Summary narrative	The operations carried out by Zengin-Net are the funds clearing business and related operations. Zengin-Net does not carry out any other operations and does not make investments in securities or real estate.

	Therefore, the anticipated business risks of Zengin-Net are the following four risks: (1) the risk of not receiving payment of expenses from Participating Banks; (2) the risk of the occurrence of a large unexpected expense, such as due to lawsuit, that Zengin-Net cannot pay the costs for; (3) the risk that Zengin-Net incurs a large expense due to a natural disaster or other event that it cannot pay the costs for; and (4) the risk that Zengin-Net cannot facilitate continued operations due to the bankruptcy of an outsourcing partner. Zengin-Net retains funds in liquid assets (bank deposits) so that it can immediately access the minimum necessary management resources to facilitate its business operations, and losses incurred by Zengin-Net from the operation of the Domestic Funds Transfer System are the joint liability of all Participating Banks and such losses can be jointly borne from all Participating Banks based on approval of the board of directors. Therefore, Zengin-Net can continue its operations even when operational losses are incurred. Additionally, the management condition of outsourcing partners is regularly monitored at least once per year and it has been confirmed that the risk of bankruptcy is low. With regards to plans for procuring additional capital (capital plan), Zengin-Net believes the necessity and significance of such a plan is low based on the following matters, and thus unnecessary. (1) Under the Payment Services Act, excluding cases where approval is received from the Prime Minister of Japan, a Funds Clearing Agency is responsible for the funds clearing business and related operations and cannot carry out other operations, meaning it has an obligation to focus on these operations exclusively. (2) The operating expenses of Zengin-Net are covered by contributions to expenses collected from Clearing Participants, which fundamentally differs from the management format of ordinary operating companies which is linked with sales performance. (3) The Zengin System, which is the core operating system of the

	Domestic Funds Transfer System, and ZEDI, which transmits/receives telegraphic transfer messages in XML format including financial EDI information as part of data exchange operations, are provided for the use of Participating Banks based on a service agreement concluded with the system vendor, and so these systems does not belong to Zengin-Net. (4) Zengin-Net does not invest at all in marketable securities or financial instruments that carry the risk of a loss of principal. (Note) Although ZEDI does not directly handle funds clearing, it is listed as a reference. Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.>** The operations carried out by Zengin-Net are the funds clearing business and related operations. It does not carry out any other operations and does not invest in securities or real estate. Therefore, the following four business risks are assumed for Zengin-Net: (1) risk of not getting the expenses paid by participating banks, (2) risk that Zengin-Net cannot afford a significantly large expense which is incurred unexpectedly, (3) risk that Zengin-Net cannot afford a significantly large expense which is incurred due to disaster, etc. and (4) risk of not being able to continue smooth business operations due to the bankruptcy of an outsourcing company. Of those identified business risks, as for the risk of nonpayment of expenses to be paid from Participating Banks to Zengin-Net, Zengin System Rules and Zengin EDI System Rules dictate that the nonpayment of Zengin System and ZEDI expenses from a Participating Bank is the joint liability of all Participating Banks and such shortfalls can be borne by all Participating Banks following a cost burden criteria, in principle. Therefore, this risk is believed to be very small. Moreover, Zengin-Net has deposits as funds to ensure the immediate acquisition of management resources required

	for business operations, and there is a limited possibility of a shortage of funds. As for the risk of a large unexpected expense that Zengin-Net cannot pay the costs for, Article 30 of the Statement of Operational Procedures states, "Even if a Clearing Participant incurs any damage concerning the Funds Clearing Business, etc., with the Association, the Association shall not be liable to provide compensation for such damage unless it is found to have been willful or gross negligence on the part of the Association." In addition, the Domestic Funds Transfer Handling Regulations states, "Losses incurred by Zengin-Net in the operation of the Funds Transfer System is the joint liability of all Participating Banks and such losses shall be borne jointly by all Participating Banks based on approval of the board of directors." Additionally, the budget is prepared at the start of the fiscal year and based on this budget operations are carried out, which means risks are extremely low. (Note) Although ZEDI does not directly handle funds clearing, it is listed as a reference. **<Key consideration 2: An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.>** As joint liability with approval of its board of directors, losses incurred by Zengin-Net related to the operation of the Domestic Funds Transfer System is the joint liability of all Participating Banks and such losses are the joint burden of all Participating Banks based on approval of the board of directors. Additionally, Zengin-Net retains funds in liquid assets (bank deposits) so that it can immediately access the necessary management resources to facilitate its business operations, which makes it possible for Zengin-Net to continue its operations even when losses from its business operations are incurred.

