

Intraday Liquidity Around the World

Some Observation from Japan

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Extraordinary Work

Intraday Liquidity Around the World*

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Abstract

We study intraday liquidity usage and its determinants using a unique cross-country data set on large-value payments. We document that the amount of intraday liquidity that depository institutions around the world use *each day* equals, on average, 15% of their total daily payment values or 2.8% of their countries' GDP. We then define and calculate system-level measures of liquidity efficiency and inequality in liquidity provision. We show that these measures vary systematically with participants' degree of payment coordination, the quantity and opportunity cost of central bank reserves and institutional characteristics such as incentives for early payment submissions and Liquidity Saving Mechanism (LSM) design features. Our results are consistent with payment system participants actively managing intraday liquidity and acting strategically

Written by distinguished central bankers and academics, many of whom have strong footings in payment and settlement systems and CPMI-related works over many years.

First intriguing efforts to collect data across economies in Europe and the Americas.

Present new indicators to capture participants' behaviors in payment systems.

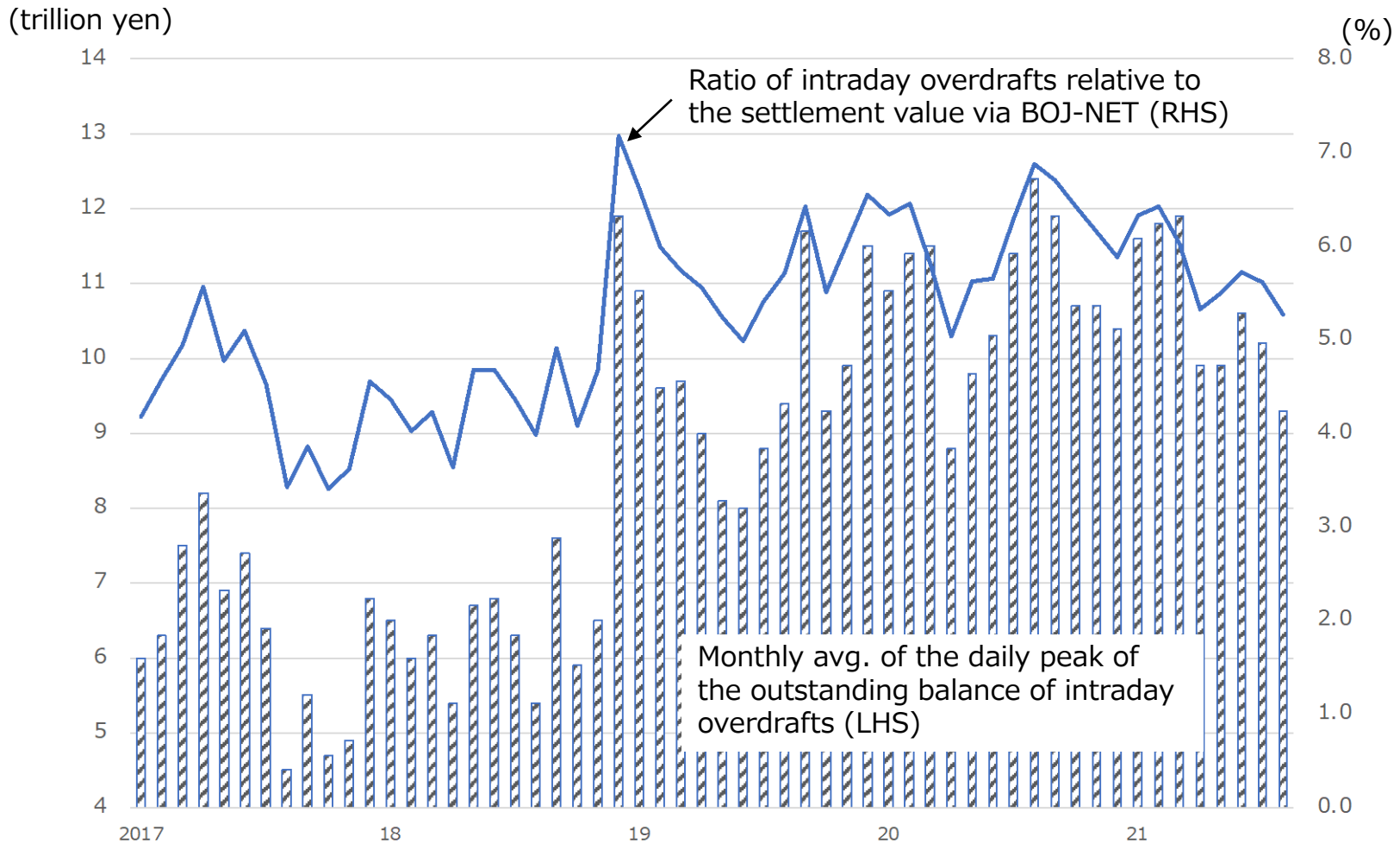
*Among the authors of this paper are members/alternates of the user groups with access to TARGET2 data in accordance with Article 1(2) of Decision ECB/2017/2080 of 22 September 2017 on access to and use of certain TARGET2 data. The European Central Bank, the Deutsche Bundesbank, the Market Infrastructure Board (MIB) and the Market Infrastructure and Payments Committee (MIPC) have checked the paper against the rules for guaranteeing the confidentiality of transaction-level data imposed by the MIB pursuant to Article 1(4) of the above mentioned issue. The views expressed in the paper are solely those of the authors and do not necessarily represent the views of the authors' affiliations, listed below, or any other person associated with these institutions. The authors wish to thank Derek Brito, Adam Epp, Othón Moreno González, Aldo Juárez Acevedo, Carlos León-Rincón, Clara Machado-Franco, Carlos Navarro Ramirez, Kristian Nørgaard Bentsen, Fabio Ortega-Castro, Patrick Papsdorf, Michael Pywell, Matthieu Rüttimann, Teresa Samuel, Takeshi Shirakami and Flurina Strasser for their contributions to the project.

