

New Initiatives to Improve the Transparency of Securities Financing Markets in Japan: Publication of *Statistics on Securities Financing Transactions in Japan*

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The Bank of Japan first published *Statistics on Securities Financing Transactions in Japan* in January 2020. As part of global efforts to monitor securities financing transactions (SFTs) in the wake of the financial crisis, the Bank compiles and releases new statistics on SFTs in Japan for the purpose of further improving the transparency of securities financing markets. Since those new statistics cover granular transaction data with various attributes, they provide detailed information such as statistical series by currency or by counterparty jurisdiction, which cannot be ascertained from existing statistics. In this paper, we look over a brief history of the global discussions on collecting SFT data as well as efforts on data collection in Japan. We also provide an overview of the statistics and describe some key features of Japanese securities financing markets that have become clear from those new statistics.

Introduction

Securities financing transactions (SFTs) are transactions that involve the exchange of cash and securities for a set period. Historically, SFTs in Japan have developed as a means for securities dealers to borrow cash for the purpose of financing their inventory of securities, which are to be sold to investors. SFTs are also used as a means of temporarily borrowing securities that are to be delivered to investors. SFTs therefore play an important role in active trading in securities markets.

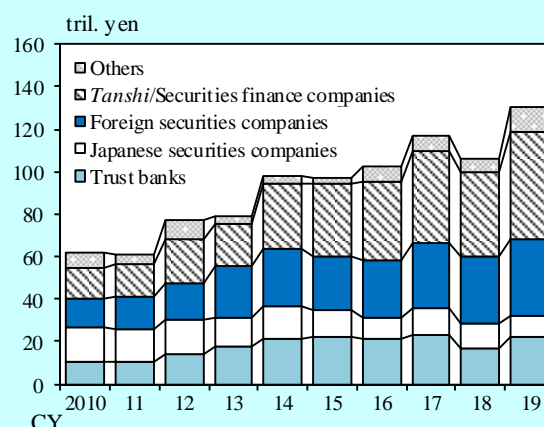
There has been an increase in the balance of SFTs in Japan and SFTs currently have the largest trading volume in short-term money markets in Japan.¹ In the last few years, the balance of SFTs has increased even more mainly due to an increase in arbitrage trading, which takes advantage of the three-tier system² of financial institutions' current accounts at the Bank of Japan and growing demand by residents outside Japan for the holding of Japanese government bonds (JGBs) or lending of Japanese yen (Chart 1).

Global discussions on SFTs and Japan's efforts on SFT data collection

The financial crisis and SFTs

While SFTs play a crucial role in supporting active trading in securities markets, it is said that prior to the

[Chart 1] Changes in the balance of SFTs in Japan



- Notes: 1. Outstanding balance of SFTs at the end of July each year on the cash lending side and the sum of GC and SC repo transactions.
2. *Tanshi* companies are companies that mainly make call loans or act as intermediaries for the lending and borrowing of such call money in the course of trading.

Source: Bank of Japan, *Tokyo Money Market Survey*.

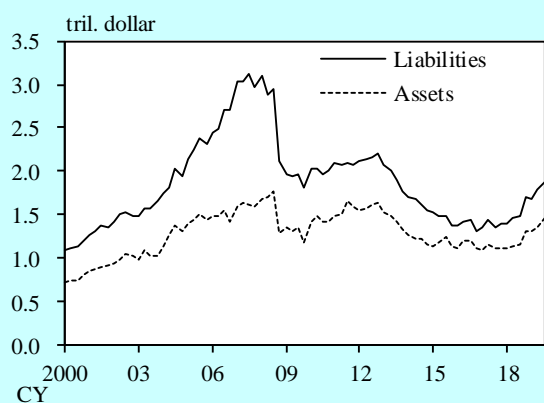
global financial crisis in 2008 some market participants used SFTs as a way to raise funds for the purpose of taking on greater leverage mainly in the U.S. and European markets. That is, short-term funds raised through SFTs were used to invest in illiquid assets and long-term financial assets³ including debt securities with creditworthiness that is not necessarily high, such as securitized products backed by subprime mortgages.

At the time of the financial crisis, the leverage that

was increased in that way was suddenly deleveraged (Chart 2). In other words, growing concerns over the creditworthiness of the securities used in SFTs caused a rapid increase in haircuts⁴ required by the cash lending side, which consequently hindered smooth funding. It is thought that such structure led to sell-offs of securities by the cash borrowing side, creating a vicious cycle that caused further declines in the prices of securities and the tightening of market liquidity.