	Zengin-Net, even when it bears a large obligation from assuming a debit for a settlement transaction, manages settlement risk appropriately and it has a mechanism in place to ultimately collect funds or losses required for repayment from virtually every bank in Japan, including foreign banks with operations in Japan. Therefore, the period required to achieve a recovery is short and there are few related operating expenses. **<Key consideration 3: An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.>** Zengin-Net, even when it bears a large obligation from assuming a debit for a settlement transaction, manages settlement risk appropriately and as provided for with a mechanism equivalent to the recovery plan of the Statement of Operational Procedures and other regulations, it has a mechanism in place to ultimately collect funds or losses required for repayment from virtually every bank in Japan, including foreign banks with operations in Japan. Therefore, the period required to achieve a recovery is short and there are few related operating expenses. Consequently, a situation requiring a recovery or wind-down attributed to business risk is practically speaking not anticipated. Cases where liquid assets will be used on a net basis to fund capital for a recovery are not anticipated, but Zengin-Net retains funds in liquid assets (bank deposits) so that it can immediately access the necessary management resources to facilitate its business operations. **<Key consideration 4: Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a**

range of scenarios, including in adverse market conditions.>
Zengin-Net's liquid assets on a net basis used for funding purposes are bank deposits (fixed-term deposits and call deposits). Deposits can be refunded and exchanged for cash without loss of value.

Income for covering annual expenses for the current term and future years is supplied from Participating Banks in the form of contributions to expenses. This amount is determined based on the budget amount and is borne by Participating Banks regardless of market conditions.

Furthermore, losses incurred by Zengin-Net from the operation of the funds transfer system is the joint liability of all Participating Banks and a mechanism is in place where such losses can be jointly borne from all Participating Banks with approval of the board of directors following cost burden criteria, in principle.

<Key consideration 5: An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.>
With regards to plans for procuring additional capital (capital plan), Zengin-Net believes the necessity and significance of such a plan is low based on the following matters, and thus unnecessary.

(1) Under the Payment Services Act, excluding cases where approval is received from the Prime Minister of Japan, a Funds Clearing Agency is responsible for funds clearing business and related operations and cannot carry out other operations, meaning it has an obligation to focus on these operations exclusively (Article 69-1 of the Payment Services Act).
(2) The operating expenses of Zengin-Net are covered by contributions to expenses collected from Clearing Participants, which fundamentally differs from the management format ordinary operating companies which is linked with sales performance (Article 13 of the Statement of Operational Procedures).
(3) The Zengin System, which is the core operating system of the Domestic Funds Transfer System, and ZEDI, which

	transmits/receives telegraphic transfer message in XML format including financial EDI information as part of data exchange operations, are provided for the use of Participating Banks based on a service agreement (the ZEDI User Agreement dated December 25, 2018, and the 7th Generation Zengin Data Telecommunication System User Agreement dated November 4, 2019) concluded with the system vendor, and so this system does not belong to Zengin-Net. (4) Zengin-Net does not invest at all in marketable securities or financial instruments that carry the risk of a loss of principal (reports concerning the funds clearing business, etc.) (Note) Although ZEDI does not directly handle funds clearing, it is listed as a reference.

Principle 16: Custody and investment risks

An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.

Summary narrative	Funds equivalent to the working capital and paid-in capital of Zengin-Net are held on deposit at commercial banks. Collateral secured from Clearing Participants is held by the Bank of Japan or Japan Securities Depository Center, Inc. As for whether rigorous accounting practices, custodian procedures and internal control systems in place to sufficiently protect these main assets, banks are subject to the supervision of the Financial Services Agency under the Banking Act. It has been determined through banks' financial reports and details disclosure information that they indeed have rigorous accounting practices, custodian procedures and internal control systems in place. The Bank of Japan is Japan's central bank. Japan Securities Depository Center, Inc. (JASDEC) is required to have an internal control system pursuant to Article 3-1-5 to Article 3-1-7 of the Act on Book-Entry Transfer of Company Bonds, Shares, etc., and is a depository and book-entry transfer institution that is supervised by the Financial Services

	Agency and overseen by the Bank of Japan. Therefore, they are believed to have rigorous accounting practices, custodian procedures and internal control systems in place. The entities that hold Zengin-Net's deposits or store its collateral are each located in Japan and Japanese law is present as the legal basis. As for Zengin-Net's holdings of security interests and credit obligations, rules requiring compliance with the written pledge submitted by Participating Banks explicitly stipulate that the setting of security rights and assignment to third parties is prohibited and are to be used to repay obligations for cash collateral. The existence of this is confirmed by checking current balance statements, deposit certificates, book-entry account records and other recorded matters. This ensures that the risk of loss of assets or delayed access to assets is minimized. Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.>** Funds equivalent to the working capital and paid-in capital of Zengin-Net are held on deposit at commercial banks. Collateral secured from Clearing Participants is held by the Bank of Japan or Japan Securities Depository Center, Inc. As for whether rigorous accounting practices, custodian procedures and internal control systems in place to sufficiently protect these main assets, banks are subject to the supervision of the Financial Services Agency under the Banking Act. It has been determined through banks' financial reports and details disclosure information that they indeed have rigorous accounting practices, custodian procedures and internal control systems in place.

