BOJ Reports & Research Papers

July 2007

Money Market Operations in Fiscal 2006

Financial Markets Department
Bank of Japan

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Summary

Throughout fiscal 2006, the Bank of Japan conducted money market operations with the uncollateralized overnight call rate as the operating target. Between March 2001 and March 2006, the Bank adopted the so-called "quantitative easing policy" whereby it conducted money market operations with the main target being the outstanding balance of current accounts at the Bank. Thus, this marked the first time in five years that the Bank used uncollateralized overnight call rates as its operating target.

At the Monetary Policy Meeting (MPM) of July 13 and 14, 2006, the target level for the uncollateralized overnight call rate was raised from "effectively zero percent" to "around 0.25 percent." The target was later raised to "around 0.5 percent" at the MPM of February 20 and 21, 2007 (Chart 1).

Parallel to the increase in the target level of the uncollateralized overnight call rate, the basic loan rate applied to the complementary lending facility was raised from 0.1 percent to 0.4 percent at the MPM of July 2006, and was further raised from 0.4 percent to 0.75 percent at the MPM of February 2007. As a result, the differential between the basic loan rate and the target level widened from 0.1 percentage points to 0.15 percentage points and finally to 0.25 percentage points (Chart 1).

Under these changes, although the uncollateralized overnight call rate tended to move up at ends of semi-fiscal years and on expectations of an increase in the uncollateralized overnight call rate target level, it remained within the target range throughout fiscal 2006. During this time, the money market steadily regained its function. The outstanding balance of current accounts at the Bank stood at approximately 30 trillion yen at the beginning of April 2006 shortly after the end of quantitative easing policy, but decreased to about 10 trillion by mid-June as the outstanding balance of current accounts at the Bank were steadily reduced. After the target level of the uncollateralized overnight call rate was raised at the July MPM, the outstanding balance of current accounts moved in the range of around 6 – 13 trillion yen (Chart 2).

Various revisions were made in the conduct of money market operations during fiscal 2006. In June 2006, bill purchasing operations were replaced by funds-supplying operations against pooled collateral to further improve efficiency in the practical implementation of money market operations. Improvements were also made in operational procedures, including the announcement of projected reserve balances for the day in the morning of each business day.

The first section of this paper focuses on the sources of changes in current account balances at the Bank, which are preconditions for money market operations. This is followed by a review of the developments in money markets including trends in the uncollateralized overnight call rate. The latter part of the paper is given to a review of developments in operations by type of operational tool and explanations of the main revisions made in operational tools and procedures.

I. Sources of Changes in Current Account Balances at the Bank of Japan (Autonomous Factors)

Current account balances at the Bank fluctuate in accordance with receipts and payments of banknotes and treasury funds between financial institutions and the Bank or the government. To ensure that the uncollateralized overnight call rate remains at the target level, the Bank projects changes in current account balances at the Bank and adjusts the current account balances by undertaking funds-supplying or funds-absorbing operations. As such, sources of changes in current account balances at the Bank (autonomous factors)[1] constitute important preconditions for the Bank's money market operations.

During fiscal 2006 (April 2006 – March 2007), developments in autonomous factors worked in the direction of decreasing the outstanding balance of current accounts, as was the case in fiscal 2005. The contribution made by autonomous factors amounted to 16.7 trillion yen, up from 12.4 trillion yen in fiscal 2005. This owes mainly to the following developments. First, while the amount of Japanese government bond (JGB) issuances declined in fiscal 2006, the amount of financing bills (FBs) issued in the market increased, and second, the net issuance amount of banknotes also increased somewhat. The following section describes the developments of these individual factors (Chart 3).[2]

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[1] Developments in banknotes and treasury funds, which are preconditions for the central bank's money market operations, are referred to as "sources of changes in current account balances" or "autonomous factors." In the case of banknotes, financial institutions' deposits of banknotes at the Bank constitute sources of increase in current account balances, while their withdrawals of banknotes from the Bank constitute sources of decrease. In the case of treasury funds, the issuance of Japanese government securities (JGSs) and payment of taxes leading to transfers of funds from the financial institutions' current accounts to the government's account constitute sources of decrease in current account balances, while the redemption of JGSs, pension payments, and other fiscal expenditures made from the government's account to financial institutions' current account at the Bank constitute sources of increase.

Money market operations by the U.S. Federal Reserve System and the European Central Bank are similar to those by the Bank of Japan in which operations are conducted in response to autonomous factors such as developments in banknotes and treasury funds.

[2] Footnote 1 refers to "autonomous factors" as preconditions for the central bank's money market operations. However, among these factors, "treasury funds and others" is actually influenced by the Bank's purchases/sales of treasury bills (TBs) and financing bills (FBs), one of the tools for money market operations. The reason is as follows. When the Bank purchases TBs/FBs from financial institutions and holds them to maturity, redemption funds that would have been deposited to current accounts of the financial institutions involved are paid to the Bank. This transaction results in a decline in treasury payments to current accounts. (The opposite occurs when TBs/FBs held by the Bank are sold to financial institutions.)

