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Trends in the Money Market in Japan

— Results of the Tokyo Money Market Survey (August 2016) —

Financial Markets Department
Bank of Japan

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Trends in the Money Market in Japan

Results of the Tokyo Money Market Survey (August 2016)

■ Introduction ■

The Financial Markets Department of the Bank of Japan (the Bank) has conducted the Tokyo Money Market Survey since 2008 to understand developments in the Japanese money market. Initially, this series of surveys was conducted every other year. However, to observe market trends more precisely, the Bank decided to conduct the survey annually beginning with the 2013 survey. In August 2016, the seventh survey in the series was carried out (the survey was conducted as of end of July 2016).

As with the previous surveys, this survey covers all eligible counterparties in the Bank's money market operations, as well as other major participants in the money market. The number of respondents in the survey was 300 (with a response rate of 100 percent), up from 298 in the 2015 survey, due to a rise in the number of eligible counterparties in the Bank's money market operations.

The Bank intends to capture comprehensively and from various angles the situations and structural changes in the money market, utilizing the results of this survey as well as the results of the Bond Market Survey. The Bank will continue to enhance a dialogue with market participants by taking advantage of the Meeting on Market Operations and the Bond Market Group to actively support the relevant parties in their efforts to enhance the Japanese financial markets, including the money market. The Bank intends to contribute significantly to such endeavors in its capacity as Japan's central bank.

Number of Respondents in the Tokyo Money Market Survey (August 2016)

	2015 survey	2016 survey
Total respondents	298	300
Eligible counterparties in the Bank's money market operations	268	273

Note: In addition to the eligible counterparties in the Bank's money market operations, several major life insurance companies, general insurance companies and major asset management companies participated in the survey (with a response rate of 100 percent).

■ Overview ■

The amounts outstanding in the money market decreased from the levels of the previous year on both the cash borrowing side and the cash lending side¹. However, the amount outstanding on the cash borrowing side remained at a high level, exceeding the levels observed between 2009 and 2013.

The decrease on the cash borrowing side can be attributed to (1) the decline in call transactions, particularly collateralized call transactions, consequent to interest rates falling into negative territory and (2) the decline in funding through CDs and CPs, whose issuance rates were hovering at around 0 percent, amid the difficulties in investing money at positive rates. On the cash lending side, in addition to the decline in call transactions, investments in treasury discount bills (T-Bills) also decreased.

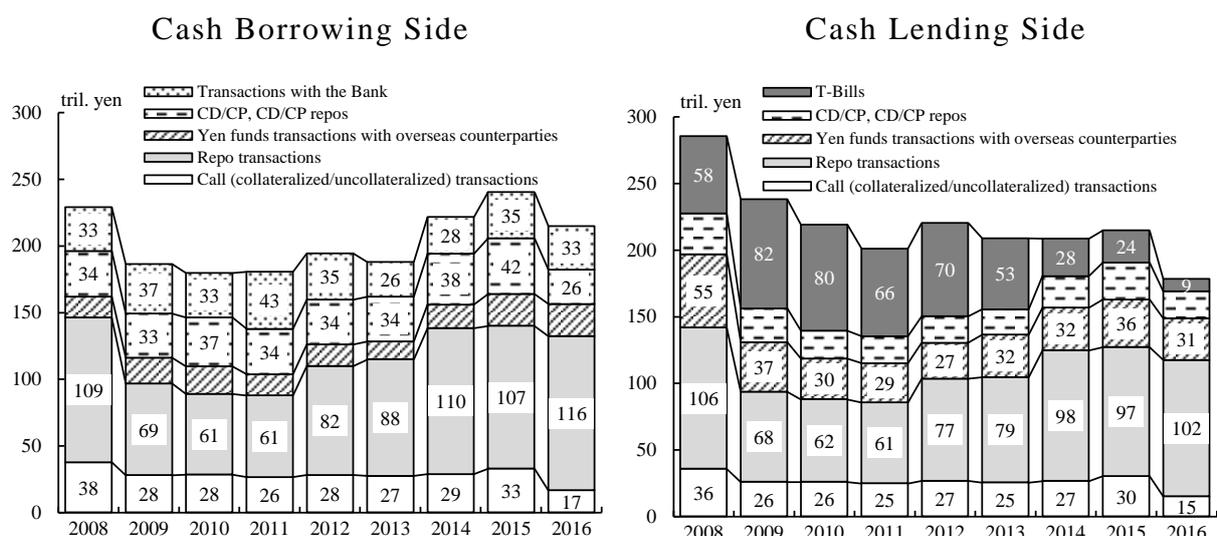
Meanwhile, repo transactions expanded their market size due to the fact that general collateral (GC) repos functioned as substitutes for call transactions and that repo transactions were preferred in arbitrage trading using unused allowances in the macro add-on balance or the basic balance of current account deposits at the Bank.

¹ The discrepancies between the figures on the cash lending side and borrowing side are due to the constraints regarding the counterparties covered by this survey (e.g., non-residents are not included), and the fact that some types of transactions are recorded only on one side (e.g., transactions with the Bank are recorded only on the cash borrowing side, while treasury discount bills [T-Bills] are recorded only on the lending side).

With respect to the functioning of the money market, the share of respondents who answered that it had "declined" increased to about 60 percent. This increase was due to interest rates in the money market falling into negative territory and to difficulties experienced in executing transactions in desired volumes. On the other hand, the share of respondents who answered that the functioning of the money market had "improved" increased to about 10 percent, reflecting an increase in the new type of arbitrage trading using unused allowances in the macro add-on balance or the basic balance at the Bank.

The Bank intends to continue to observe closely the developments in the money market through day-to-day monitoring activities, implementation of the Tokyo Money Market Survey, and a dialogue with market participants.

Amount Outstanding in the Money Market



Note: "Yen funds transactions with overseas counterparties" refers to the total of yen lending/funding through the FX swap market (those with a term of one year or less), Euroyen transactions, and yen lending/borrowing transactions with the overseas offices of financial institutions.

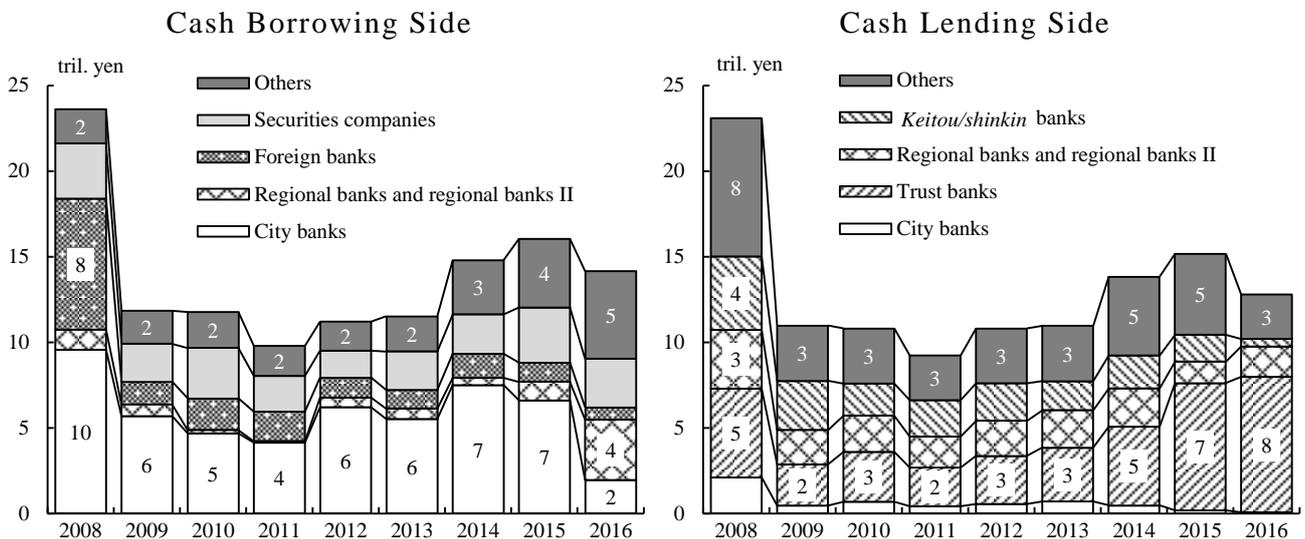
1. A Small Decrease in Uncollateralized Call Transactions

The amount outstanding of transactions in the uncollateralized call market decreased slightly from the previous year.

This was attributed to the fact that city banks refrained from borrowing cash to avoid holding the policy rate balance and also to the fact that some financial institutions had IT system constraints on trading at negative interest rates in the uncollateralized call market. It was also pointed out that life and nonlife insurers stopped lending in the uncollateralized call market after the interest rates became negative.

However, the decrease in the amount outstanding of transactions was pointed out to be small for the following reasons. First, on the cash borrowing side, regional and type II regional banks with unused allowances in their macro add-on balance or basic balance started to engage in arbitrage trading by adding the funds borrowed at negative interest rates to their current account deposits at the Bank. Second, on the cash lending side, investment trusts, which are included in trust banks in the chart, increased lending at negative rates in mid-April.

Amount Outstanding in the Uncollateralized Call Market by Investor Type



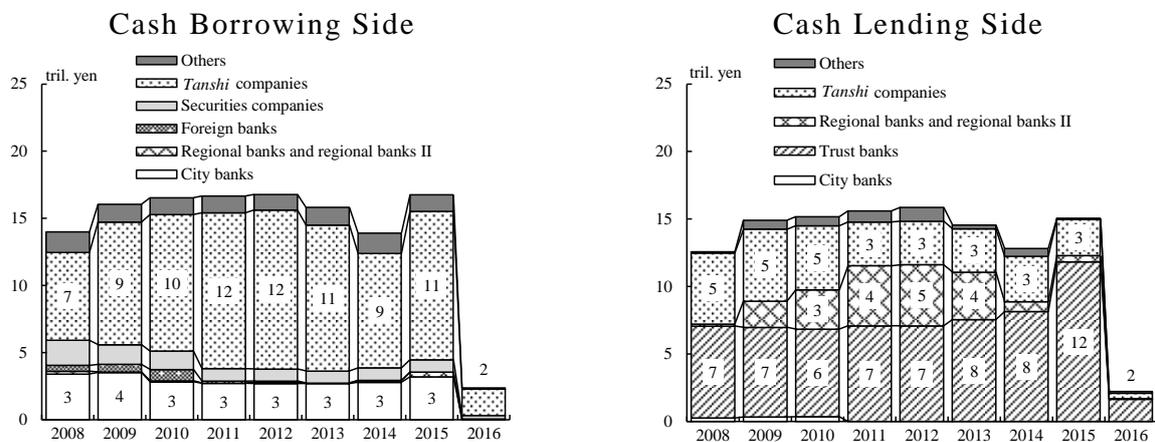
2. A Significant Decrease in Collateralized Call Transactions

The amount outstanding of transactions in the collateralized call market decreased significantly from the previous year.

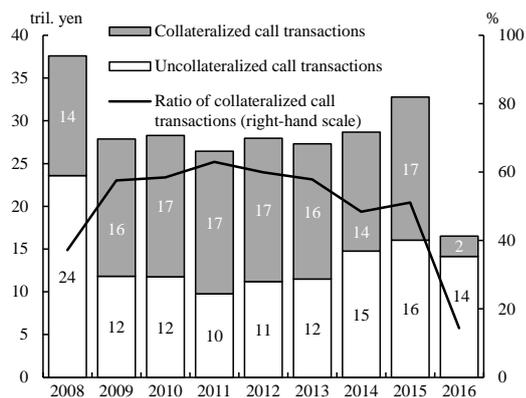
Looking at the transactions by investor type, transactions between trust banks and investment trusts as lenders and *tanshi* companies as borrowers, which constituted the majority of collateralized call transactions, decreased significantly. In these transactions, *tanshi* companies had been meeting the investment needs of trust banks and investment trusts by raising funds from them with collateral bonds borrowed through GC repos. However, it became difficult for the *tanshi* companies to offer the positive rates desired by trust banks and investment trusts as interest rates in GC repos fell into negative territory under the negative interest rate policy.

In addition, city banks dropped funding through collateralized call transactions almost altogether for the same reasons as those for uncollateralized call transactions.

Amount Outstanding in the Collateralized Call Market by Investor Type



Amount Outstanding in the Call Market and the Ratio of Collateralized Transactions



3. Decreases in CD/CP and T-Bill Transactions

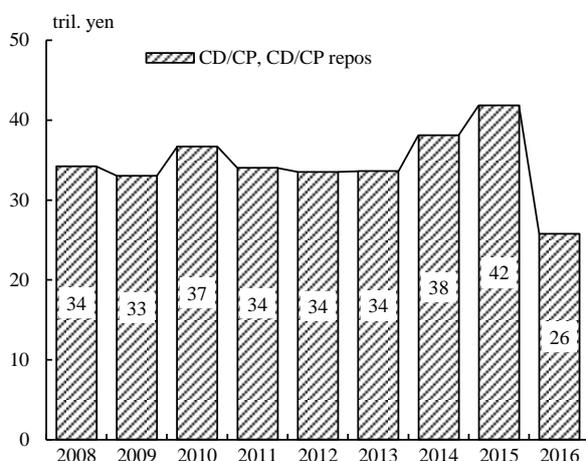
The amount outstanding of CD/CP transactions and investments in T-Bills decreased from the previous year.

The decrease in CD/CP transactions was due to the fact that amid the difficulties in investing money at positive rates, financial institutions decreased funding through CD/CPs, whose issuance rates hovered at around 0 percent, to reduce their current account deposits at the Bank and to avoid the negative interest rate from being applied to these deposits.

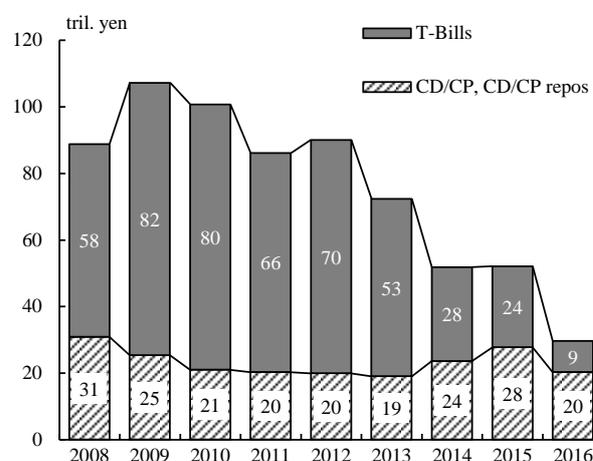
Regarding T-Bills, some pointed out that demand from domestic investors had declined as yields on T-Bills remained below minus 0.1%, the negative rate applied to the policy rate balance at the Bank, due to demand from overseas investors and purchases by the Bank.

Amount Outstanding in CD/CP and T-Bill Transactions

Cash Borrowing Side



Cash Lending Side



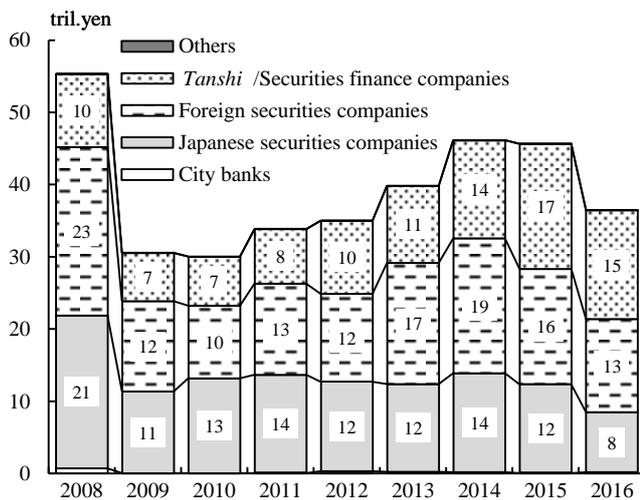
4. A Decrease in SC Repo Transactions

Of repo market² transactions, the amount outstanding of special collateral (SC) repos³ declined from the previous year.