	The Bank of Japan is Japan's central bank and Japan Securities Depository Center, Inc. (JASDEC) is required to have an internal control system pursuant to Article 3-1-5 to Article 3-1-7 of the Act on Book-Entry Transfer of Company Bonds, Shares, etc. JASDEC is a depository and book-entry transfer institution that is supervised by the Financial Services Agency and overseen by the Bank of Japan. So they are believed to have rigorous accounting practices, custodian procedures and internal control systems in place. Furthermore, Zengin-Net does not use a custodian bank. **<Key consideration 2: An FMI should have prompt access to its assets and the assets provided by participants, when required.>** Zengin-Net requests custody of collateral after verifying the rights concerning these assets. The entities that hold Zengin-Net's deposits or store its collateral are each located in Japan and Japanese law is present as the legal basis. **<Key consideration 3: An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.>** Zengin-Net does not use a custodian bank. Therefore, this key consideration does not apply. **<Key consideration 4: An FMI's investment strategy should be consistent with its overall risk-management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.>** Zengin-Net does not carry out financial investments. Therefore, this key consideration does not apply.

Principle 17: Operational risk

An FMI should identify the plausible sources of operational risk, both internal and

external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.	
Summary narrative	Zengin-Net stipulates its operational risk management policy in its Internal Control Basic Policy, and operational risk comprising administrative risk and system risk, among others, is categorized and defined based on the cause. Departments in charge of each operational risk carry out assessments of each operational risk at least once every year. The validity of this risk management policy including these categories and definitions is examined at least once every year based on changes in external environment and reviews of the medium-term management plan, and changes are made as necessary. Zengin-Net's operations are believed to be impacted the most by administrative risk and system risk, in particular. In accordance with the administrative risk management policy and system risk management policy, an Administrative Risk Management Regulation and System Risk Management Regulation have been created that do not limit the source of risk. On top of this, pursuant to these regulations, the Planning & Coordination Department is chiefly responsible for identifying and assessing administrative risk and system risk at least once every year. Zengin-Net, based on each cause, categorizes operational risk as administrative risk, system risk, information security risk, cyber security risk, legal risk, event risk, human resource risk and reputational risk. As for administrative risk that affects administrative processing, the causes of latent risk and how administrative risk will emerge from which cause is identified in groups following procedures and manuals, and controlled based on the extent of the risk. Zengin-Net's response to each individual key consideration is as follows.

	<Key consideration 1: An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.> Zengin-Net stipulates its operational risk management policy in its Internal Control Basic Policy, and operational risk, comprising administrative risk and system risk, among others, is categorized and defined based on the cause. Departments in charge of each operational risk carry out assessments of each operational risk at least once every year. Zengin-Net, based on each cause, categorizes operational risk as administrative risk, system risk, information security risk, cyber security risk, legal risk, event risk, human resource risk and reputational risk. Additionally, Zengin-Net carries out Risk and Control Self-Assessments (RCSA) based on procedures and manuals with regards to administrative risks affecting administrative processes, and persons in charge of each operation identify the causes of administrative risk and causes of latent risk. Under the management of the Planning & Coordination Department, risk is controlled based on its magnitude. Zengin-Net's operations are believed to be impacted the most by administrative risk and system risk, in particular. In accordance with the administrative risk management policy and system risk management policy, Zengin-Net identifies and evaluates risk at least once every year, not limiting the source of risk. **<Key consideration 2: An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk-management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.>** The Zengin-Net Board of Directors has established the Operational Risk Management Policy, Administrative Risk Management Policy and System Risk Management Policy, while a department has been

	designated in charge of each type of operational risk, which it manages. Additionally, the board of directors receives reports on operational risk at least once every year, and when necessary, the board of directors instructs the senior managing director to make improvements and report on the status of these improvements. Zengin-Net, within its Domestic Funds Transfer Working Group and Operations and Systems Committee, examines necessary matters for the operation of the Zengin System, including matters concerning risk management, such as reporting obligations during a system failure in a bank's systems, while examining the functions of the Zengin System and ZEDI. As for internal procedures of Zengin-Net, based on policies resolved by the board of directors, and under the senior managing director's management, the secretariat carries out reviews and examinations at least once every year and obtains the approval of the senior managing director and heads of departments. Additionally, the status of Zengin-Net's operations and systems is audited by the Internal Audit Department and outside experts based on an internal audit plan. The Domestic Funds Transfer Working Group and Operations and Systems Committee mentioned above are comprised of representatives from Participating Banks and members of the secretariat. Representatives from Participating Banks are always included in these assessments and reviews. (Note) Although ZEDI does not directly handle funds clearing, it is listed as a reference. **<Key consideration 3: An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.>** The purpose of Zengin-Net, as stated in its Articles of Incorporation, is to implement smooth, safe and efficient fund settlements between