In order to remove the effects of such TBs/FBs purchasing or selling operations and to grasp the movements of treasury funds accurately, it is assumed that, for the autonomous factors used in this paper, funds paid for the redemption of TBs/FBs purchased through money market operations are paid to the

A. Banknotes

Net issuance of banknotes for fiscal 2006 totaled 0.9 trillion yen, an increase from the 0.3 trillion yen in fiscal 2005. Following the raising of the target level in July 2006 and February 2007, the opportunity cost of holding cash increased. However, during fiscal 2006, this did not result in a decrease in net issuance or a turn to a net redemption of banknotes.

B. Fiscal Payments and Revenues

"Fiscal payments and revenues" includes payments for public works, social security expenditures, and pension payments, as well as tax revenues. It is a concept encompassing all of the treasury payments and receipts except payments and receipts related to issuance and redemption of JGBs and FBs as well as transactions of foreign exchange (payments and receipts mainly related to foreign exchange intervention). "Fiscal payments and revenues" resulted in a net payment of 39.6 trillion yen, down from 43.3 trillion yen in fiscal 2005. The decrease in net payments mainly reflects the increase in receipts of tax revenues and the decrease in repayments of Fiscal Loan Fund deposits.

C. JGBs

"JGBs" includes issuance and redemption of interest-bearing JGBs (long-term JGBs) and treasury bills (TBs).[3] Issuance continued to exceed redemption by a large margin, leading to net government receipts of 51.8 trillion yen. However, this was down significantly from net receipts of 63.6 trillion yen in fiscal 2005. Factors contributing to this development included the decrease in issuance of new financial resource bonds, the major increase in the redemption of Fiscal Investment and Loan Program Bonds, and the partial shift of the issuance of 6-month TBs to the issuance of 6-month FBs.

D. Financing Bills and Foreign Exchange

"Financing bills" (FBs) turned to net receipts of 6.7 trillion yen from net payments of 8.3 trillion yen in fiscal 2005 as the amount of FBs issued in the market increased.

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financial institutions involved. Similarly, funds paid for the redemption of TBs/FBs sold through money market operations are assumed to be paid to the Bank.

[3] The issuance and redemption of FBs are not included in "JGBs," and are shown under "FBs" (see Section I.D).

Consequently, FBs contributed as a decreasing factor in the outstanding balance of current accounts at the Bank. As mentioned in Section I.C above, this was in part due to the shift of the issuance of 6-month TBs to the issuance of 6-month FBs.

"Foreign exchange" transactions amounted to almost zero, as no foreign exchange intervention was undertaken.[4]

The developments described above can be summarized as (i) changes in banknotes, (ii) changes in treasury funds and others, and (iii) "excess and shortage of funds", derived from the sum of the preceding two factors. Regarding these three items, the Bank compiles and releases projections for the next business day, and provisional and final figures for each business day.[5] In addition to this, every morning, the Bank releases projections of the reserve balances for the same day. The release of this information by the Bank compares favorably with the information provided by other leading central banks.[6] The release of these projections provides market participants with useful information for gauging money market conditions and predicting the range of the Bank's daily operations. This information may also be useful in making decisions on investment and fund raising from the market.

A comparison of the daily projections of changes in the next day's current account balances at the Bank and the actual figures for fiscal 2006 indicates that, on average, projections of excesses and shortages of funds were accurate within a range of plus or minus 50 billion yen. The accuracy of these projections implies that the projection error rarely exerted a significant impact on money market operations (Chart 4). However, on certain days, the projections were off the mark by several 100 billion yen. In such

[4] Additional factors that affected the outstanding balance of current accounts at the Bank include yen deposits of overseas account holders. While the impact of yen deposits of overseas account holders on the current account balances at the Bank was nearly zero in fiscal 2005, these accounts contributed to an increase in the current account balances at the Bank as they amounted to 3.2 trillion yen on a cumulative basis for fiscal 2006. This may have reflected the following development. Subsequent to the rise in market rates following the two increases in the target level of the uncollateralized overnight call rate, overseas account holders reduced their yen deposits with the Bank and invested these funds in the market. Based on prearranged agreements with foreign central banks and international organizations, the Bank provides a facility that manages their yen deposits at slightly below the prevailing rate in the market without individual instructions for each transaction. Yen deposit amounts were affected when prevailing market rates became attractive compared to the interest rates on the Bank's yen deposits.

[5] Additionally, the Bank releases monthly projections, and monthly preliminary and final figures for these three items.