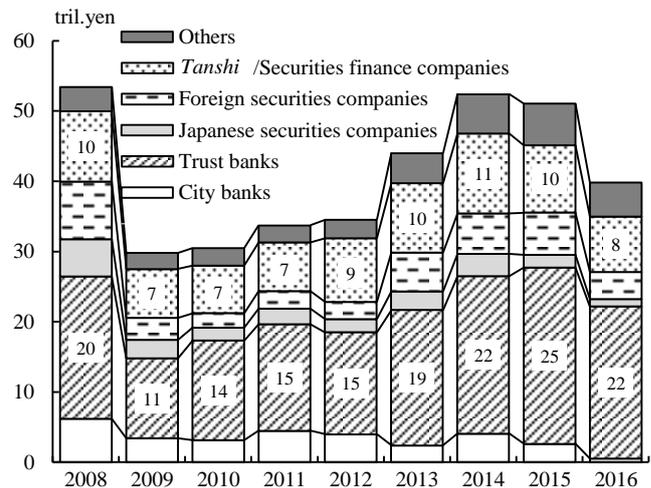
This was attributed to a decline in the needs of securities companies, which are the major bond borrowers in the market. Amid the tightening of supply and demand conditions of JGBs, due to the Bank's JGB purchases, securities companies held back from taking short positions in cash bonds, thereby reducing the need for borrowing bonds in SC repo transactions to cover short positions.

Amount Outstanding in SC Repo Transactions by Investor Type

Bond Borrowing Side



Bond Lending Side



² In this paper, the market for cash-collateralized securities lending transactions (the so-called *gentan* repo) and securities repurchase transactions (the so-called *gensaki* repo) is called the "repo market."

³ These are repo transactions in which the securities to be used as collateral are specified.

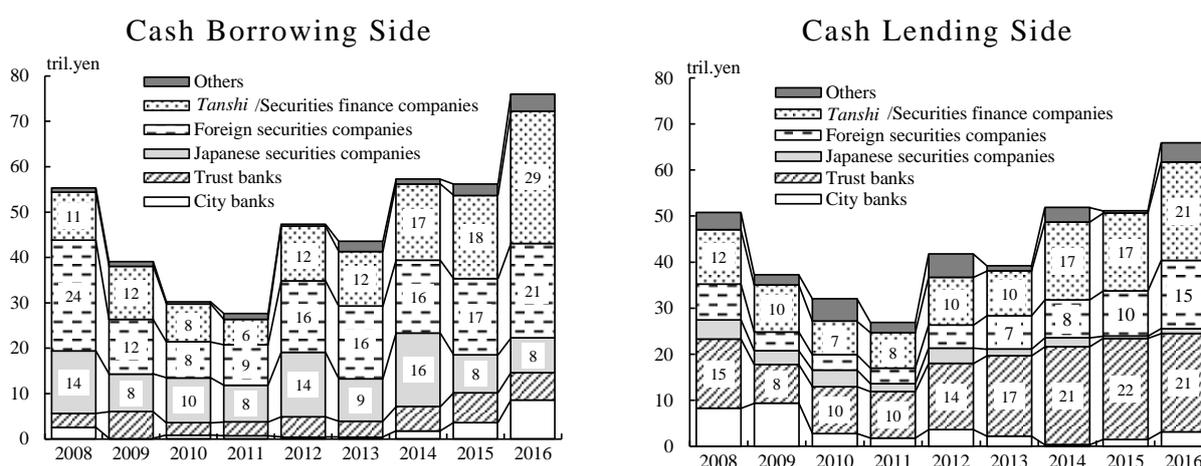
5. A Significant Increase in GC Repo Transactions

On the other hand, the amount outstanding of GC repo⁴ transactions increased significantly from the previous year.

Factors pointed out to be responsible for the increase were (1) financial institutions with IT system constraints on trading at negative rates in the uncollateralized call market increased GC repo transactions as an alternative⁵; (2) financial institutions preferred funding through GC repos versus the call market when engaging in arbitrage transactions, using unused allowances in the macro add-on balance or the basic balance, since the former's interest rates were more negative than the latter's; and (3) for financial institutions with a policy rate balance, GC repos were preferable to call market transactions as means of investment, since larger volumes could be traded through GC repos than through the call market.

In addition, with the widening of the dollar funding premium, non-residents' spread transactions between the yen-conversion rate and GC repo rate⁶ increased, which led to an increase in GC repo transactions by foreign securities companies, which functioned as intermediaries between the non-residents and the GC repo market.

Amount Outstanding in GC Repo Transactions by Investor Type



⁴ These are repo transactions in which the securities to be used as collateral are not specified.

⁵ Many financial institutions did not require additional improvement in their IT systems for repo transactions.

⁶ These are transactions in which non-residents convert their U.S. dollar-denominated assets into the yen and invest the yen funds in GC repos. Even if GC repos earn negative returns, if the funding interest rates of the yen-conversion are more negative, the spread between the two makes profits.

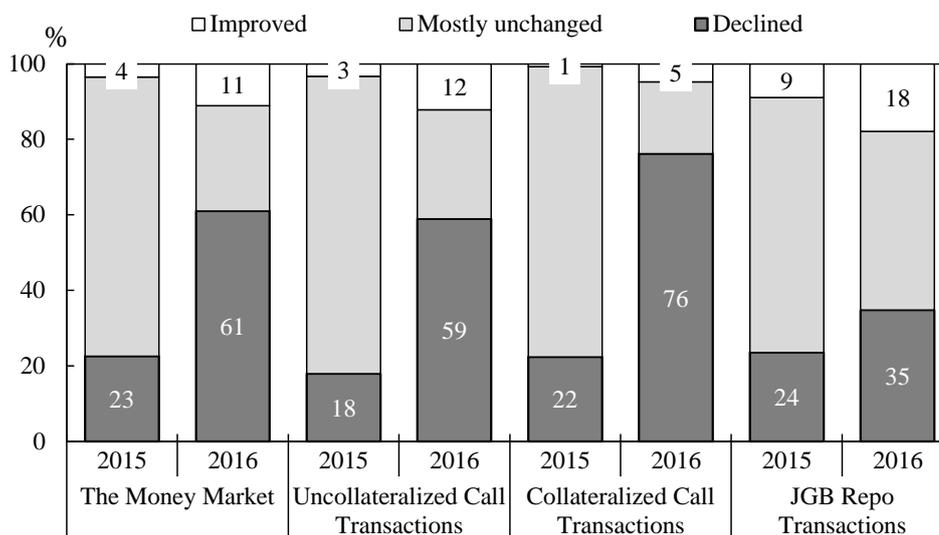
6. Perceptions of Market Participants on the Functioning of the Money Market

The share of respondents who answered that the functioning of the money market had "declined" increased to about 60 percent, due to interest rates in the money market falling into negative territory and difficulties experienced in executing transactions in desired volumes, especially in the call market.

In individual markets, respondents saying that the functioning had "declined" increased significantly for the call market. However, there was only a small increase in responses saying that JGB repo transactions' functioning had "declined," due partly to the rise in the amount outstanding of JGB repo transactions.

On the other hand, the share of respondents who answered that the functioning of the money market had "improved" increased to about 10 percent. It was pointed out that the functioning had improved because the new type of arbitrage trading using unused allowances in the macro add-on balance or the basic balance at the Bank had increased.

Perceptions of Market Participants on the Functioning of the Money Market



[BOX] The Money Market Under the Negative Interest Rate Policy

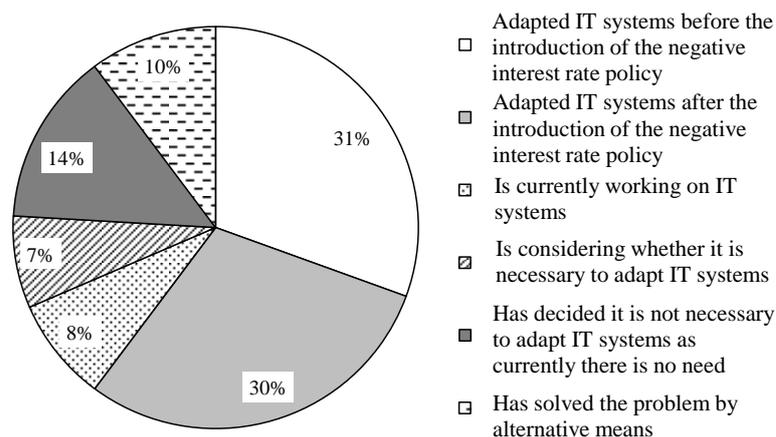
Introduction of the negative interest rate policy has brought numerous changes in the money market. Of these changes, this section examines the impact of financial institutions' IT system constraints and the three-tier structure of the current account deposits at the Bank on the money market.

(Constraints of IT Systems)

As stated earlier (in Sections 1 and 2), it was pointed out that one reason for the decrease in the amount outstanding of call market transactions was the constraint to trade at negative rates imposed by the financial institutions' IT systems⁷.

Results of a survey on the adjustment status of IT systems to negative interest rates show that only about 30 percent of the respondents had adapted their IT systems before the introduction of the negative interest rate policy. However, another 30 percent of respondents subsequently adapted their IT systems, which suggests that approximately 60 percent of the respondents had prepared for negative interest rates by the time this survey was conducted at the end of July, 2016. As for the rest of the respondents, nearly 10 percent answered that they were working on their IT systems at the time the survey was taken.

Status of IT Systems Adjustments to Negative Interest Rates in the Uncollateralized Call Market⁸



It is necessary to pay close attentions to future developments in the call market, including progress in IT system adjustments.

⁷ For repo transactions, many financial institutions did not require additional measures in terms of IT systems.

⁸ Respondents are only those counterparties that executed uncollateralized call transactions in the year before the survey was conducted.

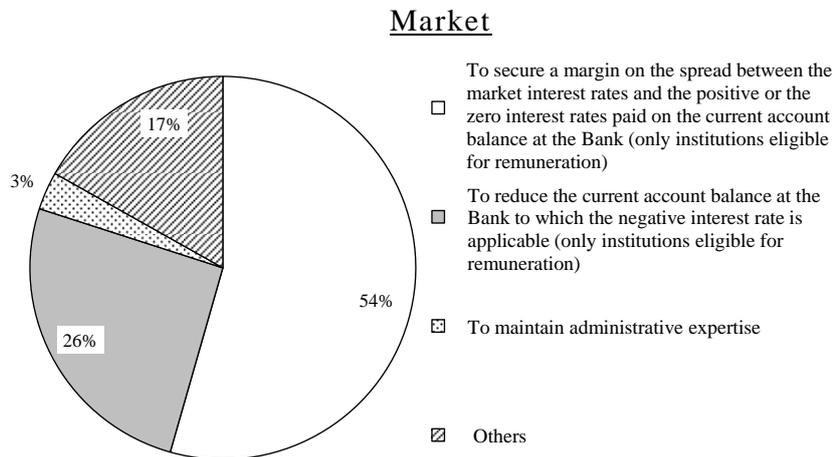
(The Three-Tier Structure of the Outstanding Balance of Current Accounts at the Bank)

The three-tier structure of the outstanding balance of current accounts at the Bank under the negative interest rate policy created new opportunities for arbitrage trading in the money market.

The three-tier structure created an incentive to trade, even at negative interest rates, for financial institutions with a policy-rate balance and for those with unused allowances in their macro add-on balance or basic balance. For those with a policy rate balance, there is an incentive to invest in the money market if the interest rate is less negative than minus 0.1 percent, which is the policy interest rate. On the other hand, if financial institutions with unused allowances in their macro add-on balance or basic balance (to which interest rates of 0 percent and plus 0.1 percent are applied respectively) borrow funds at interest rates below these rates, they can make profits by depositing these funds in their current accounts at the Bank.

The following survey result indicates that this incentive indeed drives transactions.

Purpose of Trading at Negative Interest Rates in the Uncollateralized Call

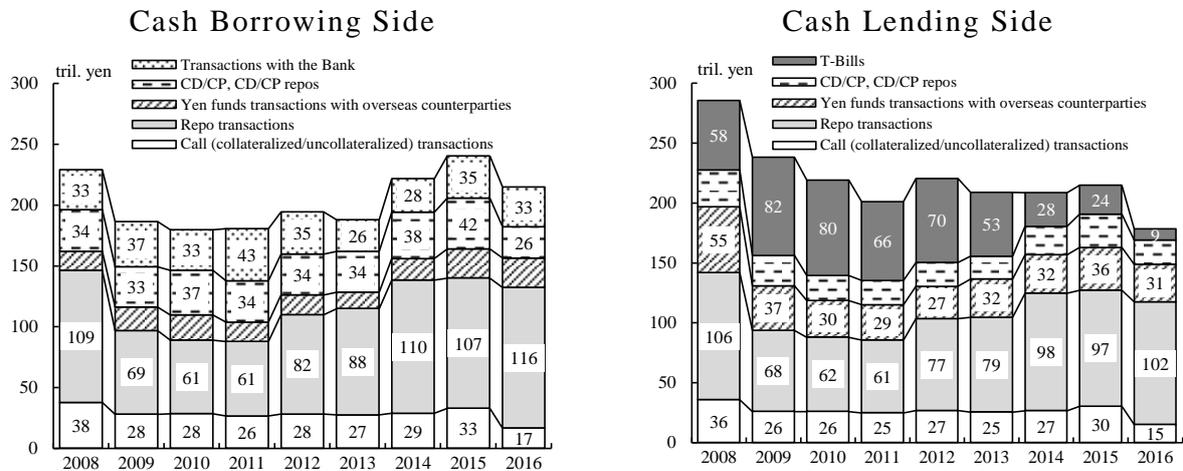


Also, the small increase of the share of respondents who answered that the functioning of the money market had "improved" may be attributed to new opportunities to earn profits through the aforementioned arbitrage trading, as stated earlier (in Section 6).

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Chart 1: Amount Outstanding in the Money Market



- Note: 1. Among call transactions, the figures for uncollateralized call transactions are calculated as total transactions through *tanshi* companies (money market brokers) and direct dealing (DD) transactions. The source of data on transactions through *tanshi* companies is "Amount Outstanding in the Call Money Market" by the Bank (the same applies hereafter).
2. Transactions with the Bank denote Funds-Supplying Operations against Pooled Collateral, Purchase/Sale of Japanese Government Securities with Repurchase Agreements, Purchases of CP with Repurchase Agreements, Funds-Supplying Operations to Support Financial Institutions in Disaster Areas, Fund-Provisioning Measure to Support Strengthening the Foundations for Economic Growth, Fund-Provisioning Measure to Stimulate Bank Lending.
3. The discrepancies between the figures on the cash lending side and borrowing side are due to the constraints regarding the counterparties covered by this survey (e.g., non-residents are not included), and the fact that some types of transactions are recorded only on one side (e.g., transactions with the Bank are recorded only on the cash borrowing side, while T-Bills are recorded only on the lending side).
4. "Yen funds transactions with overseas counterparties" refers to the total of yen lending/funding through the FX swap market (those with a term of one year or less), Euroyen transactions, and yen lending/borrowing transactions with the overseas offices of financial institutions.