It has been said that non-bank sectors used SFTs for excessive risk taking -- in a system also known as shadow banking -- in this way as a means of credit intermediation, which subsequently worsened the crisis.

[Chart 2] Outstanding balance of SFTs by broker-dealers in the United States



Note: Latest figures are as of September 2019.

Source: Federal Reserve Board, *Financial Accounts of the United States*.

Global discussions on SFTs

In the wake of the global financial crisis, international forums including the Group of Twenty (G20) and the Financial Stability Board (FSB) began discussing the regulation and supervision of credit intermediation by non-banks. A series of global discussions on SFTs started at the Seoul Summit in November 2010, where the G20 leaders asked the FSB to establish recommendations to strengthen shadow banking monitoring and regulations. As a result, the FSB has started to strengthen various regulations and look at measures that would reduce the risk and enhance the transparency of SFTs as an effort to reduce the risk in financial stability arising from shadow banking.⁵

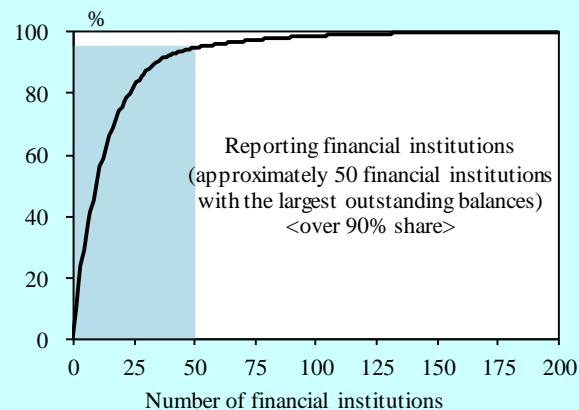
Following subsequent discussions, the FSB published a report in November 2015 entitled "Transforming Shadow Banking into Resilient Market-Based Finance: Standards and Processes for

Global Securities Financing Data Collection and Aggregation." ⁶ That report proposed the establishment of a framework where national and regional authorities collect granular data on individual SFTs and the FSB aggregates and publishes those data.

Japan's efforts based on global discussions

In accordance with those global efforts, in Japan, the Financial Services Agency (JFSA) and the Bank jointly conducted a survey in 2016 to gain an understanding of the trends and developments in SFTs. That survey had around 1,300 financial institutions in Japan as respondents including depository institutions (e.g., banks, credit associations [*shinkin* banks], labor banks, credit cooperatives [*shinkumi* banks], and *keito* financial institutions), securities companies, insurance companies, *tanshi* companies (money market dealers), and trust banks. Based on the results of that survey, the Bank selected approximately 50 financial institutions with the largest SFT trading volume -- covering over 90 percent of the cumulative share of SFTs -- as the reporting financial institutions and requested them to report transaction data on a monthly basis (Chart 3).

[Chart 3] Cumulative share of amount of SFTs

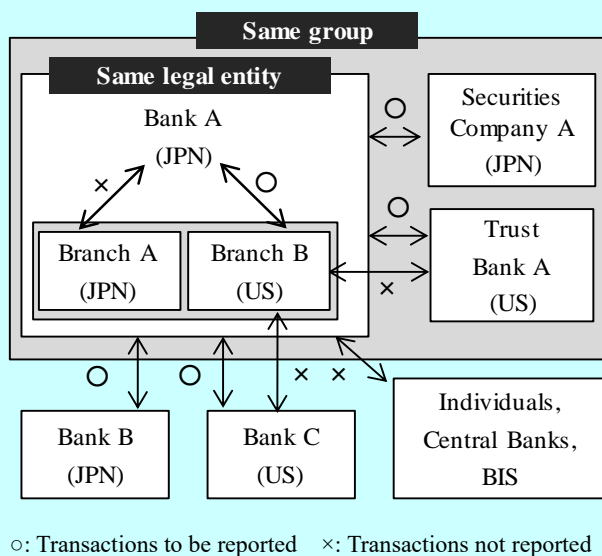


Note: Prepared based on a transaction volume survey conducted in 2016.