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Intraday Liquidity Usage in Japan

During 2017-21, intraday overdrafts have increased somewhat; however, those relative to total payment values remain 5.3% on average, significantly less than the figure mentioned in the paper (i.e., 15%).



(Source) Bank of Japan, Payment and Settlement Statistics.

Is Japan an outlier?

Prolonged QE/QQE



Less dependence on intraday liquidity



Liquidity efficiency indicators (Q) in other systems (TARGET2, Fedwire, Kronos, STR) also lie around 5%.

Interpretation of Q

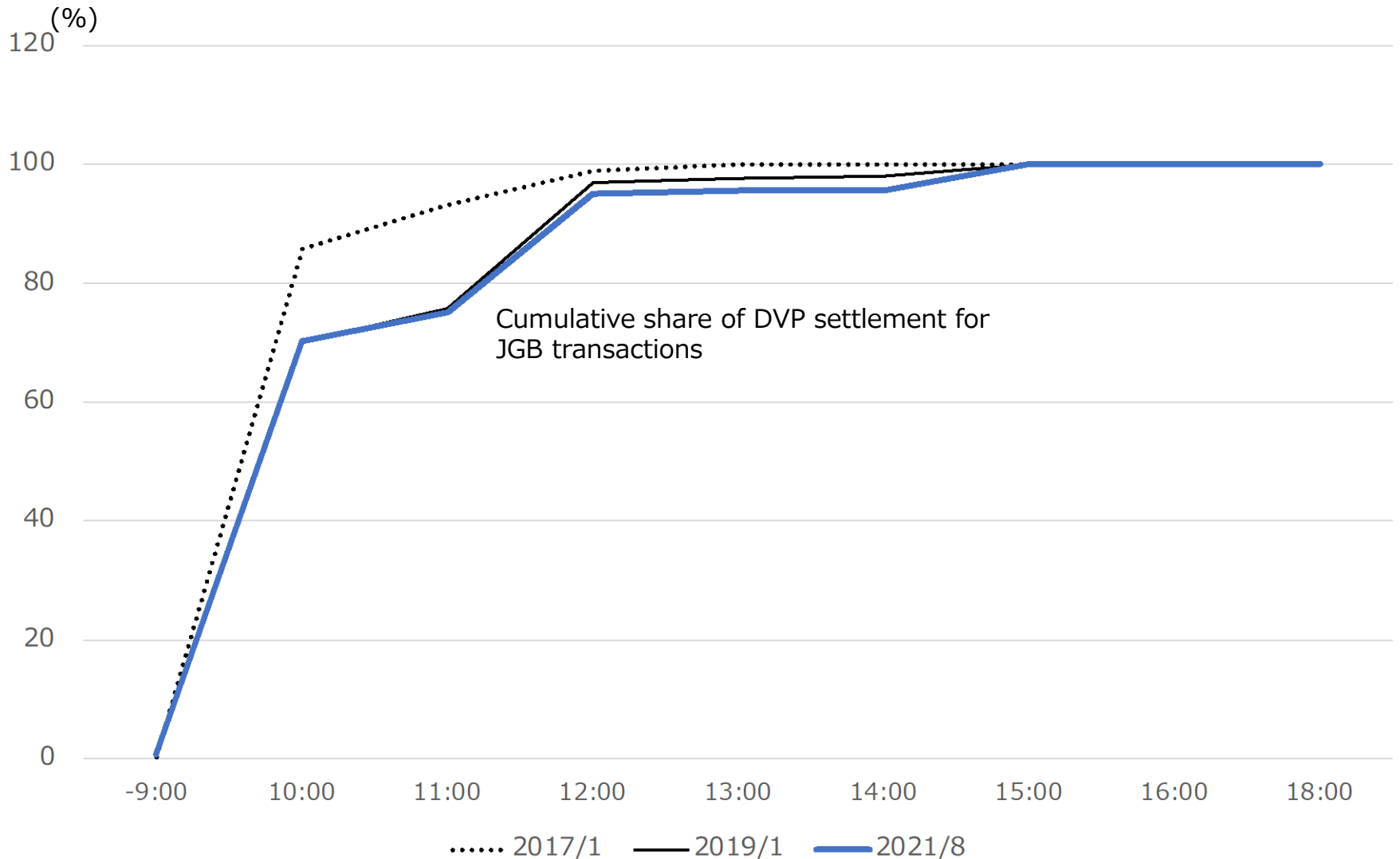
What does Q capture under QE/QQE?