Chart 2: Amount Outstanding in the Money Market by Investor Type

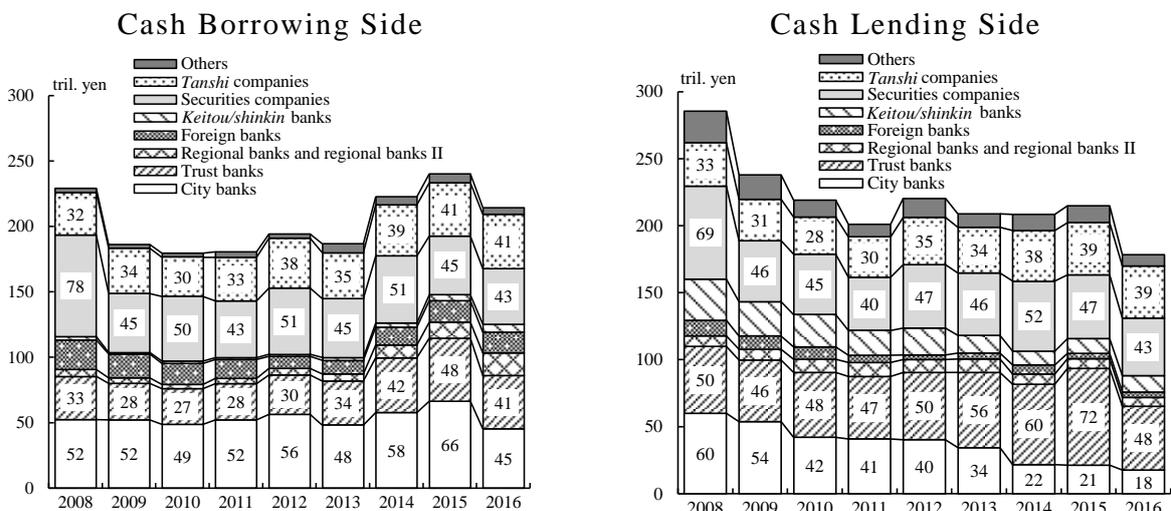
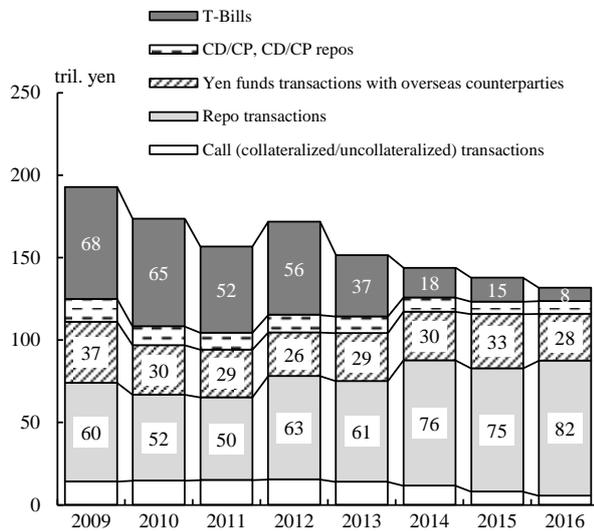
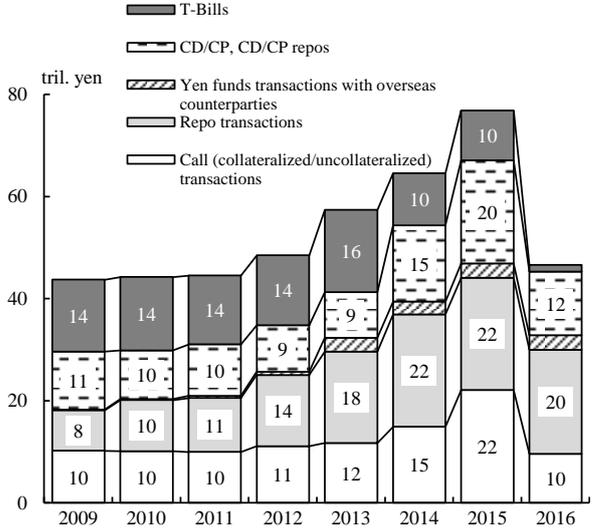


Chart 3: Amount Outstanding of Funds Lending by Institutions Eligible and Those Not Eligible for Remuneration

Institutions Eligible for Remuneration

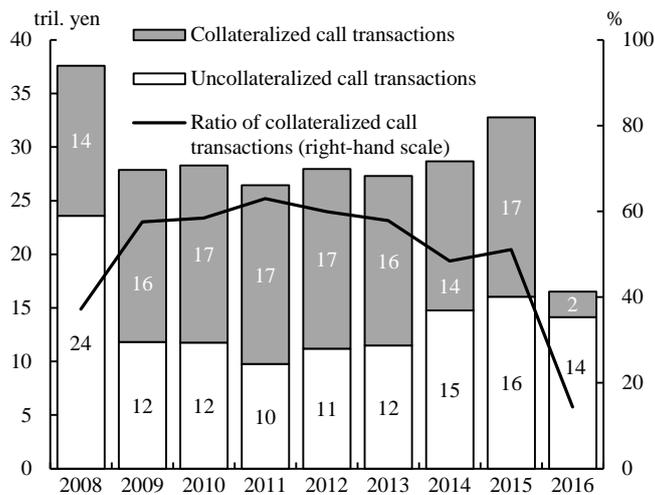


Institutions Not Eligible for Remuneration



Note: "Yen funds transactions with overseas counterparties" refers to the total of yen lending/funding through the FX swap market (those with a term of one year or less), Euroyen transactions, and yen lending/borrowing transactions with the overseas offices of financial institutions.

Chart 4: Amount Outstanding in the Call Market and the Ratio of Collateralized Transactions



Note: Cash borrowing side.

Chart 5: Amount Outstanding in the Uncollateralized Call Market by Investor Type

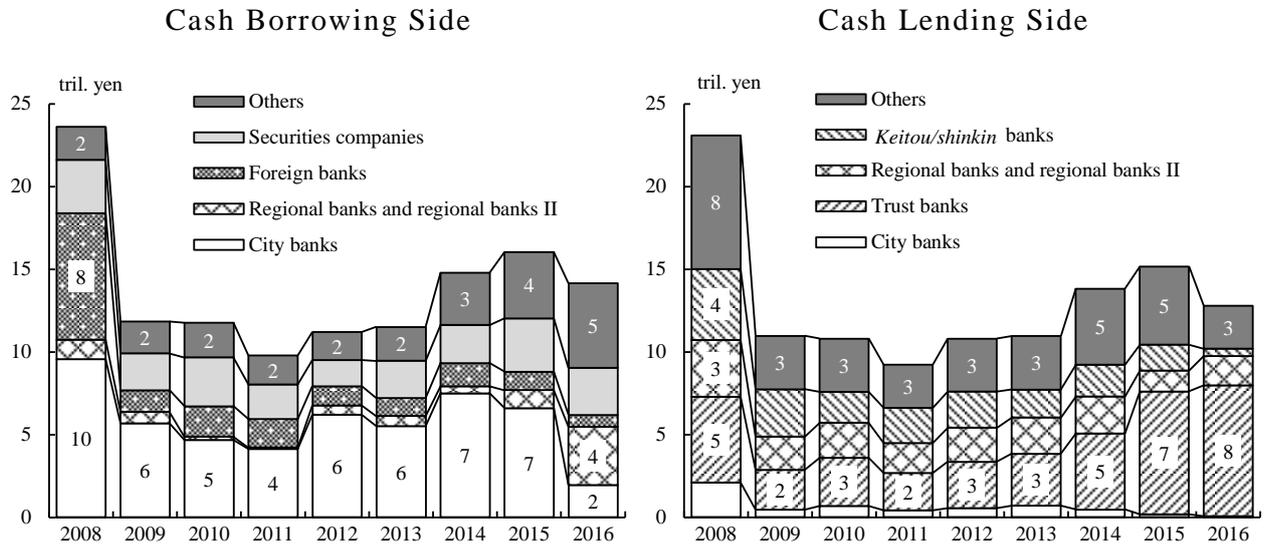
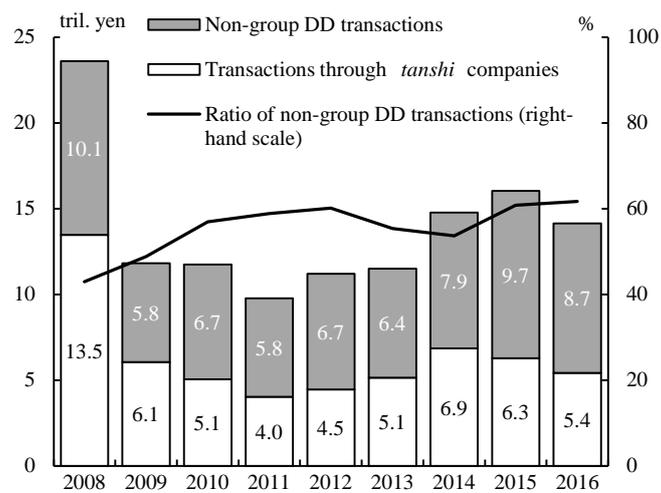


Chart 6: Amount Outstanding in the Uncollateralized Call Market and the Ratio of non-group Direct Dealing (DD) Transactions



Note: Cash borrowing side.

Chart 7: Amount Outstanding in the Uncollateralized Call Market by Term

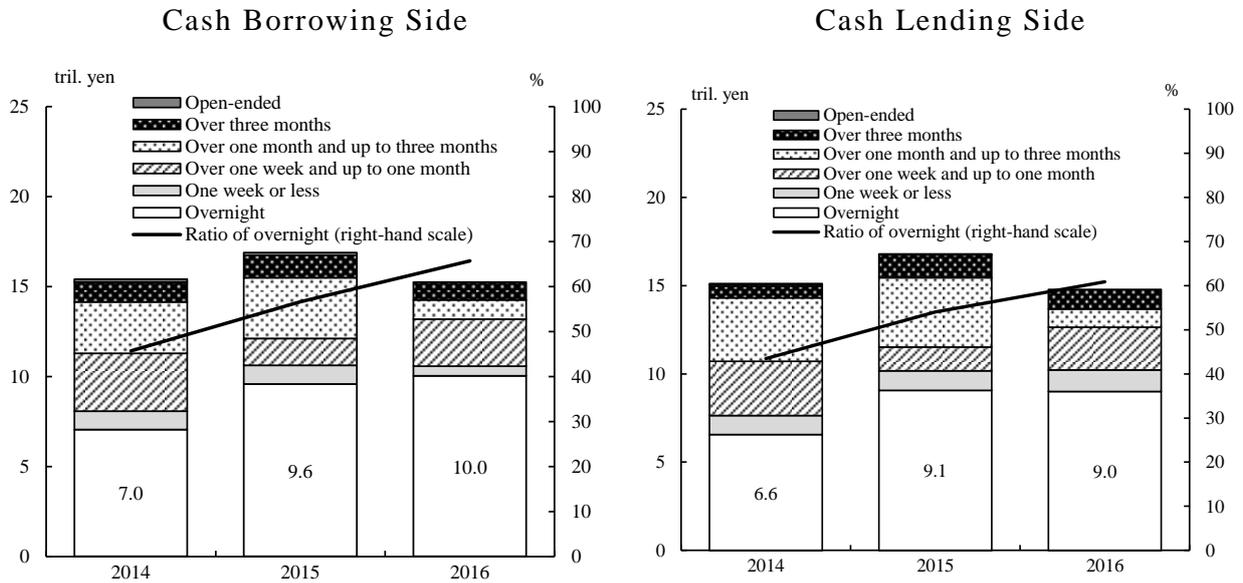
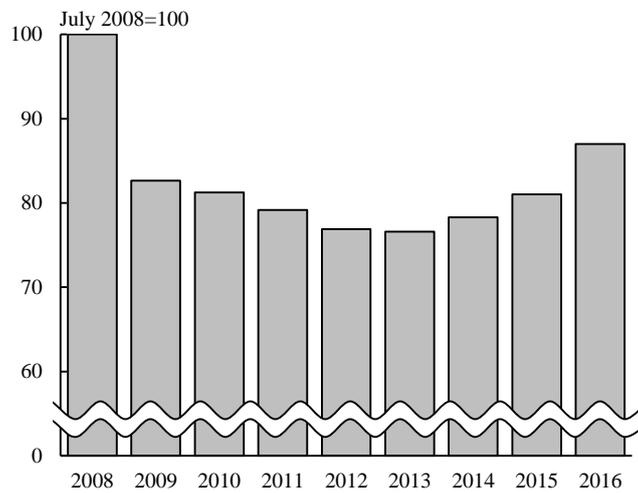


Chart 8: Number of Credit Lines Established



Note: Number of respondents whose total number of credit lines established could be confirmed for all years from 2008 to 2016. Adjusted for the effects of mergers and other factors.