	financial institutions and business operations related thereto. On top of this, the funds clearing business and funds transfer settlement operations and data exchange operations, which are a core operation closely related to the funds clearing business, are stipulated as operations receiving the highest priority for continuity. For this reason, a Recovery Time Objective (RTO) and Recovery Point Objective (RPO) have been established. From the perspective of achieving the reliability of administrative processing, Zengin-Net's Administrative Risk Management Policy stipulates that each department include the reduction of administrative risk within various manuals, the department in charge of administrative risk management to examine and assess administrative risk for all of Zengin-Net, and for necessary measures to be in place for controlling and reducing risk. **<Key consideration 4: An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.>** Zengin-Net identifies various limitations including the processing capacity of the Zengin System, and forecasting is carried out for limitation values determined to require forecasting, and every month the forecast values and actual values are compared to examine the accuracy of forecast values. Additionally, Zengin-Net examines the needs and expected timing to increase processing capacity based on forecast and actual values every month. When a future increase in processing capacity is believed to be required, Zengin-Net confirms the maximum expandability of the limit value. From the perspective of securing needed personnel, in accordance with the Administrative Risk Management Rules, the General Manager of the Planning & Coordination Department and General Manager of the Business Development Department examine the future anticipated administrative processing volume for each department each fiscal year,

	and conduct an analysis regarding needed personnel levels, based on which personnel are secured and developed. **<Key consideration 5: An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.>** Zengin-Net has established an Information Security Policy as a comprehensive policy concerning information security. This policy also covers physical security as well, such as access controls. With regards to the management of specific information assets as well as planning and implementation of protection measures, the Information Security Promotion Secretariat for the Risk Management Group of the Planning & Coordination Department supports the operations of each department head, who serve as the chief manager of information security. Zengin-Net has established a Cyber Security Policy as a comprehensive set of guidelines on cyber security based on *Guidance on Cyber Resilience for Financial Market Infrastructures* published by the CPMI / IOSCO in June 2016. Specific cyber security risk management involves the Risk Management Group of the Planning & Coordination Department serving as the department in charge that implements measures aimed at securing cyber security and setting up a cyber attack response team to prepare for possible cyber attacks. **<Key consideration 6: An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.>**

	Zengin-Net has established a BCP Basic Policy as well as a BCP scenario for taking countermeasures against a broad range of risk phenomena, and has prepared a detailed emergency response manual based on the main scenarios selected. The BCP Basic Policy stipulates the funds clearing business and funds transfer settlement operations and data interchange operations, which are a core operation closely related to the funds clearing business, as operations receiving the highest priority for continuity. Based on the main scenario, a Recovery Time Objective(RTO) and Recovery Point Objective(RPO) have also been established, as well as a Business Continuity Countermeasure Headquarters. The RTO for funds transfer settlement operations is set as the time by which the Bank of Japan must be notified of the funds transfer settlement amount so that the settlement can take place at the Bank of Japan by the final allowable time for settlement on the same day. For the Zengin System, RTO of data exchange operations shall be two hours or less. For ZEDI, RTO of bulk transfer shall be 50 minutes or less, and RTO of other operations shall be about one business day. To achieve these, the Zengin-Net adopts a dualsystem using two centers located in Tokyo and Osaka for data exchange operations of the Zengin System. For ZEDI, the Tokyo Center and Osaka Center are assigned as the main and backup bases, respectively. By establishing rules on how to respond to failure, Zengin-Net ensures business continuity. Since November 2019, collateral management terminals have been installed also at the Osaka Center, developing a system that also enables smoother implementation of collateral management operations at the Osaka Center in the event of failures at the Tokyo Center. Nearly every year, Zengin-Net carries our training exercises with Participating Banks as participants based on the scenario that one of the centers has suffered an extensive and serious interruption, based on which business continuity measures are verified and mastered.

For the Zengin System, Zengin-Net is in the process of establishing a system so that operations requiring continual implementation will be executed only by Osaka Center staff, based on the damage envisioned in the main scenario.

In addition, manuals have been prepared by Zengin-Net for other opportunities and nearly every year these manuals are revised and updated to ensure the robustness of their information.

(Note) Although ZEDI does not directly handle funds clearing, it is listed as a reference.

<Key consideration 7: An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.>

Zengin-Net identifies, monitors and manages risks that each entity poses to the administrative processing of Zengin-Net as follows.

If the operations of Zengin-Net are suspended, it will likely have an enormous impact on not only other FMI, but also on the entire society. For this reason, the Zengin System adopts a redundant system using two centers based in Tokyo and Osaka, with the Tokyo Center as the main one and the Osaka Center as a backup base for ZEDI. The system employs a redundant structure to the extent possible with regards to equipment and networks at the two centers, reducing the risk of an operational shutdown.

(Note) Although ZEDI does not directly handle funds clearing, it is listed as a reference.

The main participant of Clearing Participants

Risks posed by Clearing Participants mainly include the risk that they will engage in transactions beyond the anticipated volume and system interruptions of each Clearing Participant's banking system.