[6] The U.S. Federal Reserve System does not release this type of projection. The European Central Bank generally releases weekly projections of excesses and shortages of funds (daily averages) after the beginning of the week. These differences in practice may be due to such factors as availability of pertinent information, and differences in the range of fluctuations of excesses and shortages of funds (fluctuations in the U.S. and the Euro area are smaller than in Japan).

instances, it was occasionally necessary to additionally adjust the current account balances at the Bank through operations conducted on the same day. A review of the projection errors broken down into "banknotes" and "treasury funds and others" shows that the absolute size of the gap between projections and actual figures is larger for the autonomous factor of "treasury funds and others", reflecting the fact that payments and receipts of treasury funds significantly exceed banknote payments and receipts.[7]

II. Developments in Money Market Operations

The developments in the Bank's money market operations and changes in current account balances at the Bank, based on the sources of changes in current account balances at the Bank (autonomous factors) discussed in Section I above, are as follows.

A. Money Market Operations under a Target of "Effectively Zero Percent"

At the MPM held on March 8 and 9, 2006, the Bank decided to change the operating target of money market operations from the outstanding balance of current accounts at the Bank to the uncollateralized overnight call rate, and to encourage that rate to remain at effectively zero percent. At the same time, the Bank announced that the outstanding balance of current accounts at the Bank would be reduced towards a level in line with required reserves (approximately 6 trillion yen[8]) over a period of a few months while taking full account of conditions in the short-term money market (Chart 1).

Money market operations have been conducted under this guideline since April 2006. Reduction of the outstanding balance of current accounts at the Bank, which amounted to 31.2 trillion yen at the end of March 2006, was started in earnest in April and was

[7] In recent years, fluctuations in excesses and shortages of funds were growing as a result of the increase in payments and receipts of treasury funds. Responding to this development, in August 2005, the Ministry of Finance adopted measures designed to improve the efficiency of the management of the national treasury by matching the schedule of cash inflows through tax revenues and JGB issuance and outflows of the government through pension payments and distribution of local allocation taxes ("Efficient Management of the Cash in the National Treasury," August 26, 2005). In May 2006, the Ministry of Finance took the additional step of starting the year-round issuance of FBs with maturity of about two months with issuance dates set on days with excess cash outflow from the national treasury and redemption dates set on days with excess cash inflow into the national treasury ("Approaches to Strengthening Efficient Management of the Cash in the National Treasury," May 24, 2006). These measures act to reduce the fluctuations in the "treasury funds and others".

[8] The Japan Post is not subject to the reserve requirement system, but the Bank of Japan has a contract with the Japan Post in which the Japan Post is to maintain a designated minimum amount of balances, in the form of deposits, with the Bank. The required reserves amount of approximately 6 trillion yen includes the designated minimum amount of the Japan Post.

mainly implemented by not rolling over maturing short-term funds-supplying operations (Chart 2). However, from the perspective of maintaining stability in the money markets, the pace of reduction was adjusted by undertaking some new short-term funds-supplying operations.

Against this backdrop, the uncollateralized overnight call rate remained in the 0.001 – 0.002 percents range for a period after the start of fiscal 2006. However, as the reduction of the outstanding balance of current accounts at the Bank proceeded, the uncollateralized overnight call rate occasionally showed some upward movement, albeit at extremely low levels. This tendency was particularly apparent after the second half of May when the outstanding balance of current accounts at the Bank reached the 12 trillion yen level. At this time, the general collateral (GC) repo rate[9] began to show upward movement on days of strong fund-raising demand from securities companies, mainly JGB issuance days. This development began to affect the uncollateralized overnight call rate as well (Chart 5). During this period, an increase was seen in the use of the complementary lending facility (the basic loan rate then stood at 0.1 percent). Having gone through these developments, the outstanding balance of current accounts at the Bank decreased to about 10 trillion yen by mid-June, at which time the Bank deemed that the reduction process had been more or less completed.

The rise in the money market rates at a stage when the outstanding balance of current accounts at the Bank was significantly higher than the amount of required reserves (about 6 trillion yen) may be explained as follows. Short-term funds-supplying operations by the Bank have been the primary fund-raising tool used by financial institutions under the quantitative easing policy. Thus, even while some account holders maintained high levels of current account balances at the Bank, the cutback in short-term funds-supplying operations led some account holders, who were feeling uncertainty over fund-raising in the money market, to offer higher rates to accelerate the pace of fund-raising. In the case of the repo rate, another factor contributing to its rise was that while securities companies and others moved to increase fund raising through GC repo transactions, lenders in that market remained limited.

Consequently, adjustments were made in money market operations to compensate for fund shortages in the market at an earlier timing ahead of JGB issuance days and other

[9] The general collateral repo rate (which here refers to lending and borrowing transactions of JGBs with cash collateral) applies to transactions where the JGB issues to be used in the lending transactions are not specified. By contrast, the special collateral repo rate applies to transactions where the JGB issues to be used in the lending transactions are specified.

days with fund shortages. Specifically, to stabilize market rates, the Bank actively conducted future-dated outright bill purchasing operations (at the Head Office) starting on the third business day after the offer (T+3) (after June 26, funds-supplying operations [at the Head Office] against pooled collateral were used).