Chart 9: Amount Outstanding in the Collateralized Call Market by Investor Type

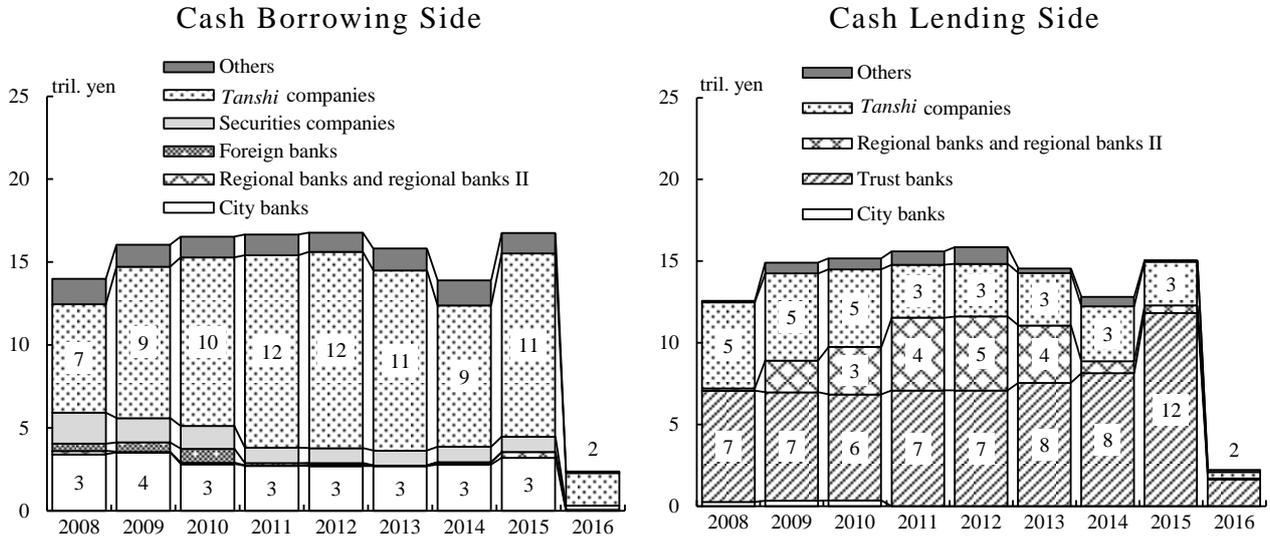


Chart 10: Amount Outstanding in the Collateralized Call Market by Term

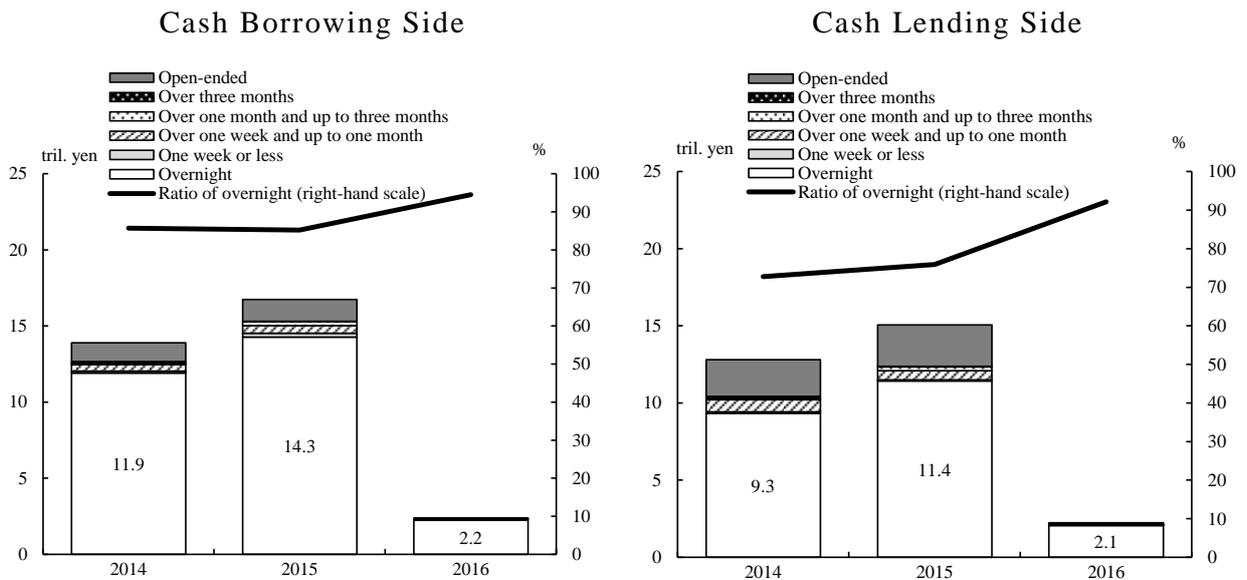
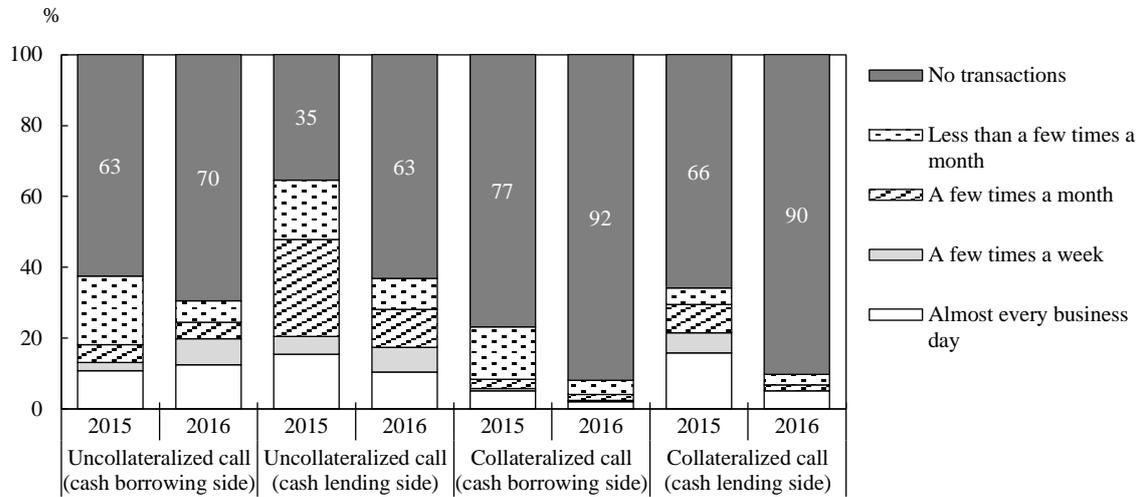
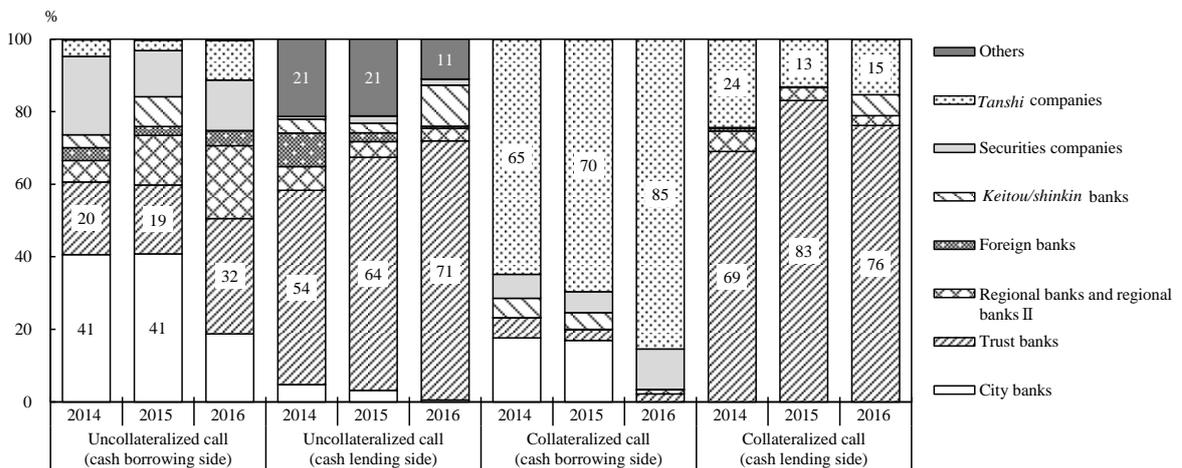


Chart 11: Frequency of Call Transactions



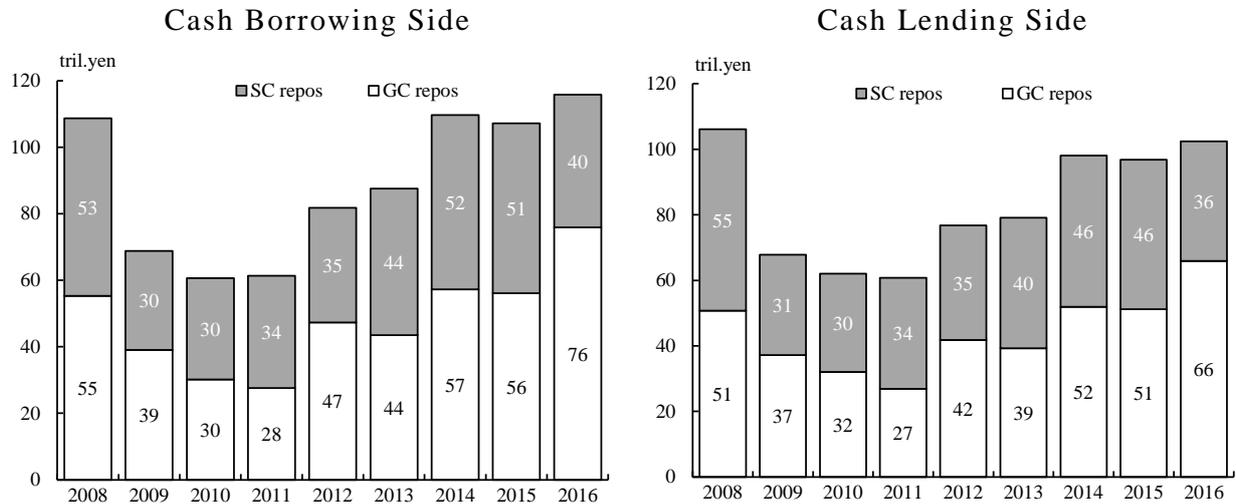
Note: Respondents whose call transactions were confirmed in both the 2015 and 2016 surveys. Adjusted for the effects of mergers and other factors.

Chart 12: Breakdown of Turnover in the Call Market by Investor Type

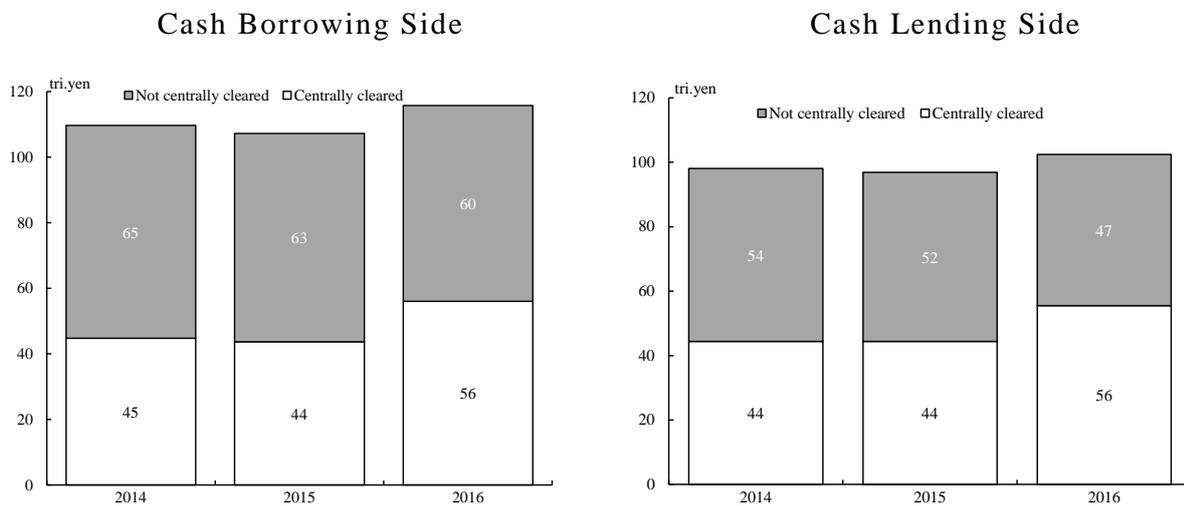


Note: For transactions that occurred in July.

Chart 13: Amount Outstanding in the Repo Market
By Transaction Type



By Settlement Type



Note: Centrally cleared transactions refer to those cleared at the Japan Securities Clearing Corporation.

Chart 14: Amount Outstanding in the GC Repo Market by Investor Type

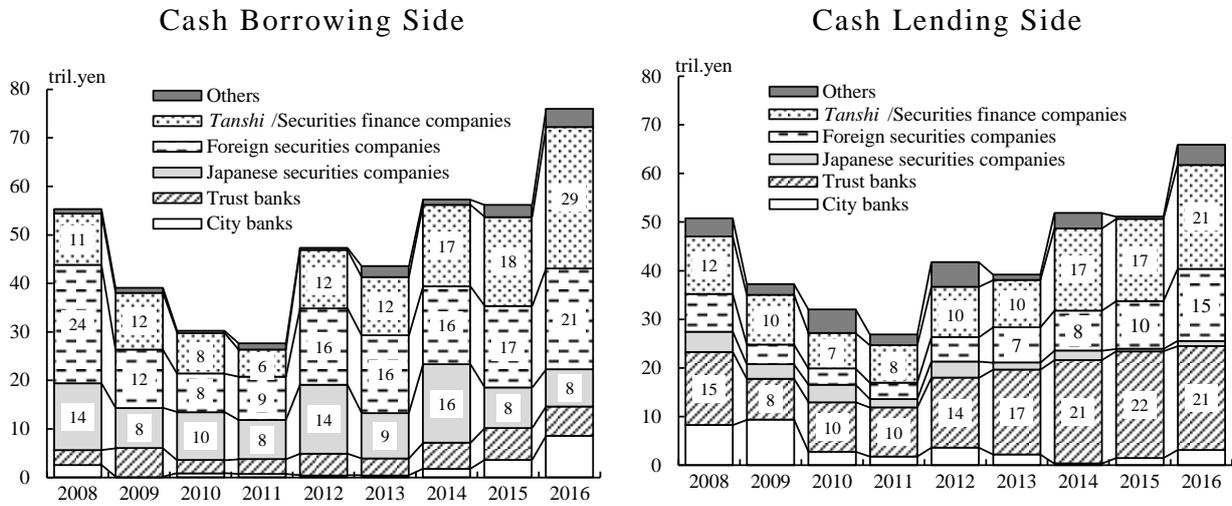


Chart 15: Amount Outstanding of GC Repo Transactions by Term

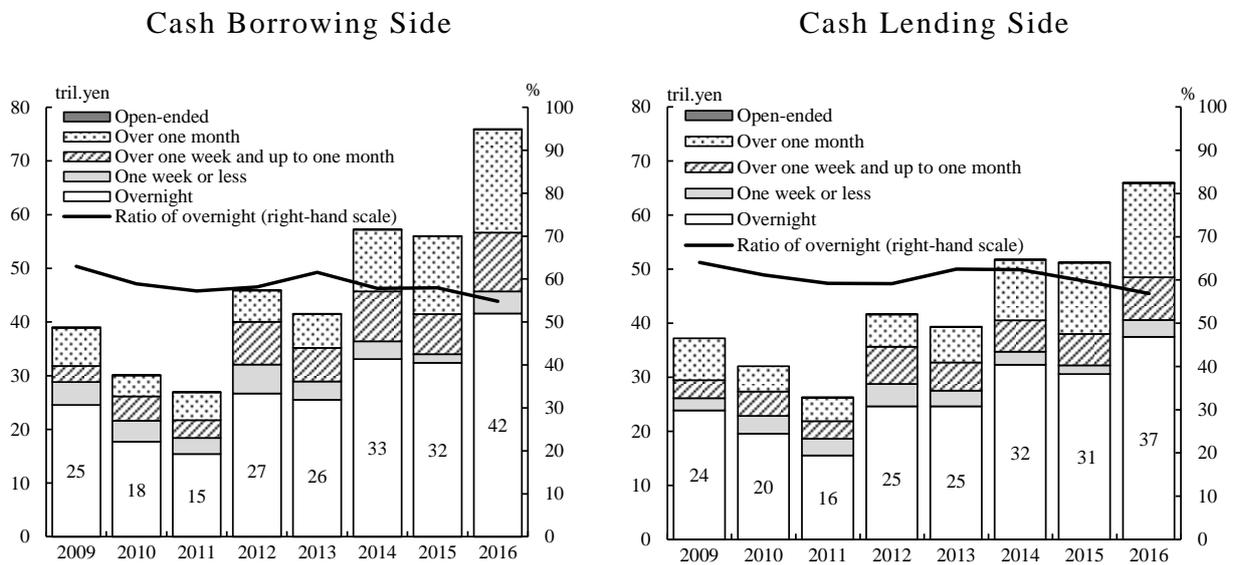
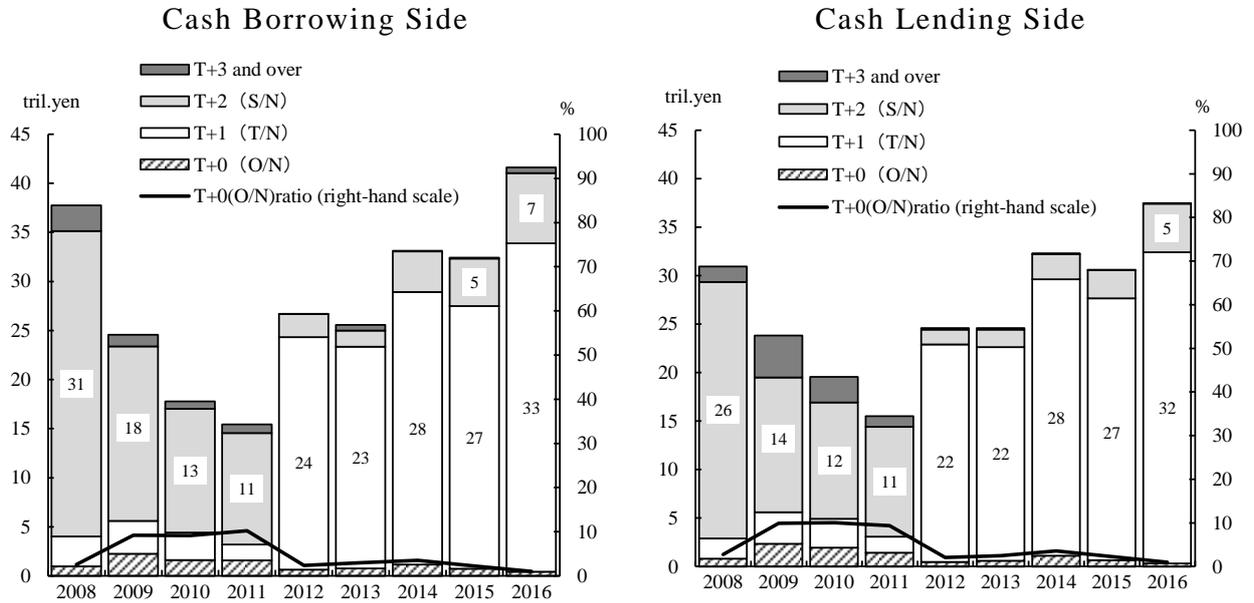