As for the former, limit values to be monitored are identified and monitored and for certain operations an overload control function has

	been introduced, and if monitoring results show that future processing volume is forecast to be exceeded, capacity increases will be carried out. As for the latter, in the case that the interruption of a Participating Bank's own center occurs that is determined to affect other Participating Banks, the status of this interruption, expected recovery and other information must be immediately communicated to a Zengin Center, while Zengin-Net also monitors the situation and responds. **Other FMI** FMI that are essential to the implementation of operations are the Bank of Japan and the Japan Securities Depository Center, Inc. (JASDEC) Of these, the risk posed by the Bank of Japan is the interruption of the Bank of Japan Net services. In such a case, large-value domestic funds transfer transactions will be restarted through processing with a backup center and the standard value of large-value domestic funds transfer transactions will be increased so that all large-value domestic funds transfer transactions will be settled without being sent to the current account at the Bank of Japan (simultaneous settlement account). The risks posed by JASDEC, too, are examined and assessments are carried out on impacts in case of interruption. **Service providers** The Japan Securities Dealers Association, Tokyo Stock Exchange, document custodian provider, securities companies, and hosting service vendors are considered as service providers for Zengin-Net. The risk posed by these service providers is assessed and managed, including by securing alternative means. **Public utility companies** Public utility companies that pose a risk to Zengin-Net's administrative processing includes power companies, public transit such as railways, and communication providers. Of these, impacts when services provided by communication providers

	cannot be accessed are managed and addressed in rules as communication line interference. The suspension of power or railway services is stipulated in a manual for responses to power outages and public transit shutdowns. **Cotra Ltd.** There are risks associated with transactions from Cotra Ltd., including the risk of transaction volumes exceeding the anticipated levels. For this risk, monitoring is conducted covering transactions from the COTRA System as well, under the identification of limit values to be monitored and monitoring described in "The main participant of Clearing Participants" above.

Principle 18: Access and participation requirements

An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.

Summary narrative	Zengin-Net's Statement of Operational Procedure, which is published on its website, contains eligibility requirements for Clearing Participants and Agency Participants as well as requirements for entities to fulfill the eligibility of Clearing Participants. According to Article 75 of the Payment Services Act, "A Clearing Institution for Interbank Funds Transfer must not give unjust discriminatory treatment to a particular person in relation to the Clearing Services for Interbank Funds Transfer." The requirements for participation are limited to deposit-taking financial institutions and funds transfer service providers that have a separately prescribed financial foundation and system that engage in the domestic funds transfer business as banking so that stability will not be lost from the standpoint of risk management. Until now, a number of banks requesting to become participants have become new Participating Banks, permitting fair and open access. Documents required to be submitted when applying to gain participant qualification include documents on the summary of the financial

	institution, its anticipated data volume for funds transfer transactions, summary of system configuration, and development schedule related to participation. This is information essential to Zengin-Net's management of operational risks. The written pledge submitted when obtaining participant qualifications or when applying to gain clearing qualifications requires compliance with the Statement of Operational Procedures, conflict resolution, necessary facilities, and enhanced administrative processing system, including training and exercises for employees. The requirements limiting participation to deposit-taking financial institutions that engages in domestic funds transfer business as part of the banking business is believed to be justified from the perspective of security and efficiency. By making participants banks or other financial institutions that obtain licensing based on supervision of the Financial Services Agency for their financial base and soundness is extremely important from the standpoint of reducing and mitigating risks of interruption posed to Zengin-Net's operations with regard to credit risk, liquidity risk, and system risk. For this reason, this is believed to be a just requirement. Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.>** The Payment Services Act states, "A Clearing Institution for Interbank Funds Transfer must not provide unjust discriminatory treatment to a particular person in relation to the Clearing Services for Interbank Funds Transfer." Zengin-Net's requirement for participation is limited to deposit-taking financial institutions and funds transfer service providers that have a separately prescribed financial foundation and system that engage in

	domestic funds transfer business as part of the banking business so that stability will not be lost from the standpoint of risk management. Until now, a number of banks requesting to become participants have become new Participating Banks, permitting fair and open access. **<Key consideration 2: An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit.>** Currently, Zengin-Net's requirement for participation is limited to deposit-taking financial institutions and funds transfer service providers that have a separately prescribed financial foundation and system that engage in the domestic funds transfer business as part of the banking business so that stability will not be lost from the standpoint of risk management. Making participant banks or other financial institutions obtain a license or registration of the Financial Services Agency for their financial base and soundness is extremely important from the standpoint of reducing and mitigating risks of interruption posed to Zengin-Net's operations with regard to credit risk, liquidity risk, and system risk, and is believed to be justified from the perspective of security and efficiency. The necessary requirements of participation and acquisition as well as the requirements for acquiring clearing qualification are stipulated in the Statement of Operational Procedures, which is published on Zengin-Net's website. Moreover, details concerning matters to include in necessary documents for applications are stipulated in the Rule of the Statement of Operational Procedures, which is disclosed to Participating Banks and presented to banks wishing to participate. **<Key consideration 3: An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly**

	defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.> Article 15 of Zengin-Net's Statement of Operational Procedures requires that Participating Banks report to Zengin-Net in the event that they are subject to losing their participation qualification, including loss of requirements for participation. Furthermore, Zengin-Net has the authority to request Participating Banks to provide periodic reports or submit relevant documents as needed. This is done to verify their adherence to Zengin-Net's Statement of Operational Procedures, confirm that they are not at risk of losing their participation qualification, and ensure the stable operation of the funds transfer system. Additionally, Zengin-Net regularly confirms publicly disclosed information from the Financial Services Agency to check if any Clearing Participants are no longer deposit-taking financial institutions or funds transfer service providers. Also, the change in status of Agency Participants is secured correctly and in a timely manner by receiving reports from Agency Participants. Pursuant to Article 52 its Statement of Operational Procedure, Zengin-Net requires the pledging of collateral based on the Sender Net Debit Cap, and in case the collateral cannot be secured due to the emergence of credit risk or liquidity at the Participating Bank, transfer messages will no longer be able to be sent. Therefore, this indicates that management measures similar to reinforced supervision and additional regulations are included. In Article 16 of Zengin-Net's Statement of Operational Procedures, a Participating Bank will lose its participation qualification in case it no longer fulfills the requirements, commences bankruptcy proceedings, or the succession of participation qualification by another financial institution. Also, in cases where facts are present that determine a Participating Bank's operational status is under threat, the Participating Bank will be given an opportunity to state its case prior to approval, and this bank can

	be moved from the roster of funds transfer system with resolution passed by the board of directors. In addition, Article 21 of the Statement of Operational Procedures makes it possible to temporarily suspend participant banks use of the funds transfer system in case they violate the Statement of Operational Procedures. Clearing qualifications can be lost in cases of nonpayment of funds transfer settlement amount, excluding when determined to be caused by special circumstances, per Article 33 of the Statement of Operational Procedures. Furthermore, according to Article 38 of the Statement of Operational Procedures, if a Participating Bank violates the Statement of Operational Procedures, the Participating Bank will be given an opportunity to state its case and indicate the reason, and the Participating Bank can have its use of the funds transfer system temporarily suspended and other measures deemed necessary and appropriate by Zengin-Net taken as well. The Statement of Operational Procedures is published on Zengin-Net's website.

Principle 19: Tiered participation arrangements

An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.

Summary narrative	Zengin-Net has a tiered participation arrangement consisting of Clearing Participants who are direct participants and Agency Participants who are indirect participants. To facilitate the smooth execution of funds settlements for the overall Domestic Funds Transfer System, Zengin-Net, pursuant to Article 15 of the Statement of Operational Procedures, requires that Agency Participants report whenever changes occur in important matters pertaining to their management operations. Additionally, interviews are

	conducted with Agency Participants to collect information on the status of their domestic funds transfer business operations. On top of this, reviews are conducted on any risks to be considered and the results are reported to relevant meeting bodies and managed. Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.>** Zengin-Net has a tiered participation arrangement consisting of Clearing Participants who are direct participants and Agency Participants who are indirect participants. To facilitate the smooth execution of funds settlements for the overall Domestic Funds Transfer System, Zengin-Net, pursuant to Article 15 of the Statement of Operational Procedures, requires that Agency Participants report whenever changes occur in important matters pertaining to their management operations, and Zengin-Net manages this information. Additionally, interviews are conducted with Agency Participants at least once per year to collect information on the status of their domestic funds transfer business operations, while reviews are conducted on any risks to be considered and the results are reported to the board of directors and Risk Management Committee. **<Key consideration 2: An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.>** Zengin-Net conducts interviews with each Agency Participants at least once per year to collect information such as the number of transactions by specific Agency Participants, overages of the Sender Net Debit Cap due to sudden increases in value, and possible affects on system load, etc. Additionally, a review is carried out to check whether an important

	dependence exists between direct participants and indirect participants that can affect Zengin-Net. **<Key consideration 3: An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions.>** Zengin-Net conducts interviews with Agency Participants at least once per year to check the share of transaction volume and value of Agency Participants. Additionally, checks are carried out for Agency Participants that account for a significant share of transaction value or Agency Participants that have an especially large number or value of transactions compared to their capacity. **<Key consideration 4: An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.>** Zengin-Net conducts interviews of Agency Participants at least once per year with regard to the risks arising from tiered participation and carries out monitoring. Based on this, if a situation is found where risk is caused to Zengin-Net, measures are considered.

Principle 21: Efficiency and effectiveness

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

Summary narrative	The purpose of Zengin-Net is to facilitate smooth, safe and efficient fund settlements between financial institutions, which are a foundation of society. Zengin-Net strives to identify the needs of Participating Banks and their customers by holding interviews with various experts and conducting surveys targeting the customers of Participating Banks. Issues that come

	to light during this meeting are examined further and solutions considered within each meeting body comprising representatives of Participating Banks. Additionally, as for the operations of the Zengin-System, the core operating system, a Recovery Time Objective (RTO) for the event of a system interruption has been established and a Service Level Agreement (SLA) has been concluded with the service vendor. Monthly monitoring is carried out and the results reported to the board of directors and other meeting bodies. Under this system, there has never been a situation where a stoppage has lasted longer than the RTO, and effectiveness is secured if issues are found by ordering remedial actions taken. Furthermore, Zengin-Net ensures the efficiency with regard to each year's income and expenditures budget and system expenses by reviewing and deliberating these by the board of directors and each meeting body comprising representatives of Participating Banks, which bear these costs. Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures.>** Zengin-Net carries out a survey every fiscal year targeting Participating Banks from the standpoint of managing the organization and operations based on the needs of Participating Banks. Through this survey, satisfaction levels are ascertained, issue identified, and solutions examined. In fiscal 2014 and fiscal 2016, Zengin-Net conducted a survey on the needs of customers of Participating Banks and is now utilizing the results to plan new services.