Competing forces driving Q in opposite directions.

Regime shift under negative interest rate policy?

Early Settlement in Japan

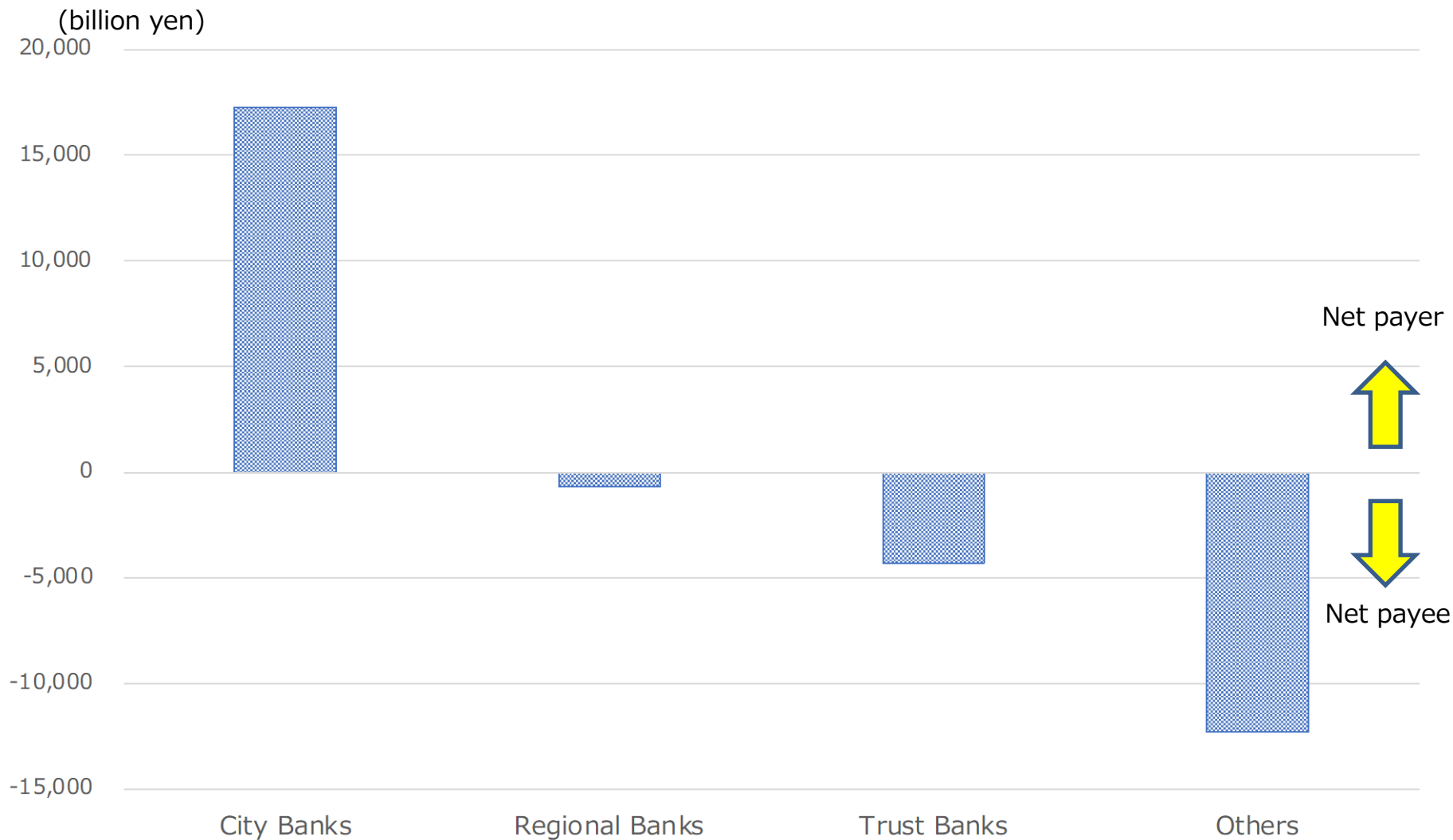
Despite marginal reliance on intraday liquidity, most of the transactions have been settled before noon; the picture has not materially changed.