Chart 16: Amount Outstanding in the GC Repo Market by Starting Date

Overnight Transactions



Term Transactions

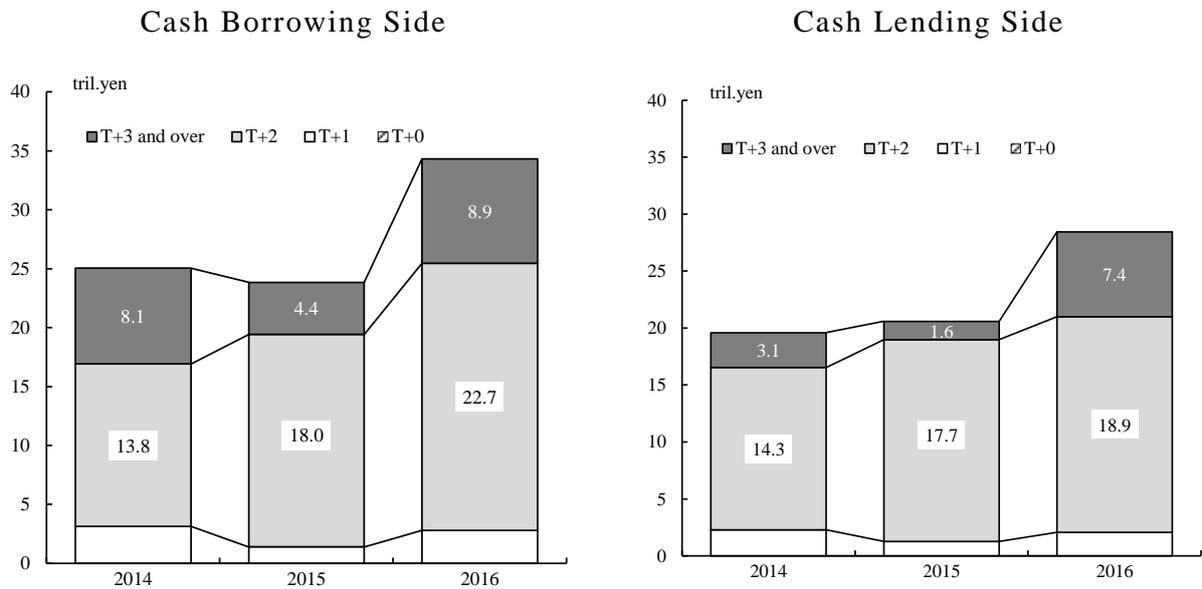


Chart 17: Amount Outstanding in the SC Repo Market by Investor Type

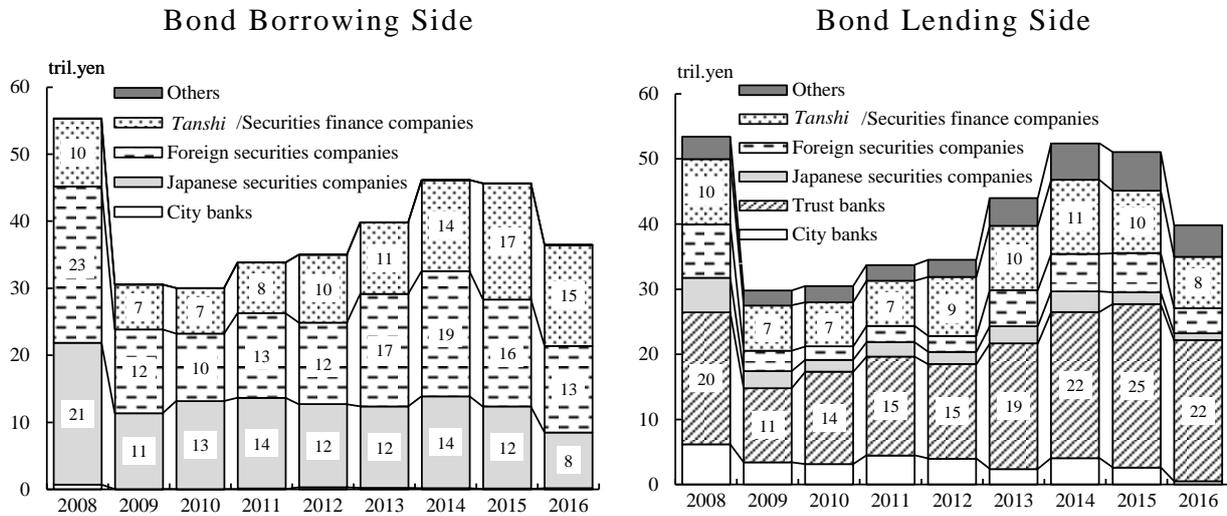
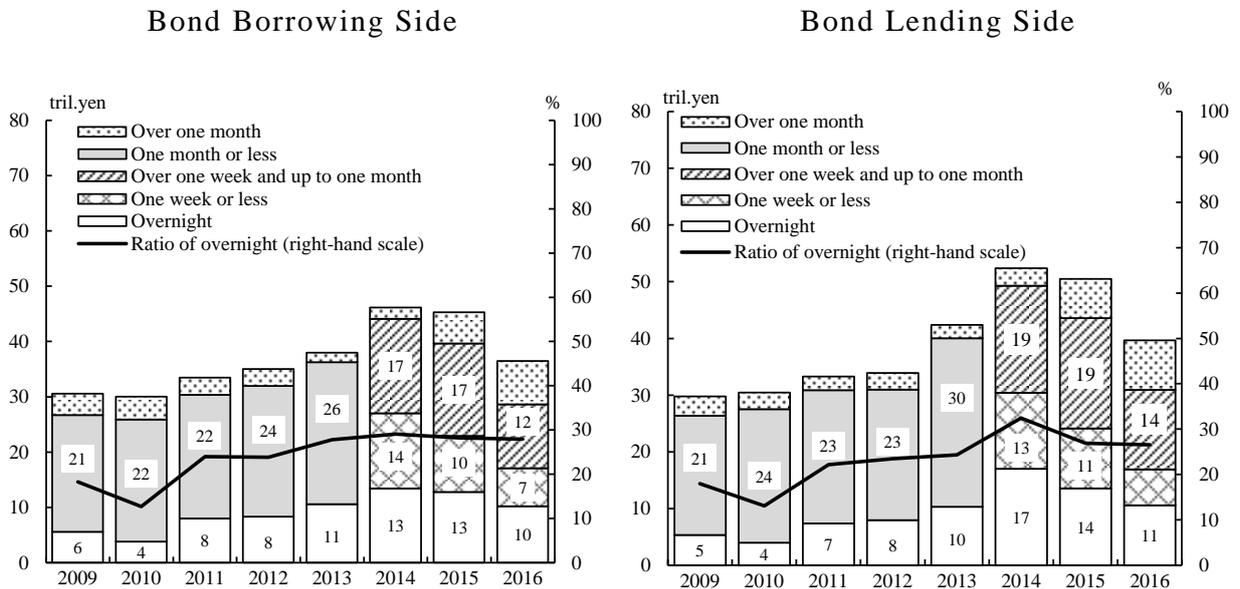
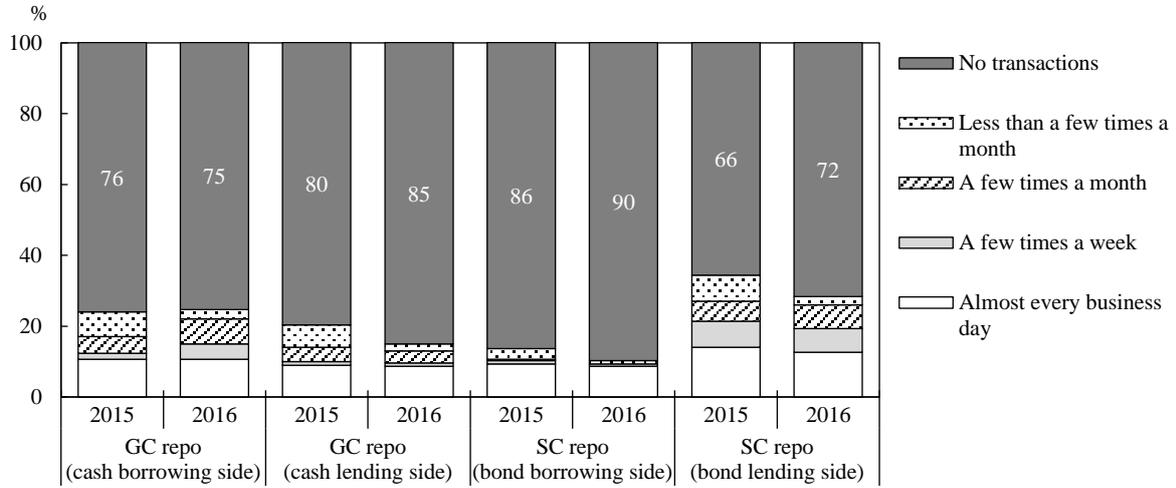


Chart 18: Amount Outstanding of SC Repo Transactions by Term



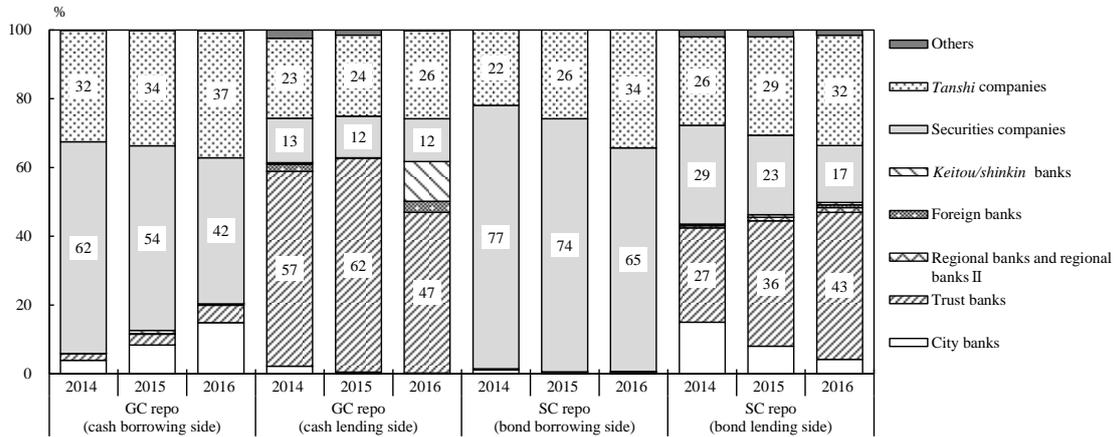
Note: From the 2014 survey, "one month or less" has been subdivided into "one week or less" and "over one week and up to one month."

Chart 19: Frequency of Repo Transactions



Note: Respondents whose repo transactions were confirmed in both the 2015 and 2016 surveys. Adjusted for the effects of mergers and other factors.

Chart 20: Breakdown of Turnover in the Repo Market by Investor Type



Note: For transactions that occurred in July.

Chart 21: Breakdown of Amount Outstanding in the Repo Market
by Type of Collateral

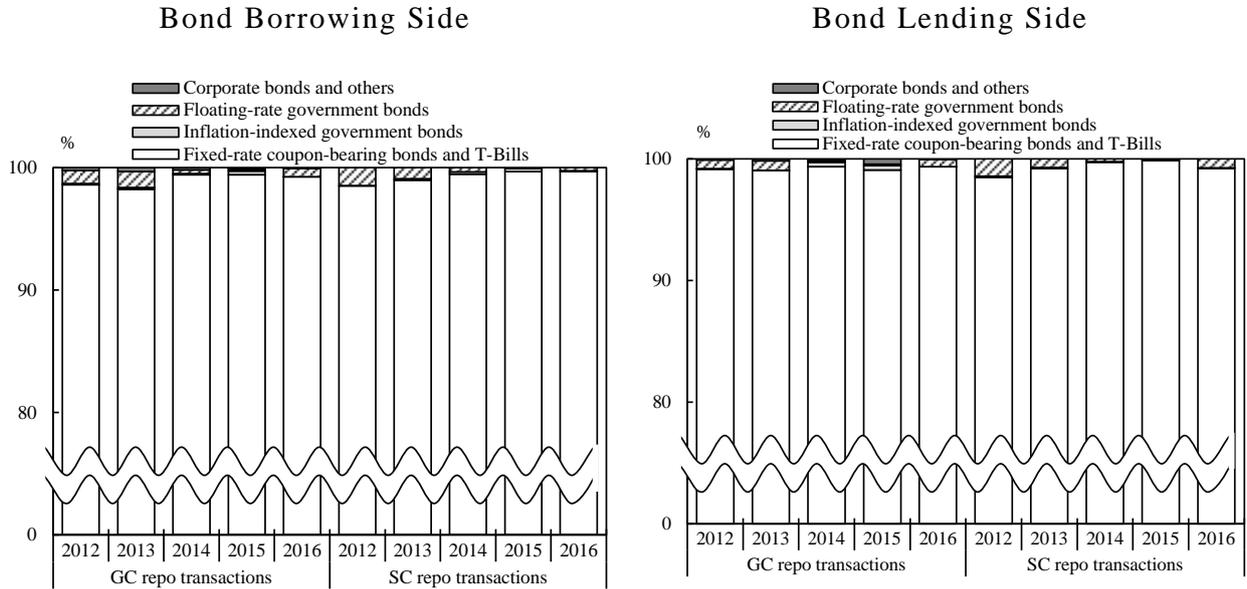


Chart 22: Amount Outstanding of Repo Transactions in Managed Securities
Trusts by Term