To ensure smooth interest rate formation in the money market after the reduction of the outstanding balance of current accounts at the Bank was more or less completed, it was important for market participants to have an accurate picture of excesses and shortages of funds. However, because of the large amounts of current account balances held by counterparties not subject to the reserve requirement system, movements in the total amount of current account balances did not necessarily accurately reflect actual excesses and shortages of funds. For instance, consider a case in which the outstanding balance of current accounts at the Bank has increased substantially from the previous day. This would not result in an actual excess of funds if this increase was due to an increase in the current account balances held by counterparties not subject to the reserve requirement system and these counterparties did not increase their investment of funds in the market. Conversely, even when the outstanding balance of current accounts at the Bank has decreased, this would not result in an actual shortage of funds if this decrease was due to a decrease in the current account balances held by counterparties not subject to the reserve requirement system and these counterparties did not reduce their investment of funds in the market.

For financial institutions investing and raising vast amounts of funds on a daily basis, current account balances held by counterparties subject to the reserve requirement system (reserve balances) is a more important indicator of actual excesses and shortages of funds than the total outstanding balance of current accounts at the Bank. In light of this fact, on June 16, 2006, the Bank changed the content of its announcements of "Sources of Changes in Current Account Balances at the Bank of Japan and Market Operations" as follows. The deposits of the Japan Post, previously included in "reserve balances held by institutions subject to reserve requirements," were combined with "Current account balances held by institutions NOT subject to reserve requirements" and announced under "Current account balances held by OTHER institutions." Beginning on June 16, projections of reserve balances for each business day started to be released at around 9:20 a.m. of the same day (see Section V. C below).

During this period, the Bank revised the maximum bidding amount and minimum unit of bid rates in its money market operations to ease the transition in the operating target to the uncollateralized overnight call rate (see Section V. D and E below).

At the MPM held on July 13 and 14, 2006, the target level for the uncollateralized overnight call rate and the basic loan rate were raised. Due to the configuration of dates,[10] some financial institutions borrowed funds heavily from the Bank through the complementary lending facility at the basic loan rate that applied prior to the rate increase of July 14[11]. Consequently, these financial institutions significantly frontloaded their reserve balances for the July reserve maintenance period.

B. Money Market Operations under a Target of "Around 0.25 Percent"

The following two decisions were made at the MPM of July 13 and 14, 2006: to "encourage the uncollateralized overnight call rate to remain at around 0.25 percent;" and, to change the basic loan rate applicable to the complementary lending facility to 0.4 percent. Thereafter, money market operations were conducted in conformity to these decisions.

During this period, the uncollateralized overnight call rate remained at "around 0.25 percent." However, the rate tended to fluctuate during the July reserve maintenance period, which immediately followed the rate increase. Specifically, the uncollateralized overnight call rate moved upward at the start of the period and moved downward during the second half of the period (Chart 5). This was mainly due to the following factors. [1] As foreign banks' demand for funds in the uncollateralized overnight call market increased, these banks moved to speed up their borrowing in light of the credit line constraints that applied to them. [2] As Japanese banks sensed uncertainty in raising funds from the money market, these banks tended to frontload their reserve balances instead of investing in the market. [3] Reacting to the significant frontloading of reserve

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[10] The reserve maintenance period extends from the 16th of every month to the 15th of the following month. During each reserve maintenance period, counterparties subject to reserve requirements must hold, on a cumulative basis, at least an amount obtained by multiplying the required reserves (daily average) by the number of days in the reserve maintenance period in the form of reserve balances. The reserve maintenance period for June 2006 ended on July 15 (Saturday), and the previous day (Friday, July 14) was the last day for adjusting reserve balances. The reserve balance as of the end of business on July 14 applied not only to the last day of the June reserve maintenance period (Saturday, July 15) but was also carried over as the reserve balance for the start of the July reserve maintenance period, which started on July 16 (Sunday) and also to the following day, July 17 (Monday), as this day was a national holiday. In this way, the reserve balance of June 14 was also applied to the July reserve maintenance period.

[11] The basic loan rate after the raise (0.4 percent) became immediately applicable upon the release of "Change in the Guideline for Money Market Operations" (July 14, 1:40 PM).

balances, there was a growing sense of excess funds during the second half of the reserve maintenance period.

Against this backdrop, during the July reserve maintenance period, the Bank actively made offers on both funds-supplying and funds-absorbing operations on a same-day start basis to stabilize the money market and to prevent the uncollateralized overnight call rate from deviating significantly from its target level. When fund shortages were expected in the market, the Bank endeavored to stabilize the market rates by offering T+3 funds-supplying operations (at the Head Office) against pooled collateral.

During the August reserve maintenance period and thereafter, investment and fund-raising in the money markets gradually became more active, which lowered the level of concern for uncertainty in fund-raising in the market. In addition, the credit line constraints on foreign banks were gradually alleviated. In this environment, the process of rate formation was gradually stabilized except for the semi-fiscal year-end at the end of September when the uncollateralized overnight call rate moved upward as lenders adopted a cautious stance influenced by the capitalization requirements for financial institutions. Responding to these changes, the volume of operations starting on the same day decreased somewhat compared to immediately after the rate increase. Furthermore, the Bank stopped offering T+3 funds-supplying operations (at the Head Office) against pooled collateral after September, as a general rule. Including the adoption of these measures, a gradual transition was made to money market operations that utilize the market's autonomous interest rate formation function, in line with the recovery in market function that followed the rate increase.