SFTs with counterparties located in Japan as well as those with counterparties located overseas, intra-group transactions between different legal entities or between foreign branches and their parent companies, and transactions with international organizations are included in the scope of data to be reported. However, internal transactions in which both parties are part of the same legal entity, transactions executed with individuals, central banks or the Bank for International Settlements (BIS), and transactions where the reporting financial institution only provides

advice are excluded from the scope of data reporting (Chart 4).

[Chart 4] Scope of reporting on transactions of "Bank A"



Collected data on individual transactions include various attributes such as counterparties, transaction terms, transaction types, and collateral information (Chart 5). In the dataset, in addition to the data elements that are in accordance with the recommendations of the FSB, the Bank established unique data categories based on practices in Japanese securities financing markets. For example, the Bank distinguished General Collateral (GC) repo transactions where the securities are not specified from Special Collateral (SC) repo transactions where the securities are specified, and it also added a label to identify Subsequent Collateral Allocation Repos,⁷ which was introduced in accordance with the shortening of the JGB settlement cycle.

[Chart 5] Attributes of SFT data

Counterparty
Name, sector, jurisdiction, etc.
Transaction terms
Starting/ending date, principal amount, repo rate, haircut, etc.
Transaction types
GC repo, SC repo, Subsequent Collateral Allocation Repos, CCP-cleared or not, CCP jurisdiction, etc.
Collateral information
Security type, cash currency type, maturity date, rating, re-use eligibility, management entity, market value, etc.

In collecting SFT data on individual transactions in this way, the Bank has developed a dedicated system for aggregating SFT data, and it has been working to establish an information management system and an analysis platform for granular data including SFT data. After those preparations, the collection of SFT data started in Japan in January 2019 and aggregate data are being reported to the FSB. Also, the JFSA and the Bank utilize those data to understand trends in securities financing markets such as haircuts and the types of collateral securities and to monitor trading activities of individual financial institutions.

Overview of Statistics on Securities Financing Transactions in Japan

The Bank began releasing some of the data compiled in *Statistics on Securities Financing Transactions in Japan* in January 2020 to improve the transparency of securities financing markets in Japan. In those statistics, the Bank releases such data as the outstanding balances of (1) repo transactions configured as transactions consisting of security purchases with repurchase agreements and (2) securities lending transactions in which cash is used as collateral to borrow securities, as well as their total outstanding balances.

The commencement of data is December 2018, and the frequency of compilation is monthly. In principle, data are published on the 15th business day of the month after the month they were collected. Statistical tables are released on the Bank's website. Details are available in the Explanation of *Statistics on Securities Financing Transactions in Japan*, which is also on the Bank's website.⁸

Key Features of Japan's Securities Financing Markets Shown by the New Statistics

Examples of existing statistics on securities financing markets include *Tokyo Money Market Survey*, which is published by the Bank each year, and *Balance of Bond Transactions with Repurchase Agreements (by investor type)*, which is published by the Japan Securities Dealers Association each month.

While almost all financial institutions in securities financing markets are represented in the reporting financial institutions in existing statistics, the number of those financial institutions is limited to about 50 institutions in *Statistics on Securities Financing*

Transactions in Japan. However, the statistics cover all of the leading financial institutions in terms of SFT trading volume, so there is a proper coverage of data⁹ in terms of the total outstanding balances of SFTs (Chart 6).

With regard to the items of the statistics, since the statistics have an advantage of collecting data on individual transactions, the Bank can compile and release data that cannot be ascertained by existing statistics such as the outstanding balances of transactions where the cash leg is denominated in a foreign currency. Furthermore, other features of the statistics include information about counterparty jurisdiction, original maturity, which is calculated as the difference between the ending date and the starting date of the transactions, and daily data on repo transactions.

[Chart 6] Comparison with other statistics

Name	Statistics on Securities Financing Transactions in Japan	Tokyo Money Market Survey	Statistics by Japan Securities Dealers Association
Reporting entities	Approximately 50 financial institutions with the largest trading volume	302 (sum of eligible institutions for the Bank's money market operations and other major participants in the money market)	268 securities companies 204 special members
Reported securities	All securities	Bonds denominated in Japanese yen	Bonds denominated in Japanese yen, equities, etc.
Outstanding balances	209 tril. yen ¹	143 tril. yen ²	208 tril. yen ³
Items	By sector, by cash currency, by jurisdiction, by GC/SC repo, etc.	By sector, by GC/SC repo, etc.	By sector, etc.