(Source) Bank of Japan, Payment and Settlement Statistics.

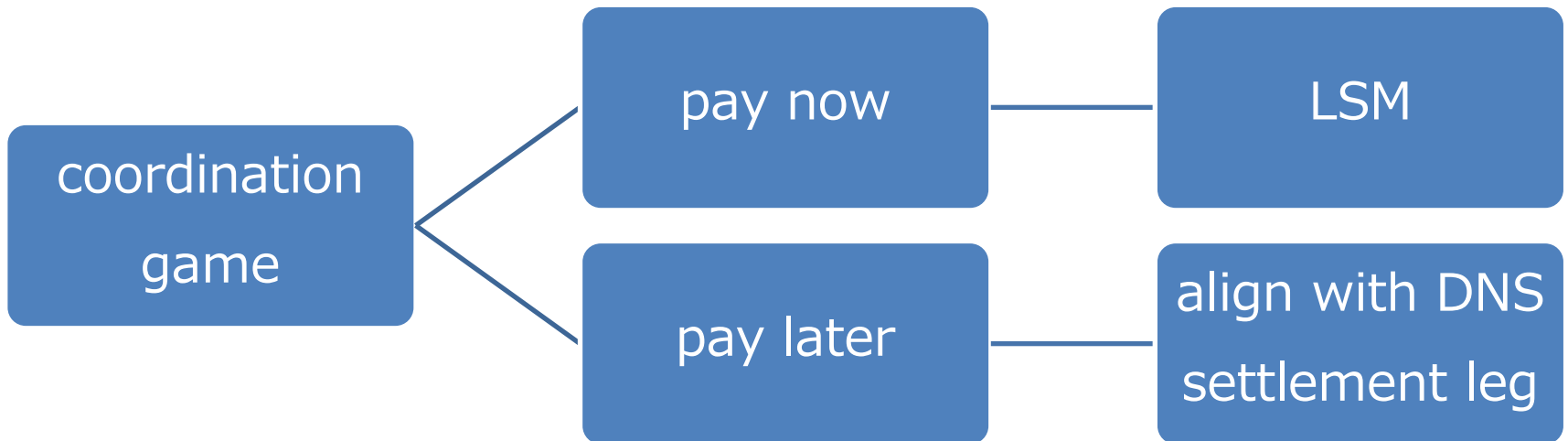
Chosen Few

Ultimately, it is up to mega banks (MUFG, SMBC, Mizuho).



(Source) Japanese Bankers Association, Annual Payment Statistics, 2020.