<Key consideration 2: An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities.>

The purpose of Zengin-Net is to facilitate smooth, safe and efficient fund settlements between financial institutions, which are a foundation of society.

Zengin-Net strives to identify the needs of Participating Banks and their customers by holding interviews with various experts and conducting surveys targeting the customers of Participating Banks, and then summarizing the results of these efforts in reports. Issues that come to light during this meeting are examined further and solutions considered within each meeting body comprising representatives of Participating Banks.

Additionally, as for the operations of the Zengin System, the core operating system, a Recovery Time Objective (RTO) for the event of a system interruption has been established and a Service Level Agreement (SLA) has been concluded with the service vendor. Monthly monitoring is carried out and the results reported to the board of directors and other meeting bodies for management.

<Key consideration 3: An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.>

Zengin-Net ensures efficiency with regard to each year's income and expenditures budget and the expenses of the Zengin System and ZEDI by having them reviewed and deliberated on by the board of directors as well as the Corporate Planning Working Group and Corporate Planned Committee, which are comprised of representatives from banks that bear these costs.

Moreover, as the framework to evaluate effectiveness, reports are made to the board of directors as well as the Domestic Funds Transfer Working Group and Operations and Systems Working Group, both comprising representatives of Participating Banks once every three months. Reports

	on the operating status of the Zengin System and ZEDI that include transaction volume and the status of interruptions are made to the board of directors as well as the Domestic Funds Transfer Working Group and Operations and Systems Working Group, both comprising representatives of Participating Banks. If an issue is found, remedial action is ordered, so efficiency is secured through this process. (Note) Although ZEDI does not directly handle funds clearing, it is listed as a reference.

Principle 22: Communication procedures and standards

An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.

Summary narrative	Zengin-Net does not engage in cross-border business operations, but the 7th Generation Zengin System launched in 2019 adopts communication procedures and standards that are used and accepted internationally. Specifically, the Zengin System uses TCP/IP as communication protocol and an IP-VPN (closed domain) and ISDN for communication between Participating Banks and the Bank of Japan. In addition to the fixed length telegraphic message format that has been conventionally used, the 6th Generation Zengin System launched in 2011 adopts the option of XML-formatted (ISO 20022) telegraphic messages for the first time. This format can be used in case a Participating Bank requests it. The fixed length telegraphic message format used conventionally has been made compliant with international standards by comparing it with the elements of ISO20022 and submitting additional application to ISO 20022 message registering body for those items that need to be added. Moreover, for ZEDI, an XML message compliant with ISO20022 is used although communication is not related to funds clearing. (Note) Although ZEDI does not directly handle funds clearing, it is listed as a reference.

	Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.>** Zengin-Net does not engage in cross-border business operations, but the 7th Generation Zengin System launched in 2019 adopts communication procedures and standards that are used and accepted internationally. Specifically, the Zengin System uses TCP/IP as communication protocol and an IP-VPN (closed domain) and ISDN for communication between Participating Banks and the Bank of Japan. In addition to the fixed length telegraphic message format that has been conventionally used, the 6th Generation Zengin System launched in 2011 adopts the option of XML-formatted (ISO 20022) telegraphic messages for the first time. This format can be used in case a Participating Bank requests it. The fixed length telegraphic message format used conventionally has been made compliant with international standards by comparing it with the elements of ISO20022 and submitting additional application to ISO 20022 message registering body for those items that need to be added. Moreover, for ZEDI, an XML message compliant with ISO20022 is used although communication is not related to funds clearing. (Note) Although ZEDI does not directly handle funds clearing, it is listed as a reference.

Principle 23: Disclosure of rules, key procedures, and market data

An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.

Summary narrative	Zengin-Net publishes its Articles of Incorporation and Statement of Operational Procedures, both of which contain fundamental rules and

	major procedures of Zengin-Net, on its website (https://www.zengin-net.jp/). Participating Banks can obtain the latest documents related to rules and procedures, including contributions to expenses standards, from a dedicated website. Banks that wish to newly become participants can obtain the necessary documents upon concluding a confidentiality agreement. Various documents related to these regulations, rules and procedures are reviewed during the drafting phase by committees comprising representatives of Participating Banks, which confirms a high level of sufficiency and that the documents are clear and comprehensive. In addition, Zengin-Net provides Participating Banks with information for understanding risks, including the basic specifications of the Zengin System, operational status reports, system audit results, and BCP Basic Policy. Statistics are published on the Zengin-Net website monthly and commentary is provided on the system and the mechanism of funds clearing operations. The Zengin System is also explained using pamphlets and video postings. Zengin-Net's response to each individual key consideration is as follows. **<Key consideration 1: An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.>** Zengin-Net publishes its Articles of Incorporation, which contain important rules about its operations, and the Statement of Operational Procedures, which contains comprehensives provisions on the operations of Zengin-Net, on its website. Additionally, the dedicated webpage for Participating Banks found on the Zengin-Net website contains a collection of regulations on the domestic