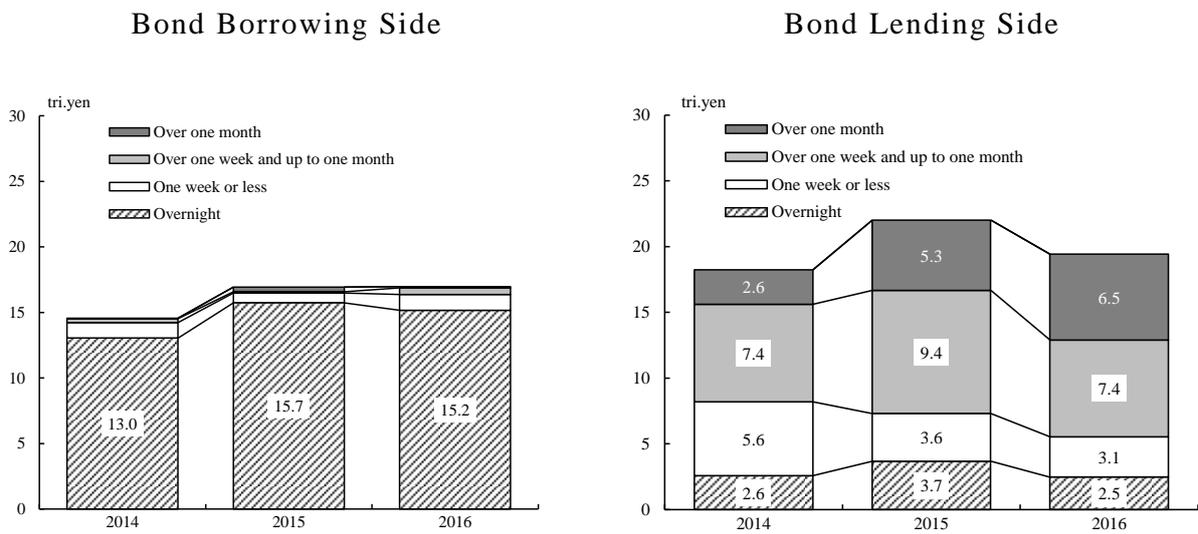
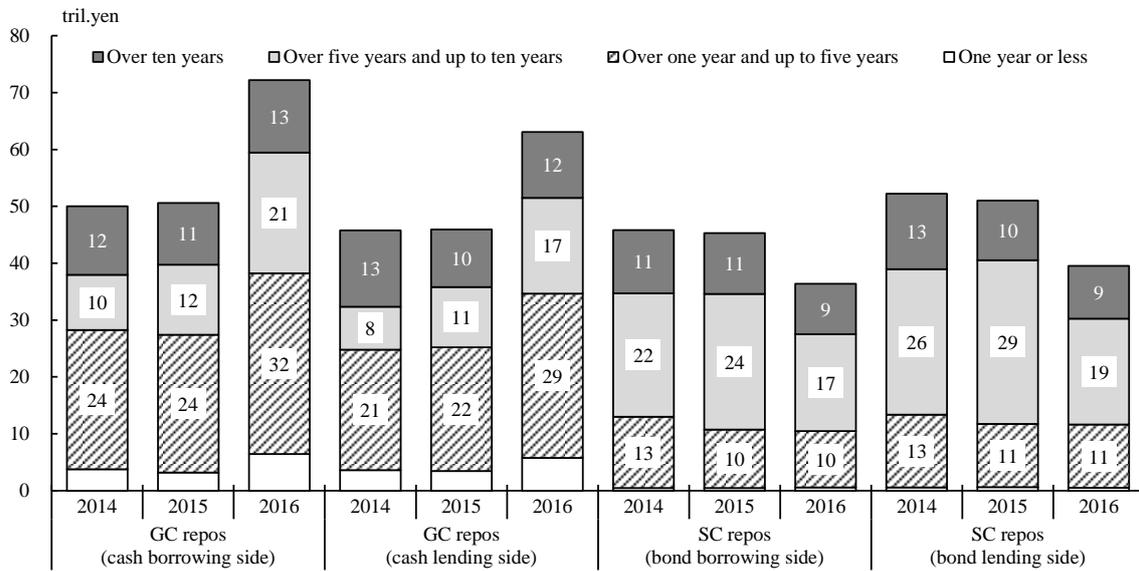
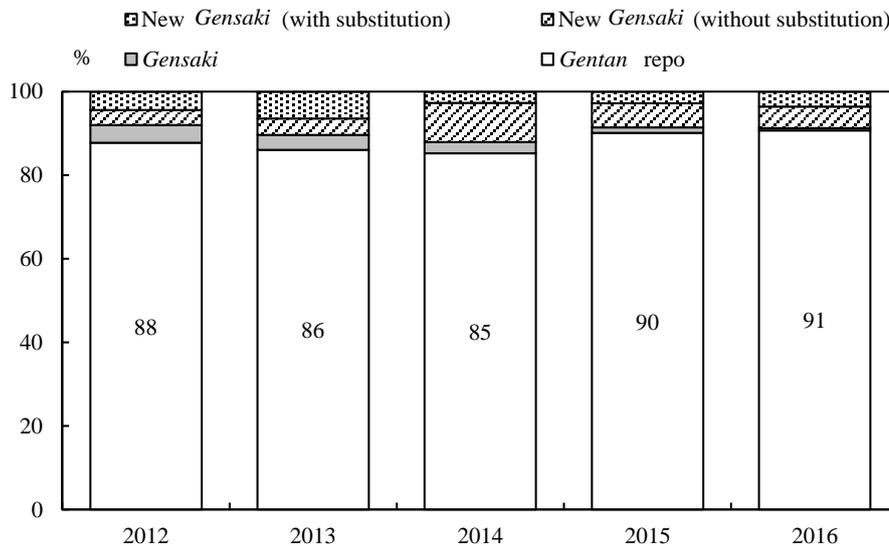


Chart 23: Amount Outstanding of Repo Transactions by Collateral Maturity



Note: Repo transactions with fixed-rate coupon-bearing bonds as collateral.

Chart 24: Breakdown of the Amount Outstanding of Repo Transactions by Form of Contract



Note: Total of cash borrowing and lending.

Chart 25: Amount Outstanding of Financial Institutions' CP Holdings
by Investor Type

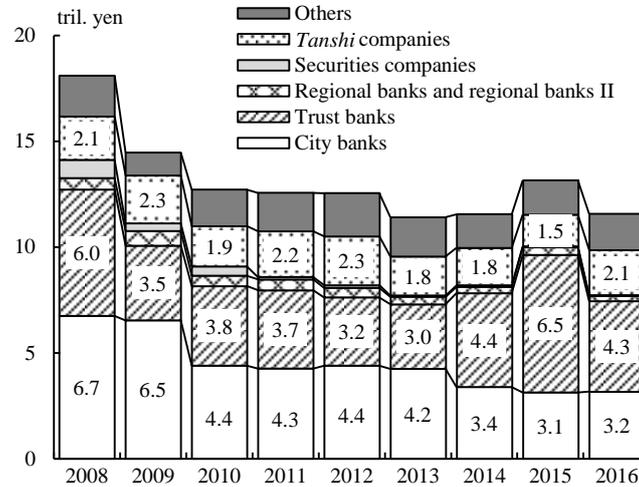
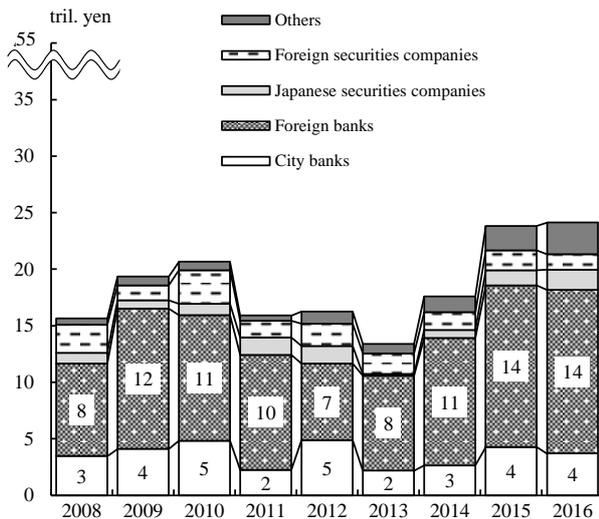
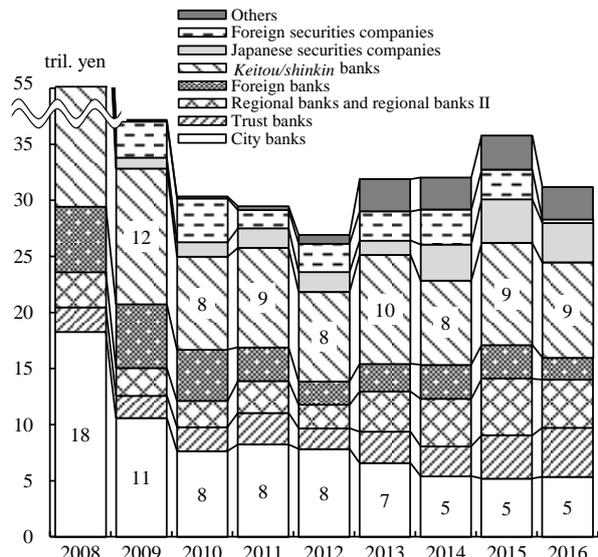


Chart 26: Amount Outstanding of Yen Funds Transactions with Overseas Counterparties by Investor Type

Japanese Yen Borrowing Side



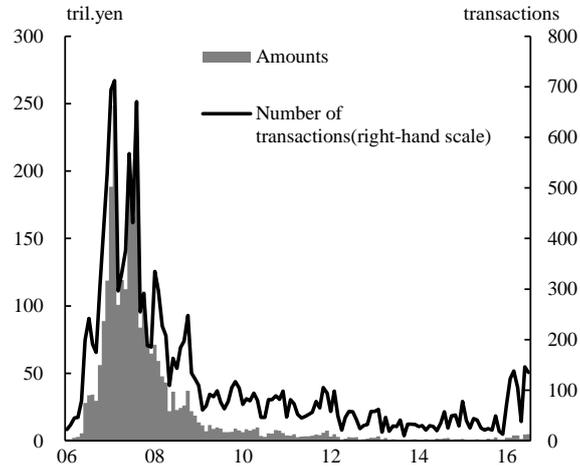
Japanese Yen Lending Side



Note: The total of yen lending/funding through the FX swap market (those with a term of one year or less), Euroyen transactions, and yen lending/borrowing transactions with the overseas offices of financial institutions.

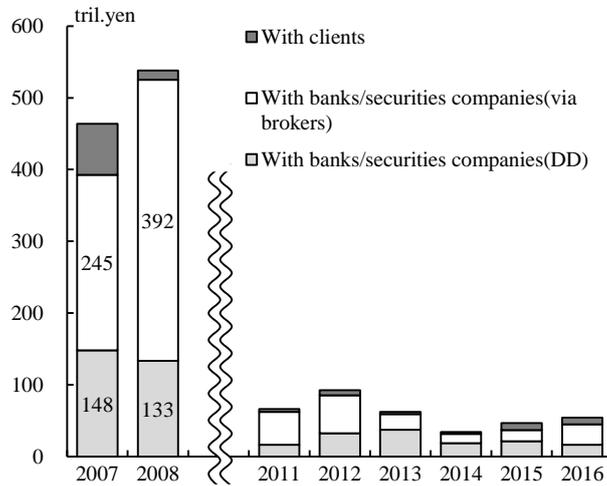
Chart 27: Yen Overnight Index Swap Market

Volume and Number of Yen OIS Transactions
via Brokers



Source: Money Brokers Association.

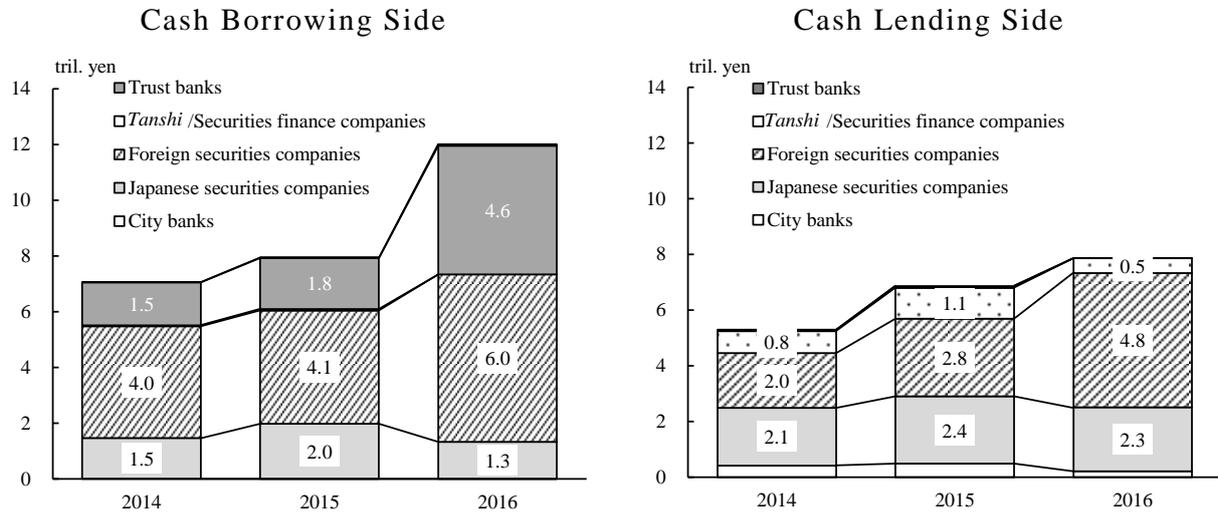
Amount Outstanding in the Yen OIS Market



Note: Includes transactions by overseas offices of financial institutions. On the basis of notional amounts.

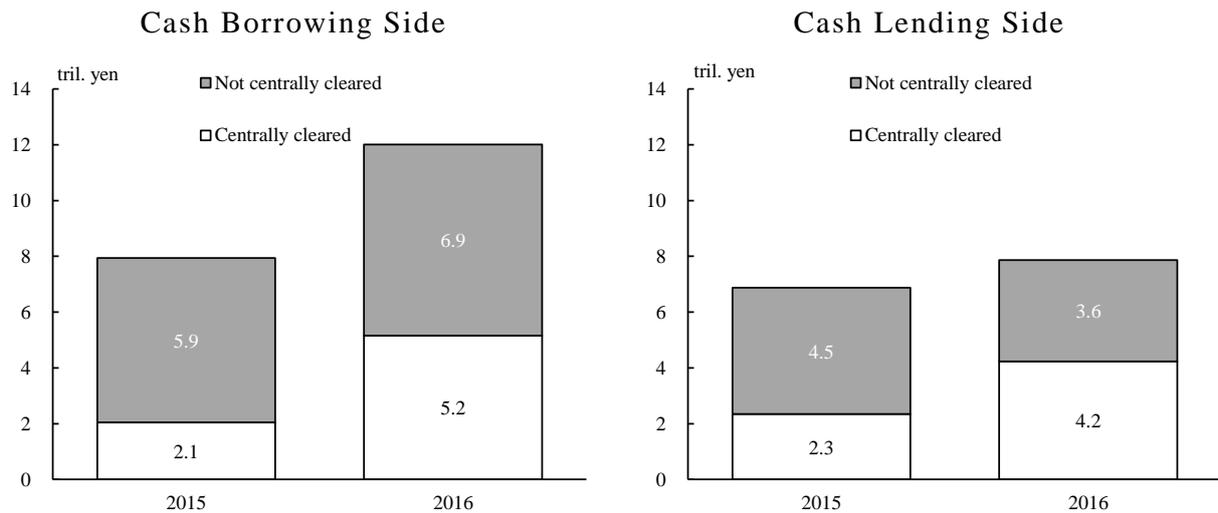
Chart 28: Amount Outstanding in the Equity Repo Market

By Investor Type



Note: Excludes the institutional credit trading, general margin trading, and equity lending without collateral. The same applies to the next chart.