Beginning in January 2007, the uncollateralized overnight call rate and other overnight rates moved upward in response to growing expectations of a rise in the target level of the uncollateralized overnight call rate (see BOX). On such occasions, the Bank restrained the rise in interest rates by offering large amounts of same-day funds-supplying operations. During this period, there were many examples of financial institutions experiencing difficulties in raising same-day funds making use of the complementary lending facility. Due to these high-volume same-day funds-supplying operations and complementary lending, reserve balances significantly exceeded requirement levels during the first parts of the January and February reserve maintenance periods, resulting in a frontloading of reserve balances (Chart 6). Consequently, there was a growing sense of excess funds in the market during the latter parts of these reserve maintenance periods. This created an environment in which the uncollateralized overnight call rate could easily decline.

[BOX] Expectations of Rate Increases and the Increase in Uncollateralized Overnight Call Rate and Other Rates

Heightened expectations of an increase in the target level for the uncollateralized overnight call rate can exert upward pressure on the uncollateralized overnight call rate and other overnight rates even before the holding of a MPM where a decision on a rate increase is anticipated. Such upward pressure is mainly generated by changes in the behavior of counterparties subject to reserve requirements.

This can be explained as follows. When interest rates are raised during a reserve maintenance period, the opportunity cost of holding reserves (profits earned if those funds were invested in the market) for the period following the rate increase is approximately equal to the target level of the uncollateralized overnight call rate after the rate increase. By comparison, the opportunity cost is smaller prior to the rate increase. In this case, it is rational for counterparties subject to reserve requirements to frontload their reserve holdings and to maintain daily reserve balances that exceed their reserve requirements during the period ahead of the rate increase. As a result, supply of funds in the market diminishes (fund-raising demand in the market increases) prior to a rate increase. This generates upward pressure on the uncollateralized overnight call rate and other overnight rates.

Some borrowers find it necessary to raise funds even at higher rates in order to meet settlement demands for the day. For this reason, upward pressure on overnight rates, especially on those starting on the same day, tend to easily emerge when the amount of fund raising demand is increasing.

C. Money Market Operations under a Target of “Around 0.5 Percent”

The following two decisions were made at the MPM of February 20 and 21, 2007: to “encourage the uncollateralized overnight call rate to remain at around 0.5 percent;” and, to change the basic loan rate applicable to the complementary lending facility to 0.75

percent. Thereafter, money market operations were conducted in conformity to these decisions.

As discussed above, reserve balances were significantly frontloaded ahead of the February MPM. In this environment, while the uncollateralized overnight call rate showed some fluctuation, the transition to the new target level was completed relatively smoothly after the rate increase, reflecting the recovery of money market functions.

The following developments were observed on March 30, the last business day of fiscal 2006. Given the impact of capitalization requirements for financial institutions, lenders in the uncollateralized overnight call market generally adopted a cautious stance, while some financial institutions exhibited strong demand for funds. The Bank responded to this by offering same-day funds-supplying operations. In this environment, the uncollateralized overnight call rate climbed to 0.715 percent, while the use of the complementary lending facility marked a substantial amount (Chart 5).

D. Developments in Current Account Balances at the Bank

Under the monetary policy framework described above, current account balances at the Bank during fiscal 2006 declined from 31.2 trillion yen at the end of the previous fiscal year to about 10 trillion yen by the middle of June 2006. Following the increase in the target level of the uncollateralized overnight call rate at the July MPM, current account balances at the Bank moved in the range of around 6 – 13 trillion yen (Chart 2). As previously mentioned, lenders adopted a cautious stance at the end of March 2007 due to fiscal year-end factors. Consequently, current account balances at the Bank reached 11.7 trillion yen at the end of fiscal 2006 (down 19.5 trillion yen from the previous fiscal year-end).

Outstanding balances of the Bank's money market operations also decreased significantly during fiscal 2006. The balance of short-term funds-supplying operations[12] decreased from 56.5 trillion yen marked at the end of fiscal 2005 and generally remained in the vicinity of 40 trillion yen after the process of the reduction of current account balances at the Bank was completed. While autonomous factors contributed in

[12] Short-term funds-supplying operations consist of operations that provide funds extending over not more than 1 year, such as outright purchases of TBs/FBs, funds-supplying operations against pooled collateral, and purchases of JGSs with repurchase agreements. It also includes outright purchases of asset-backed securities which were terminated at the end of fiscal 2005. Outright purchases of JGBs are not included.

a downward direction more than in fiscal 2005 implying a need to raise the level of short-term fund-supplying operations, current account balances at the Bank decreased significantly and more than offset the previous factor. By the end of fiscal 2006, outstanding balances of short-term funds-supplying operations had decreased to 34.6 trillion yen (down 21.9 trillion yen from the previous fiscal year end: Charts 7 and 8).