Notes: 1. Sum of outstanding balances in "2-1. Transactions in Japanese yen, by counterparty" and "2-2. Transactions in foreign currencies, by counterparty" by the cash borrowing side at the end of July 2019.
2. Total outstanding balances of GC/SC repo transactions by the cash borrowing side at the end of July 2019.
3. Sum of outstanding balances in *Balance of Bond Transactions with Repurchase Agreements (by investor type)*, *Bond Margin Loans (Collateralized) (Cash)*, and *Kabukentō taishaku jōkyō* (available only in Japanese) from the cash borrowing side at the end of July 2019.

Sources: Bank of Japan; Japan Securities Dealers Association.

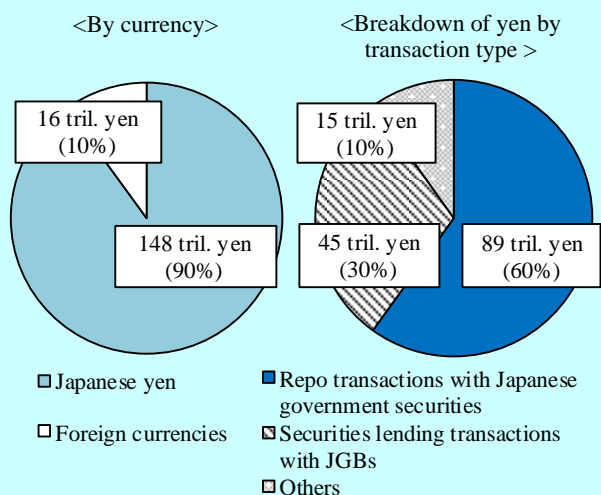
In the following section, we briefly introduce some key features of securities financing markets in Japan that became ascertainable with the new statistics.

Trading volume of SFTs by cash currency or by transaction type

The statistics reveal the trading volume in Japanese yen or foreign currencies and by transaction type. For example, from the viewpoint of the cash lending side, the average month-end outstanding balance in securities financing markets in Japan during a one-year period from December 2018 to November 2019 was 164 trillion yen. Of that total outstanding balance of SFTs, the outstanding balance of transactions denominated in Japanese yen was 148 trillion yen (approximately 90 percent of the total outstanding balance), indicating that transactions in Japanese yen make up the bulk of SFTs in Japan.

Of the transactions denominated in Japanese yen, the average month-end outstanding balance was 89 trillion yen for "Repo transactions with Japanese government securities"¹⁰ and 45 trillion yen for "Securities lending transactions with JGBs" (accounting for approximately 60 percent and 30 percent, respectively). This indicates that transactions with JGBs make up the majority of SFTs where the cash leg is denominated in Japanese yen (Chart 7).

[Chart 7] Outstanding balances by currency and transaction type



Notes: 1. Outstanding balances from the cash lending side (average month-end outstanding balances from December 2018 to November 2019).

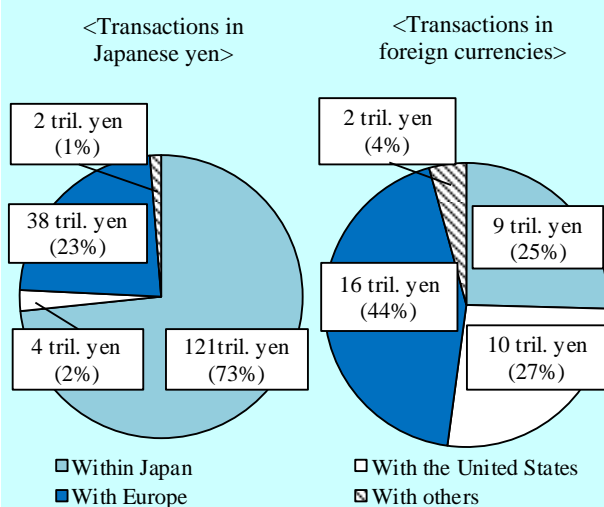
2. "Others" includes SFTs using equities, CP, and corporate bonds.

Source: Bank of Japan, *Statistics on Securities Financing Transactions in Japan*.