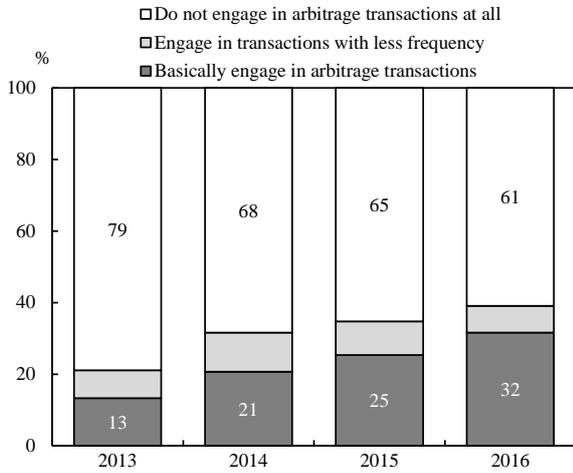
By Settlement Type



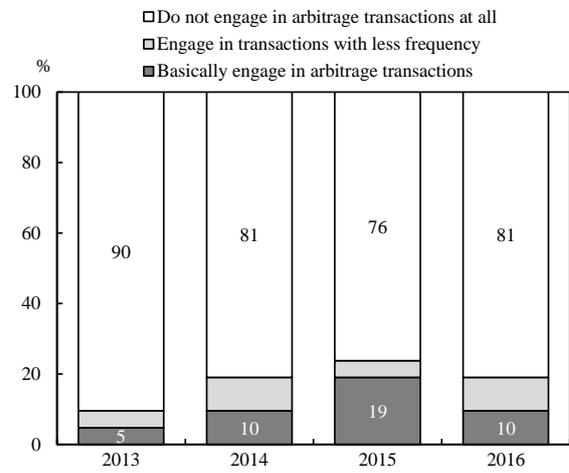
Note: Centrally cleared transactions refer to those cleared at JASDEC DVP Clearing Corporation.

Chart 29: Stance on Arbitrage Transactions

Institutions Eligible for Remuneration

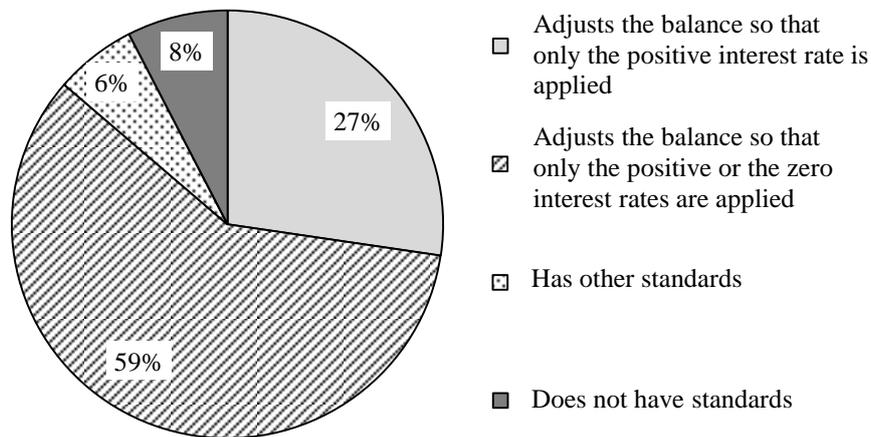


Institutions Not Eligible for Remuneration



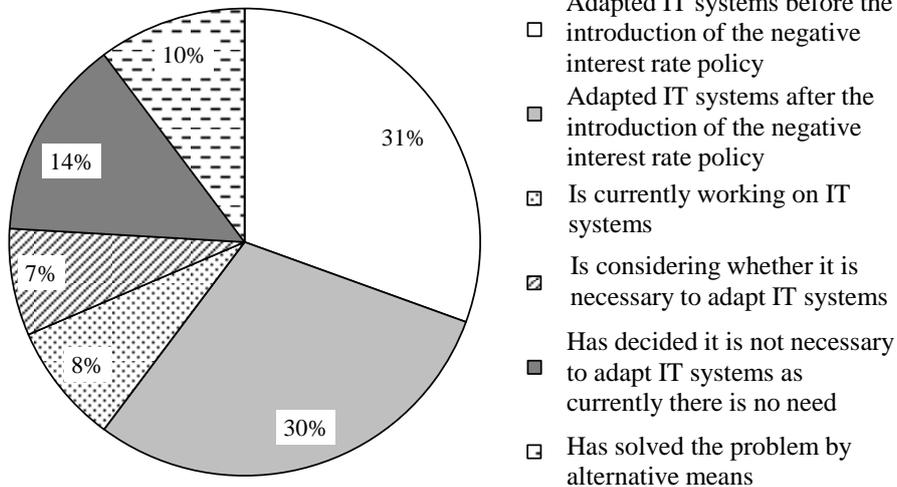
Note: Respondents since 2013. Adjusted for the effects of mergers and other factors.

Chart 30: Stance on the Management of Current Account Deposits at the Bank



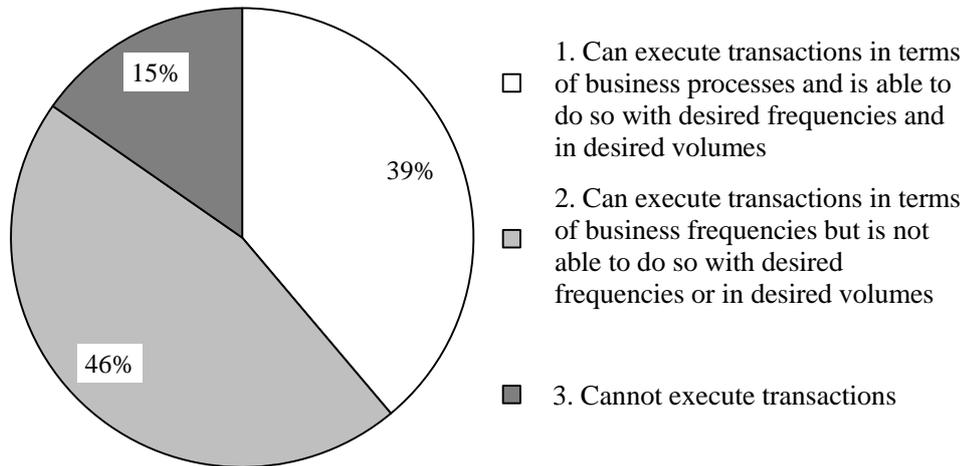
Note: Respondents are only those who have current account deposits at the Bank.

Chart 31: Financial Institutions' Status in the Uncollateralized Call Market
 Status of IT Systems Adjustments to Negative Interest Rates



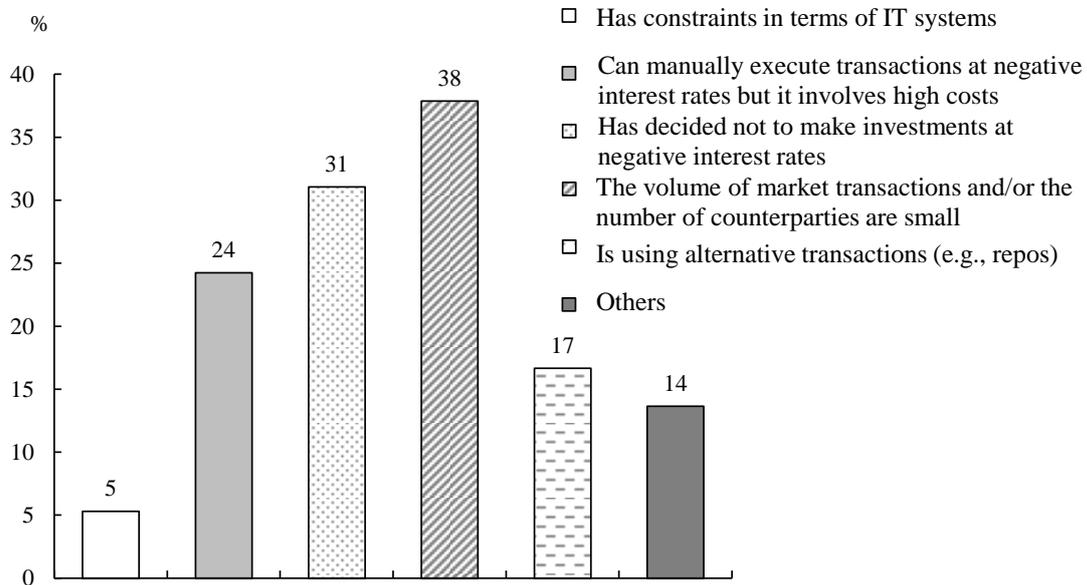
Note: Respondents are only those counterparties that executed uncollateralized call transactions in the year before the survey was conducted.

Capacity to Execute Transactions at Negative Interest Rates



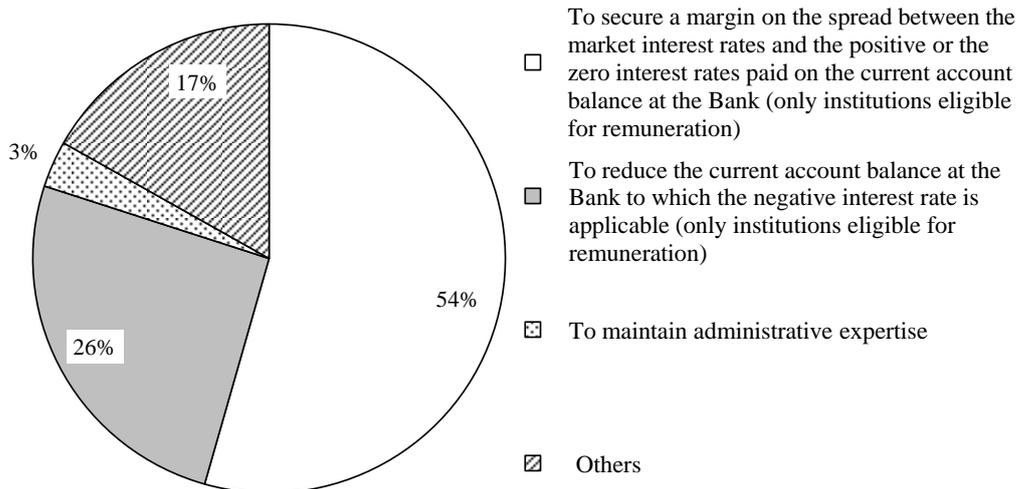
Note: Respondents are only those counterparties that executed uncollateralized call transactions in the year before the survey was conducted.

Reasons for Answering 2 or 3 to the Preceding Question



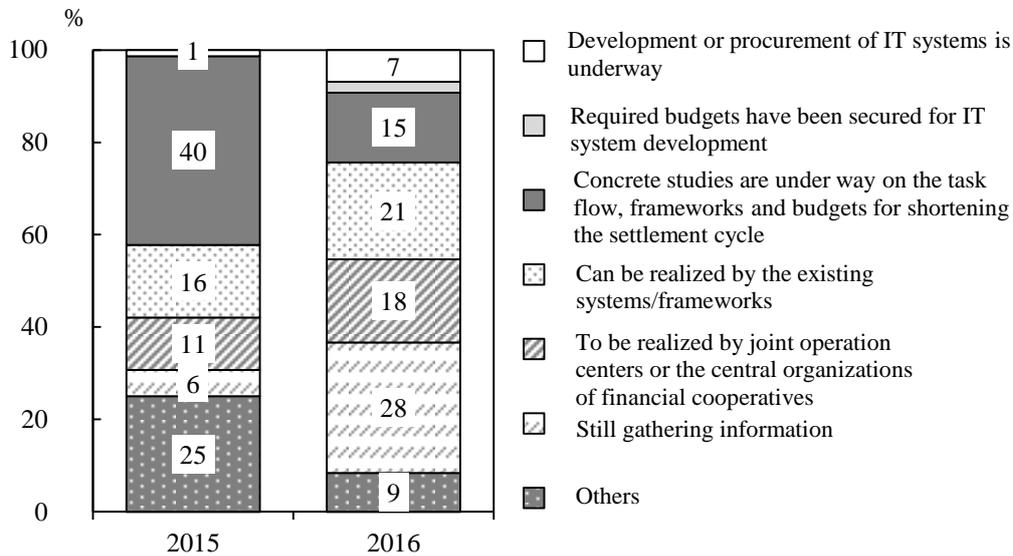
Note: Multiple choices are allowed.

Chart 32: Purpose of Trading at Negative Interest Rates in the Uncollateralized Call Market



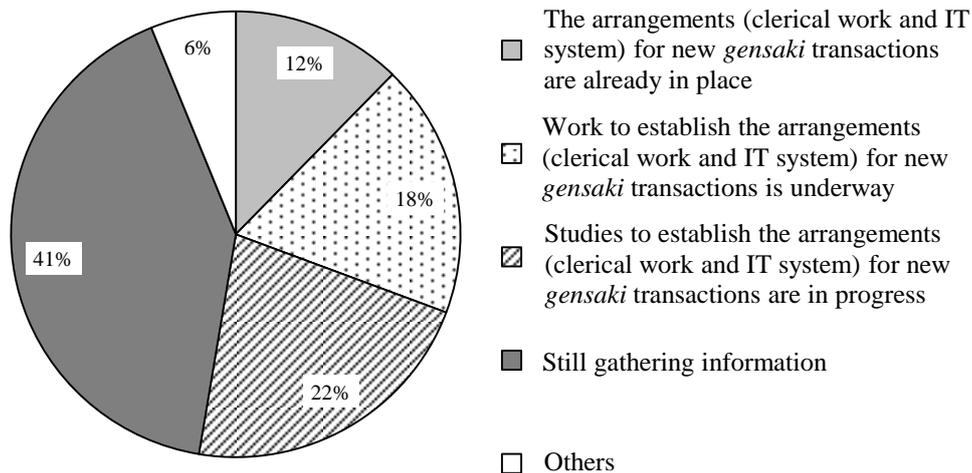
Note: Respondents are only those counterparties that executed uncollateralized call transactions in the year before the survey was conducted.

Chart 33: Topics in the Money Market
Shortening the Settlement Cycle of JGBs



Note: Market participants are preparing for a "T+1" settlement cycle of JGBs on the assumption that implementation will occur around May 2018. The results above show the extent to which the counterparties covered by this survey have progressed thus far.

Shift to New *Gensaki*



Note: Discussions among market participants have resulted in the adoption of a policy to align the standard agreement used in repo transaction to the new *gensaki* format. This question was conducted to see the extent to which counterparties covered by the survey have taken steps to reach this goal. Responses were obtained from 114 counterparties who were engaged in JGB repo transactions.