The following developments were seen in the reserve balances within current account balances at the Bank. While required reserves remained at about 4.7 trillion yen[13] throughout the fiscal year, counterparties subject to reserve requirements reduced their current account balances exceeding their required reserves (excess reserves). As a result, reserve balances, which stood at 23.5 trillion yen at the end of fiscal 2005, fell to an average of 5 – 6 trillion yen after the July MPM. (Due to fiscal end-year factors, reserve balances increased to about 8.8 trillion yen at the end of fiscal 2006.) Reductions in excess reserves were seen across all categories of counterparties. However, the timing of these reductions differed slightly among different categories of counterparties. The current account balances of counterparties not subject to reserve requirements ("Current account balances held by OTHER institutions") also declined while showing some fluctuation (Charts 9 and 10). This can be attributed to the following developments. Following the rate increase, keener awareness of the opportunity cost of holding current account balances at the Bank emerged among financial institutions. At the same time, concern for uncertainty surrounding fund-raising in the money market gradually receded with each reserve maintenance period. As a result, current account balances at the Bank held as a buffer for cash management were reduced.

E. Changes in Money Market Operations after the Quantitative Easing Policy

A comparison between money market operations under the quantitative easing policy (primarily during fiscal 2005) and money market operations after the rate increase in July 2006 reveals the following changes.

First, following on the significant decrease in current account balances at the Bank, the outstanding balance of short-term funds-supplying operations declined (Charts 7 and 8).

Second, lengths of operations (the length between the start date and the end date of an operation) were shortened. Under the quantitative easing policy, the length of short-

[13] Total required reserves of counterparties subject to reserve requirements (excludes the required deposits of the Japan Post).

term funds-supplying operations was increased, and funds-absorbing operations were actively offered on days of excess funds to stabilize the current account balances at the Bank within the target range. The average length of short-term funds-supplying operations was increased to about six months by the second quarter of 2005. Given the frequency of undersubscription in short-term funds-supplying operations, this was a measure to stimulate demand for funds among counterparties in operations, and to thereby maintain the current account balances at the Bank within the target range. After the rate increase, the outstanding balance of short-term funds-supplying operations decreased, and undersubscription ceased to exist. Against this backdrop, the average length of short-term funds-supplying operations has been reduced to about one month (Chart 11). However, funds-supplying operations of relatively longer lengths are also being offered. Given the continued downward trend in autonomous factors, this is being done to stabilize the reserve balances while accommodating fluctuations in autonomous factors.

Third, the number of operations offered has increased (Chart 12). Among these, the number of short-term funds-supplying operations has been increased mainly for the following reasons. Because the average length of operations was very significantly reduced in comparison to the reduction in the outstanding balance, the number of offers had to be increased to maintain the accumulation of necessary outstanding balance of operations. A related consideration is that amounts offered through individual future-dated operations were not increased so that future reserve balances could be finely adjusted to necessary and adequate levels even when the pace of reserve accumulation changes. A further cause for the increase in the number of operations is that same-day funds-supplying operations were used flexibly when the uncollateralized overnight call rate showed indications of deviating above the target level.

As for funds-absorbing operations, same-day offers were also increased. The offers were made when the uncollateralized overnight call rate showed indications of deviating below the target level. On the other hand, the number of future-dated funds-absorbing operations declined for the following reasons (Chart 12). First, unlike under the quantitative easing policy, funds-absorbing operations did not have to be used to keep current account balances at the Bank within the target range. Second, the Bank primarily coped with days of fund excesses, due to payments of treasury funds for example, by setting the end date of short-term funds-supplying operations on these days.

III. Developments in the Money Market and Impact on Money Market Operations

A. Development in Uncollateralized Overnight Call Rate

A review of the movements in the uncollateralized overnight call rate, the Bank's operating target, shows that the daily weighted average moved in line with the target level as it was changed.

During the period when the target was set at around 0.25 percent (July 2006 – February 2007), the gap between the weighted average of the uncollateralized overnight call rate and the target level was generally at the same level as was seen when the target was previously set at around 0.25 percent (September 1998 – February 1999, and August 2000 – February 2001: Chart 13).

During this period, an examination of the movements in the weighted average shows that it was more frequently above 0.25 percent than below 0.25 percent (Chart 14). This was due to the following factors. First, as previously explained, while the function of the market was still in the process of recovery, there was a tendency to frontload the raising of funds and to prioritize the accumulation of reserve balances. Second, upward pressure was exerted on interest rates during periods of growing expectation of rate increases. Third, in the case of some foreign banks, funds needed for settlement of transactions consistently and significantly exceed their required reserves. Because such banks engage in large daily fund-raising, the uncollateralized overnight call rate can easily come under upward pressure even on days when the total balance of reserves exceeds the average reserve requirements of subsequent days.