Early Payment/Settlement Incentives



Existence of other LVPS

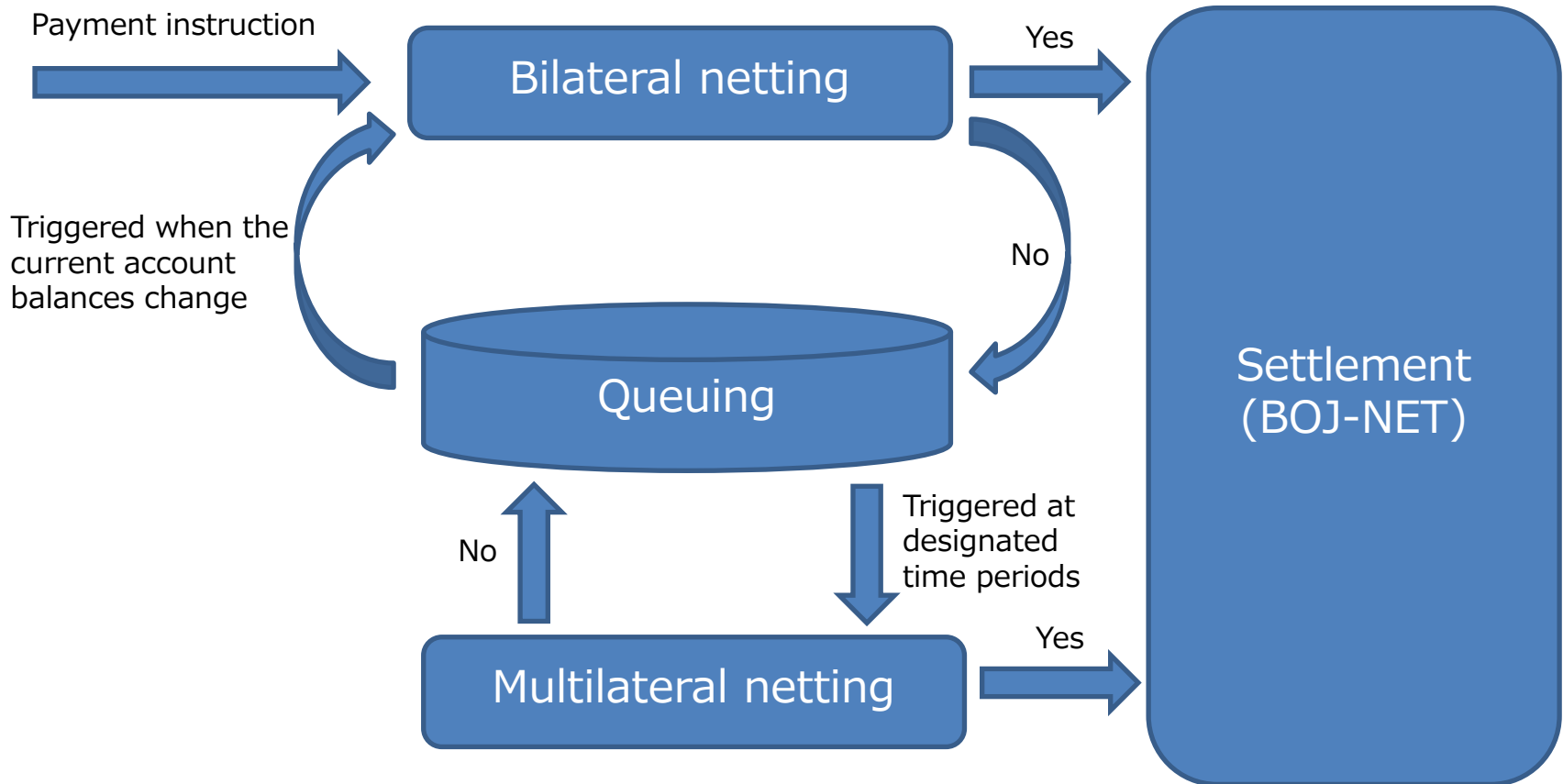
	CHIPS (United States)	EURO1 (Europe)	Zengin System (Japan)
Administrator	TCH (The Clearing House)	EBA CLEARING	Zengin-Net
Participation qualification	Deposit-taking institutions	Deposit-taking institutions	Deposit-taking institutions
Number of transactions	470,831 transactions	207,007 transactions	6,876,000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

(Source) "Report by the Task Force for the Next-Generation Payment Systems," Japanese Banks' Payment Clearing Network, February 2021.

BOJ-NET LSM

Banks have a choice for payment instructions under 100 million yen.

- a. RTGS: BOJ-NET (if queued, however, uncertainty regarding the timing of settlement)
- b. DNS: Zengin System (cleared and settled at 3:30pm)



Some Suggestions for the Future



Interplay between RTGS and private payment systems

Include Japan (possibly other Asian economies) in the data

Beef up BIS Red Book Statistics