Key features of counterparty jurisdictions

In the statistics, counterparty jurisdictions are classified as "United States," "Europe," and "Others" for transactions where counterparties are residents outside Japan (cross-border transactions).¹¹ Looking at the average month-end outstanding balances during a one-year period from December 2018 to November 2019, reporting financial institutions borrowed an equivalent of 130 trillion Japanese yen (Japanese yen: 121 trillion yen, foreign currencies: 9 trillion yen) from residents in Japan, and an equivalent of 72 trillion Japanese yen (Japanese yen: 44 trillion yen, foreign currencies: 28 trillion yen) from residents outside Japan. Of the residents outside Japan, residents in Europe have a large share (Chart 8). In particular, borrowing from Europe accounts for 44 percent of all foreign currencies borrowed. This is mainly because financial institutions headquartered in Europe conduct many transactions between their Japanese offices and those located overseas.

[Chart 8] Outstanding balances by counterparty jurisdiction



Note: Outstanding balances by counterparty jurisdiction from the cash borrowing side (average month-end outstanding balances from December 2018 to November 2019).

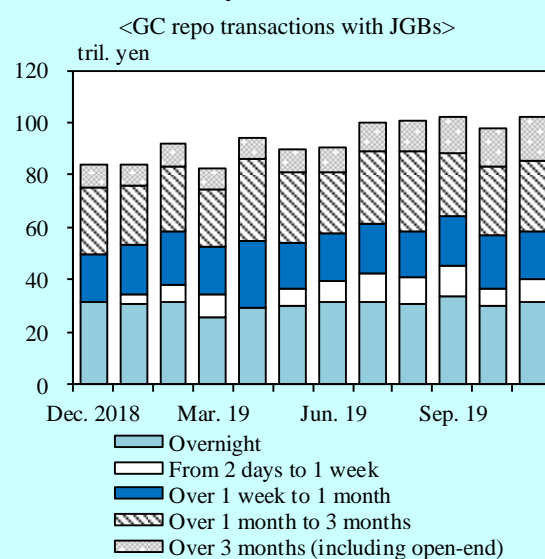
Source: Bank of Japan, *Statistics on Securities Financing Transactions in Japan*.

Key features of original maturity

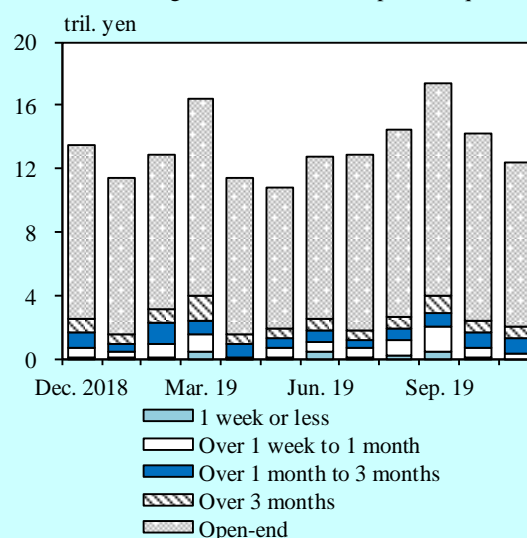
In the statistics, original maturity is classified as "Overnight," "2D or more and 1W or less," "More than 1W and 1M or less," "More than 1M and 3M or less," "More than 3M," and "Open-end."

Looking at the original maturity of GC repo transactions with JGBs, the largest amount of transactions is classified as "Overnight," while there is also a considerable amount of transactions with a term to maturity (Chart 9).

[Chart 9] Outstanding balances by original maturity



<Securities lending transactions with Japanese equities>



Note: Outstanding balances from the cash lending side and equities borrowing side.

Source: Bank of Japan, *Statistics on Securities Financing Transactions in Japan*.

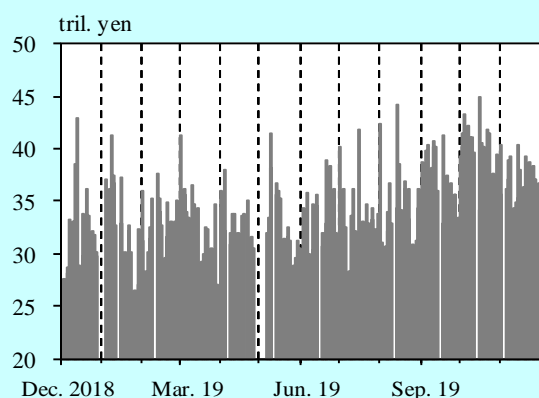
On the other hand, open-end transactions where no maturity date is specified in advance are predominant in securities lending transactions with Japanese equities. In addition, seasonal fluctuations can be seen in securities lending transactions with Japanese equities with an increase in outstanding balances of the transactions at the end of March and September, which is when Japanese companies tend to pay dividends or grant similar rights.