After the target level was raised to around 0.5 percent, fluctuations in the uncollateralized overnight call rate grew somewhat greater than when the target level was set at around 0.25 percent. This reflected the greater available range for rate fluctuation following the increase in the target range from around 0.25 percent to around 0.5 percent and the increase in the differential between the target level and the basic loan rate applicable to the complementary lending facility from 0.15 percentage points to 0.25 percentage points.

An examination of maximum and minimum rates for the same business day indicates that intraday fluctuations in overnight rates are significantly large (Chart 14). Intraday movements in the rates tend to trace the following pattern. During the morning hours, fund-raising begins at a relatively high rate. Thereafter, the rate moves gradually downward. However, rates observed in the course of the day may rise or fall sharply in response to progress in settlements of funds and securities during the day, or changes in the fund-raising stance of borrowers and the investment stance of lenders.

B. Developments in the Money Market[14]

Following the two increases in the policy rates, the money market steadily regained its function as market participants became more actively involved in transactions. While various issues remain, the following changes were observed as described below. First, the scale of the call market steadily recovered. Second, the level of arbitrage activities between markets increased.

The amounts outstanding in the call market gradually increased during fiscal 2006. This recovery was centered on the uncollateralized call market. Looking at transactions intermediated by *tanshi* (money market brokers), the pace of increase has picked up, particularly after December 2006 (Chart 15-1). Likewise, there are indications that so-called direct deal (DD) transactions, which are not intermediated by *tanshi*, also have been increasing somewhat (Chart 16).

The following factors contributed to the increase in the amounts outstanding in the uncollateralized call market. First, following the conclusion of the quantitative easing policy, an increasing number of counterparties restarted or enlarged their call market transactions.[15] Second, responding to call market transaction levels, some financial institutions expanded their credit lines for both lending and borrowing, and upgraded their organizations for investment and fund-raising in the money market.

The amounts outstanding in the collateralized call market decreased as invested funds shifted out to uncollateralized call transactions and others. However, the amounts outstanding began to increase slightly beginning in September 2006 (Chart 15-2). The growth in collateralized call transactions has been sluggish partly because the collateral posted in collateralized call transactions is valued lower than that for GC repo

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[14] For details of changes and challenges in the money market after the conclusion of the quantitative easing policy and after the rate increase in July 2006, see the following reports of the Bank, respectively: Financial Markets Department, “Financial Markets Report – Supplement – Changes Observed in Money Markets after the Conclusion of the Quantitative Easing Policy” (September 25, 2006); and, “Financial Markets Report – Supplement – Changes Observed in Money Markets after the Rise in the Policy Interest Rate in July 2006” (April 19, 2007).

[15] During the approximately 5 years of quantitative easing policy extending between March 19, 2001 and March 9, 2006, some financial institutions, led by local financial institutions, suspended their investment and fund-raising through the call market, or moved their market transaction departments out of Tokyo.

transactions compared on a marked-to-market basis, and DVP settlements are not widespread. Regarding collateral value, JGB margin tables were revised on March 19, 2007 in the direction of improving collateral efficiency.[16]

The money market contains various other markets that are closely linked to the call market. These include the GC repo market, the euro-yen market, and the foreign exchange swap markets (yen conversion and yen placement). Developments in these markets can be summarized as follows.

GC repo transactions, on the fund-raising side, are frequently used by securities companies to finance their JGB positions, and mainly consist of transactions that start on T+3 and T+2. Consequently, funds for positions that cannot be financed through T+2 overnight transactions (S/N)[17] tend to be raised in the call market. This tendency became particularly conspicuous during May and June 2006. During this period, increases in the GC repo rate (S/N) tended to push the uncollateralized overnight call rate upward (Chart 5).

As concerns for uncertainty surrounding the fund-raising in the uncollateralized call market gradually receded, the attention of major banks and others was drawn to the fact that the GC repo rate (S/N) was higher than the uncollateralized overnight call rate. This stimulated arbitrage transactions involving future-dated GC repo lending funded by borrowing on the uncollateralized call market. These developments helped push up amounts outstanding in the GC repo market (Chart 17). While lenders of funds have not increased substantially, some growth has been seen in T+0 and T+1 GC repo transactions. As a result, the pattern of a rising GC repo rate (S/N) spilling over to the uncollateralized overnight call rate has become infrequent.

In euro-yen and foreign exchange swap transactions, daily amounts of euro-yen transactions intermediated by brokers appear to be increasing (Chart 18). This can be attributed to the fact that, reflecting extensive transactions in overseas markets, mainly foreign banks are using these transactions to raise and invest yen funds. In terms of

[16] See Tanshi Association, “Revision of Margin Tables for Collateralized Call Transactions” (March 19, 2007, in Japanese). The following rules apply under the new capitalization requirements that went into effect at the end of March 2007 in Japan (so-called “Basel II”). When the value of collateral submitted (mark-to-market value) in collateralized call transactions exceeds the amount of funds borrowed, the borrower must recognize the excess portion of the collateral as a credit risk exposure. The revision of the margin tables in March 2007 made it possible to reduce the excess portion of collateral value submitted taking into account the mark-to-market value of JGBs.