	funds transfer system featuring a compilation of necessary rules and procedures for the operation of the domestic funds transfer system. These rules and procedures contain detailed contents that can be understood by all Participating Banks, which is believed to ensure clearness and sufficiency. Participating Banks can make inquiries to Zengin-Net at any time with regard to these rules and procedures. Zengin-Net compiles case studies provided by Participating Banks into cautionary points and notifies Participating Banks and requests improvements be made. **<Key consideration 2: An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.>** The design of the Zengin System is stated in the Basic Specifications and system operations and usage methods are stated in the Zengin System Rules. In the same manner, the design of ZEDI is stated in the Basic Specifications and system operations and usage methods are stated in the Zengin EDI System (ZEDI) Rules. Zengin-Net issues these documents to Participating Banks and the Bank of Japan. Zengin System Rules and Zengin EDI System Rules are submitted to the Financial Services Agency and disclosed to Participating Banks on the dedicated webpage for Participating Banks on the Zengin-Net website. In addition, banks that would like to become participants receive an explanation on the summary of costs involved prior to participation, including the obligation of pledging collateral. (Refer to Principle 4 [Credit Risk] for information on collateral requirements). Zengin-Net discloses the Domestic Funds Transfer System rules as well as the Basic Specifications for the Zengin System and ZEDI to banks that have not participated in Zengin-Net yet by having them conclude a confidentiality agreement to have them understand the risks related to

	participation in Zengin-Net. (Note) Although ZEDI does not directly handle funds clearing, it is listed as a reference. **<Key consideration 3: An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.>** Zengin-Net provides necessary rules and procedures for operational administration on the dedicated webpage for Participating Banks and all Participating Banks can freely reference this webpage. Within these documents is the Statement of Operational Procedures that clarifies the risks associated with participating in the domestic funds transfer system as well as the rights and obligations of Zengin-Net and Participating Banks (including Liquidity Providing Banks). Additionally, once every year Zengin-Net calls for case studies from Participating Banks regarding handling that differs from the stipulations of the domestic funds transfer handling regulations. This is compiled into cautionary notes and made known to all Participating Banks. Requests are then made for improvement, which makes it possible to facilitate the operations and administration. In addition, system revisions that may affect the operations or requests for Participating Banks to bear risks are explained at the board of directors or committees comprising representatives of Participating Banks. If questions arise, additional explanation is provided to promote Participating Bank understanding. Furthermore, the handling of system interruptions or settlement defaults differ in particular from the handling of normal situations, so training exercises are carried out for each regularly at least once per year with the participation of Participating Banks. **<Key consideration 4: An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of**

	priced services for comparability purposes.> Expenses required for the operation of Zengin-Net are paid by each Participating Bank based on their funds transfer transaction volume and other factors. Expenses related to the Zengin System are paid by each Participating Bank, the Bank of Japan, densai.net Co., Ltd., Cotra Ltd. and the Japanese Bankers Association based on their funds transfer transaction volume. Commissions from settlements are not collected. Fund transfer operational costs are established as expenses paid by the sender bank to the receiver bank to ensure the stable operation of the domestic funds transfer system. Fund transfer operational costs are set at a reasonable level under normal social conventions, reflecting costs required for the receiver bank to process fund transfers, including crediting of funds. In order to maintain fund transfer operational costs at a reasonable level under normal social conventions, the costs shall be reviewed once every five years by calculating the cost for dealing with the receiver bank and profits of fund transfer business. The expenses related to ZEDI are borne by participating banks depending on the number of funds transfer transactions handled using the Zengin System, etc., and a commission fee per data exchange is not collected. These contributions to expenses of the Zengin System and the Zengin EDI System are stipulated in the Zengin System Rules and the Zengin EDI System Rules established by the board of directors. The rules are provided to Participating Banks and provided to banks wanting to become a Participating Bank after the conclusion of a confidentiality agreement. (Note) Although fund transfer operational costs are not fees charged by Zengin Net, they are listed as a reference. In addition, although ZEDI does not directly handle funds clearing, it is listed as a reference. **<Key consideration 5: An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO disclosure framework for financial market infrastructures. An FMI also**

	should, at a minimum, disclose basic data on transaction volumes and values.> On July 31, 2015, Zengin-Net published its official response to the disclosure framework for financial market infrastructure (CPSS-IOSCO), which was updated regularly every two years. This disclosure represents a periodic update of this information as well as basic data on transaction volume and value. The basic data of the transaction volume and value which is disclosed on the website each month includes the transaction volume and value by funds transfer notification method (both includes the breakdown by type), the number of the participating banks and their stores and the transaction volume of ZEDI.

V. List of publicly available resources

Information about the Japanese Banks' Payment Clearing Network ("Zengin-Net") can be found on the following website: https://www.zengin-net.jp/.

The main contents of this website are as follows.

- The Zengin System
    - Participants to the Zengin System
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