The Back-Up Facility and Market-Level Business Continuity Planning (BCP)

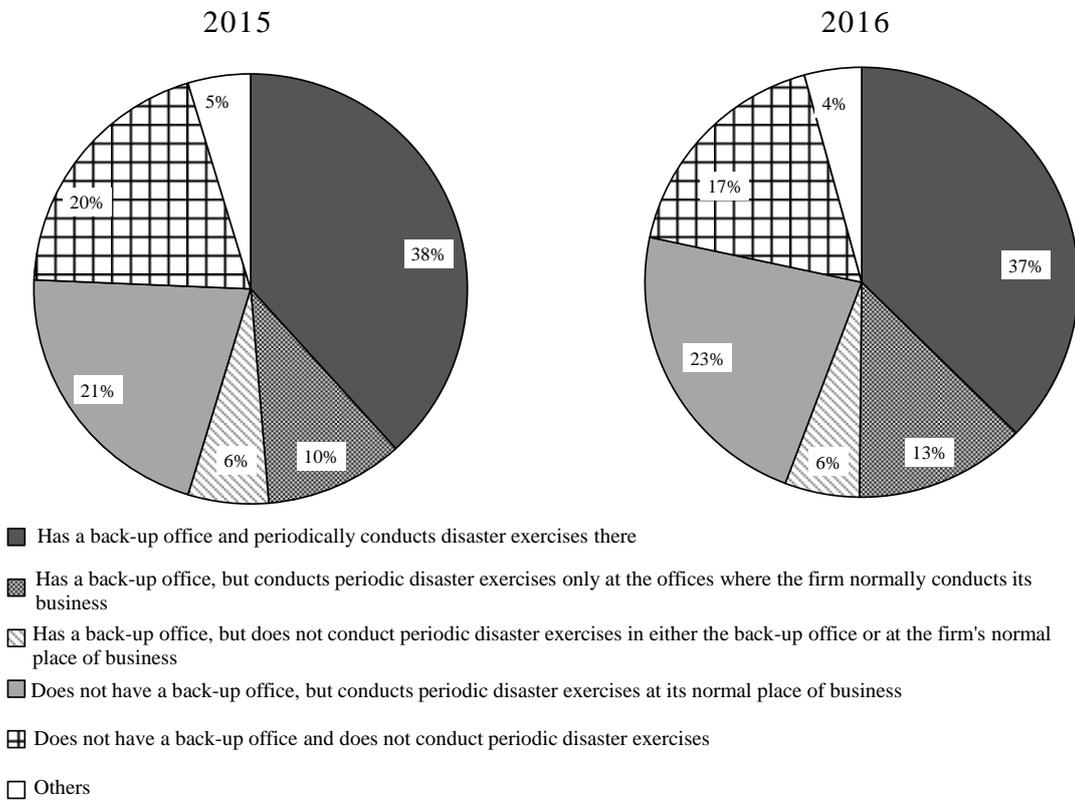
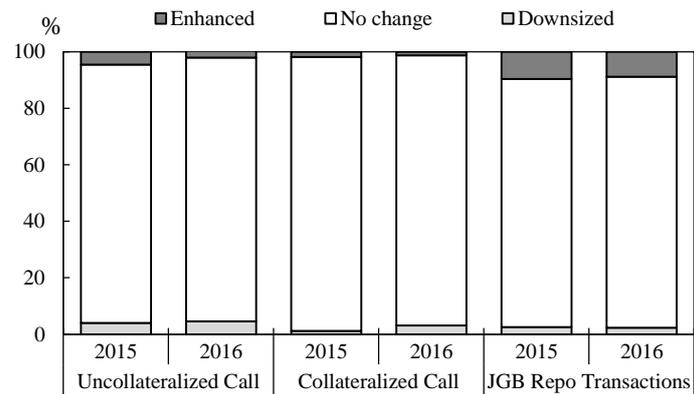
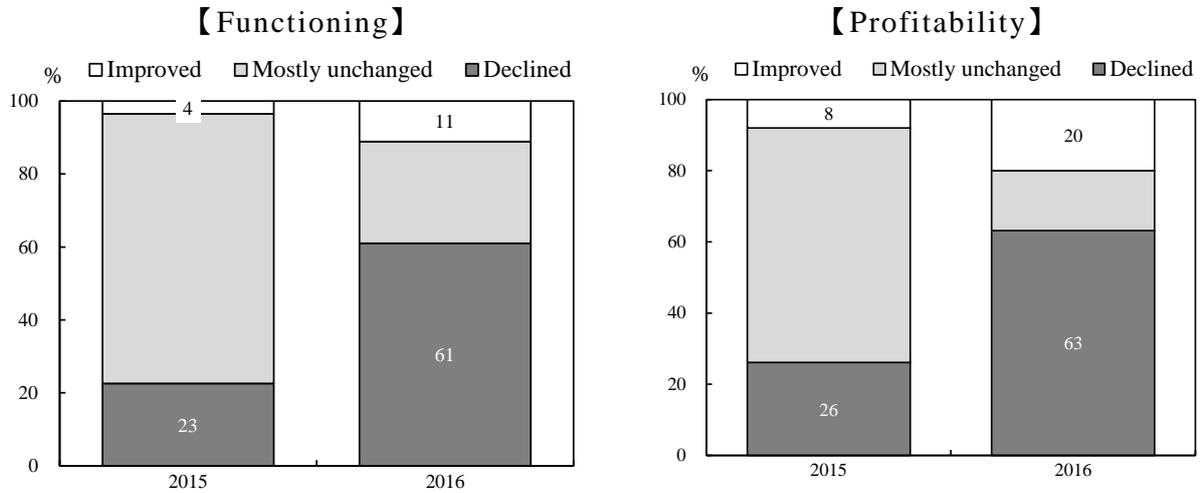


Chart 34: Changes in Administrative Structures



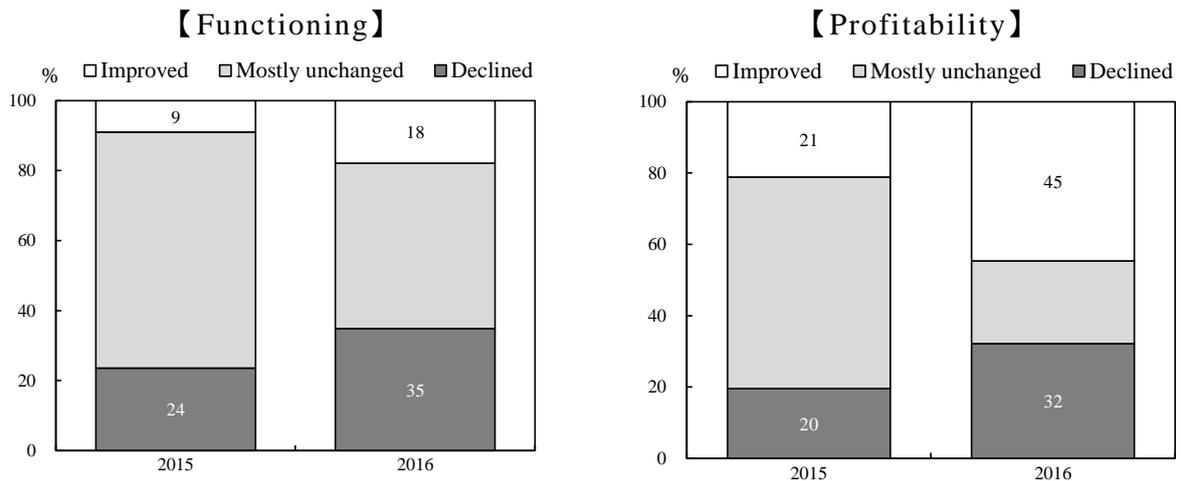
Note: Changes from the previous year.

Chart 35: Perceptions of Market Participants on Money Market Transactions



- Notes:
1. Responses were obtained only from those counterparties that were engaged in call money transactions or JGB repo transactions, or in both of them.
 2. The question on "Functioning" was designed to find the perceptions of market participants on the change in functioning of the money market from the previous year, mainly taking into account whether respondents were able to make transactions with intended rates, prices, terms, and counterparties. The same applies to the following results.
 3. The question on "Profitability" was designed to find the perceptions of market participants on the change in profitability in the money market from the previous year, mainly taking into account investment yield, funding cost, transaction amounts, and fixed cost. Responses also include those from counterparties who posted losses in their total money market transactions. It is considered that they answered "improved (declined)" when their losses shrank(expanded) from the previous year. The same applies to the results that follow.

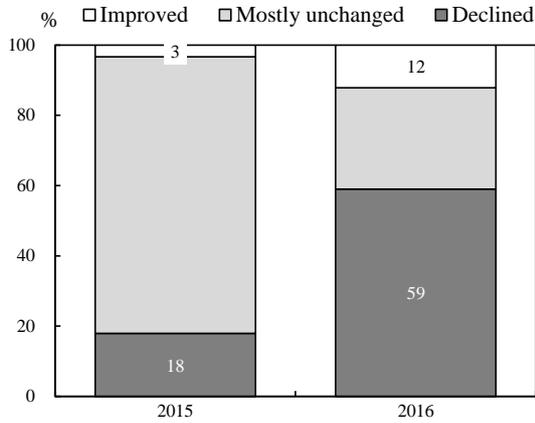
JGB Repo Transactions



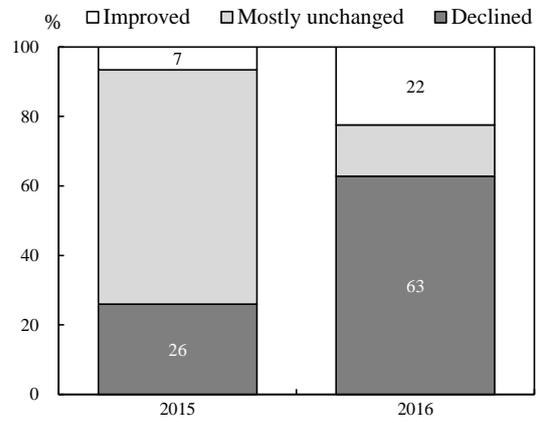
Note: Responses were obtained only from those that were engaged in JGB repo transactions.

Uncollateralized Call Transactions

【Functioning】



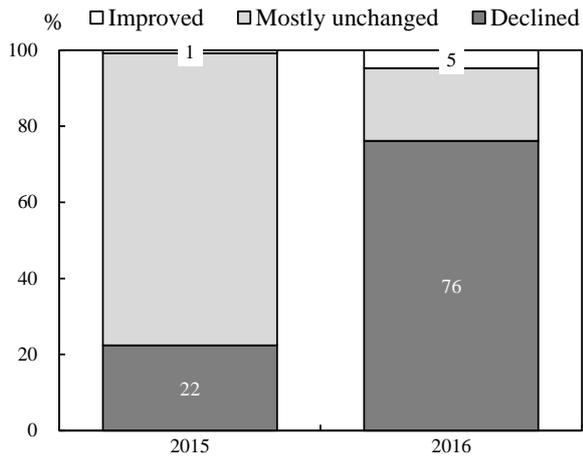
【Profitability】



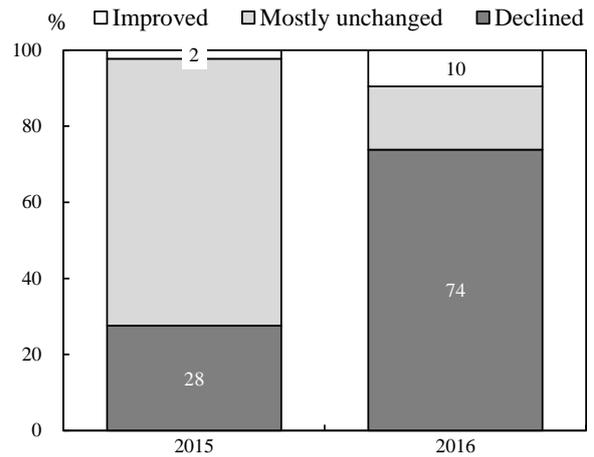
Note: Responses were obtained only from those that were engaged in uncollateralized call transactions.

Collateralized Call Transactions

【Functioning】



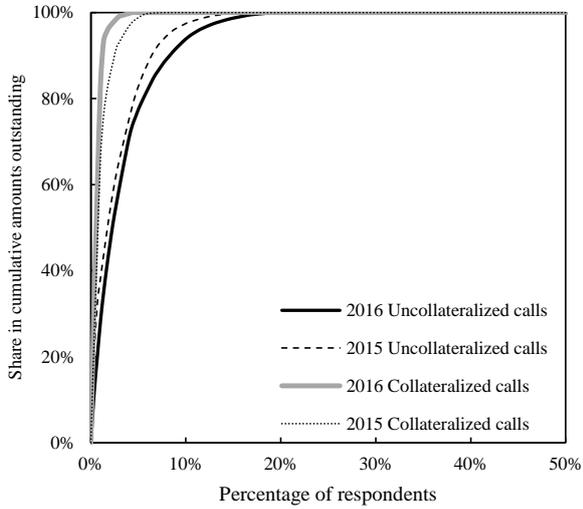
【Profitability】



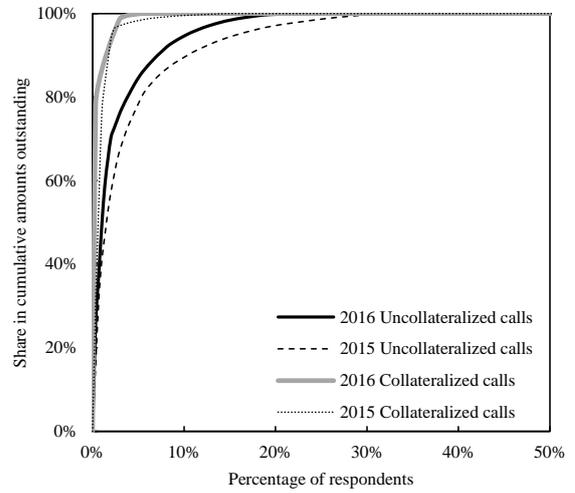
Note: Responses were obtained only from those that were engaged in collateralized call transactions.

Chart 36: Degree of Concentration in Each Market

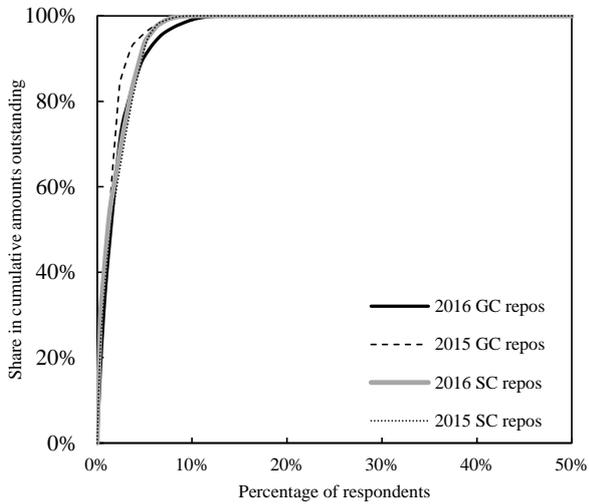
Call Market: Cash Borrowing Side



Call Market: Cash Lending Side



Repo Market: Bond Borrowing Side



Repo Market: Bond Lending Side