Key features of daily data on repo transactions

The statistics also include daily data on principal amounts and the number of repo transactions where the cash leg is denominated in Japanese yen, which

are conducted by reporting financial institutions as the cash lending side. Since the collected data are daily data, it is possible to closely analyze and understand the trends in securities financing markets, such as changes in the amount of transactions after a long holiday period and trends in trading volume when repo rates rise (Chart 10).

[Chart 10] Daily principal amount of repo transactions



Source: Bank of Japan, *Statistics on Securities Financing Transactions in Japan*.

Concluding Remarks

In this paper, we have looked at the history of global discussions on collecting SFT data after the financial crisis and we have provided an overview of *Statistics on Securities Financing Transactions in Japan*, which the Bank began publishing in January 2020, and key features of securities financing markets in Japan that have become clear from the new statistics.

The statistics provide information on a monthly basis that cannot be obtained from existing statistics such as transaction data by cash currency, transaction type, counterparty jurisdiction, and original maturity, as well as daily repo transactions. While these data have been collected for only about one year, we expect to utilize them for analyses in a broad range of areas as they accumulate over the coming years.

As mentioned above, SFTs play an important role in promoting active transactions in securities markets. The Bank expects the publication of these statistics will help improve the transparency of securities financing markets in Japan, thereby contributing to maintaining and improving the functionality and robustness of financial markets overall.

¹ For example, see *Trends in the Money Market in Japan -- Results of the Tokyo Money Market Survey (August 2019)* --.

² Since the introduction of Quantitative and Qualitative Monetary Easing with a Negative Interest Rate in January 2016,

the outstanding balance of each financial institution's current account at the Bank has been divided into three tiers (Basic Balance, Macro Add-on Balance, and Policy-Rate Balance), to each of which a positive interest rate, a zero interest rate or a negative interest rate is applied, respectively. For details, see https://www.boj.or.jp/en/announcements/release_2016/k160129_a.pdf. An example of arbitrage trading is, when the repo rate exceeds the Bank's policy rate, financial institutions with "unused allowances" in their Macro Add-on Balance borrow cash, and those with a Policy-Rate Balance lend cash.

³ The typical channels to take on further leverage include (1) borrowing highly liquid assets such as cash in SFTs and investing in illiquid assets such as non-investment grade bonds (which is referred to as liquidity transformation) and (2) borrowing short-term funds in SFTs and investing in long-term financial assets (which is referred to as maturity transformation).

⁴ A haircut is where the market value of a delivered security is discounted by a percentage taking into account the risk of fluctuation in the collateral price and the credit risk of the counterparty. If a haircut increases, the borrower needs to prepare an additional amount of its own funds, which makes it difficult to increase leverage.

⁵ For details on global discussions on SFTs, see Ono, N., Sawada, K., and Tsuchikawa, A. "Toward Further Development of the Repo Market" (Bank of Japan Review 2015-E-4, 2015).

⁶ For details, see

<https://www.fsb.org/wp-content/uploads/Press-Release-Global-SFT-Data-Standards-and-Processes.pdf>.

⁷ Subsequent Collateral Allocation Repos are GC repo transactions where, at the time of the execution of the transaction, the parties only agree on the amount of funds and the basket of securities to be delivered, and the allocation of collateral is delegated to a third party just before the settlement. With the enforcement of the shortening of the JGB settlement cycle on May 1, 2018, it became difficult to execute and settle GC repo transactions on the same day by using conventional transactions that require the allocation of JGBs immediately after the execution. Hence, a new type of transaction, Subsequent Collateral Allocation Repos, was introduced.

⁸ See the Explanation of *Statistics on Securities Financing Transactions in Japan* at

<https://www.boj.or.jp/en/statistics/outline/exp/exrepo.html>.

⁹ As each set of statistics differs in coverage and method of aggregation, the coverage of each of those cannot be compared only in terms of outstanding balances.

¹⁰ "Japanese government securities" indicates government securities (government bonds, local government bonds, government guaranteed bonds, etc.) that are denominated in Japanese yen.

¹¹ Corporations located in countries or regions other than Japan listed in Appended Table 2 of the Ministerial Ordinance concerning Reports on Foreign Exchange Transactions, etc. (Ordinance of the Ministry of Finance No. 29 of 1998) and international organizations.

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