[17] Abbreviation for “spot/next.” These are overnight transactions where the funds are delivered two business days after the contract date.

timing, these transactions are primarily conducted between evening hours in Tokyo and the end of market hours in London. The T+1 overnight (T/N)[18] rate is closely linked to the rate at which foreign banks raise funds in the uncollateralized call market on the next business day.

In the euro-yen market, major Japanese banks and local financial institutions are increasingly undertaking T/N lending to foreign banks financed by borrowing on the uncollateralized call market on the following business day. In the foreign exchange swap market, as in the case of the euro-yen market, mainly foreign banks are raising yen funds through T/N borrowing. In addition to this, foreign banks with relatively good access to funds in the uncollateralized call market are engaging in arbitrage transactions involving the lending of yen funds to other foreign banks on T/N and same-day-start overnight terms financed through borrowing of yen funds on the uncollateralized call market and other markets.

After the rate increase of July 2006, arbitrage transactions among these markets for overnight instruments have been gradually growing. This has strengthened the linkage between interest rates in these markets (Chart 19). For instance, this linkage was observed during a period of weaker yen in December 2006 and before and after the rate increase in February 2007. In both instances, a rise in yen-conversion costs (T/N) was followed by a similar rise in the euro-yen rate (T/N). Responding to this rise in yen-conversion costs and euro-yen rate, some foreign banks shifted their yen fund-raising from foreign exchange swaps (yen conversion) and euro-yen to the uncollateralized overnight call market. These arbitrage activities between the markets are believed to have led to the rise in the uncollateralized overnight call rate (Chart 20). It seems that this development reflected the heightened yen fund raising demand of overseas investors and others to a considerable extent. In certain periods, these changes in yen fund raising demand appear to be influencing the uncollateralized overnight call rates.

C. Responses to Intraday Liquidity Demand

Intraday liquidity refers to temporary intraday funds requirements that become necessary for settlement of market transactions. In January 2001, RTGS was introduced for current account settlements at the Bank, and the practice of "prioritizing repayment

[18] Abbreviation for "tomorrow/next." These are overnight transactions where the funds are delivered one business day after the contract date.

over new lending"[19] became prevalent in uncollateralized call transactions. Under these arrangements, demand for intraday liquidity tends to increase in the morning hours up until around 10 a.m. when borrowers are repaying the uncollateralized overnight call funds borrowed on the previous day. Awareness of these changes in settlement systems and settlement practices was initially low because of the ample supply of funds made available under the quantitative easing policy initiated immediately after the introduction of RTGS. However, these changes have been exerting some influence on the market in fiscal 2006 after the conclusion of the quantitative easing policy.

The Bank provides intraday liquidity through interest-free intraday overdrafts that must be repaid by the end of the business day. Such overdrafts are available within the limit of the value of excess pooled collateral[20] submitted to the Bank by financial institutions. However, holdings of eligible collateral vary among financial institutions, and their demand for intraday liquidity also varies according to the day-to-day volume of transactions. In the case of foreign banks and others, the intraday liquidity needed to repay their uncollateralized overnight call borrowings by 10 a.m. may exceed the value of the intraday overdrafts available to them. Foreign banks and others cope with these situations by using "intraday call transactions" to raise intraday liquidity, or by conserving intraday liquidity in overnight transactions.[21]

A commonly used method for conserving intraday liquidity is to choose transactions for which settlement can be carried out on a net basis by netting borrowed and repaid amounts (Chart 21). For instance, euro-yen transactions can be settled on a net basis using the Foreign Exchange Yen Clearing System. Thus, compared to uncollateralized overnight call transactions, which are settled under RTGS, euro-yen transactions allow financial institutions to conserve intraday liquidity. As the euro-yen rate (T/N) normally

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[19] In the call market, the market practice is that, "in principle, borrowers make repayments to lenders by no later than 10 a.m." This practice is applied with a view to smooth cash settlement under RTGS.

[20] Pooled collateral refers to collateral that counterparties submit to the Bank based on the provisions of agreements pertaining to transactions with the Bank and other contracts. The Bank specifies eligible assets for the pooled collateral in the "Guidelines on Eligible Collateral." The assets most commonly submitted by counterparties to the Bank are government bonds, corporate and other bonds, and loans on deeds. Counterparty financial institutions can borrow from the Bank within the limit of the value of pooled collateral through funds-supplying operations against pooled collateral, complementary lending facility, intraday overdraft, and other means. Previously, collateral needed to be specified for each individual agreement or contract, with financial institutions submitting collateral equal to or exceeding the respective required amounts. Since January 2001, for certain borrowings, financial institutions have been permitted to meet collateral requirements by submitting assets eligible for pooled collateral equal to or exceeding the total amount of collateral required by all the outstanding agreements and contracts (see Section IV. A).

[21] Japanese banks generally have sufficient eligible collateral, and seldom have difficulties maintaining adequate intraday liquidity.

remains above the uncollateralized overnight call rate, the spread can be interpreted to include a premium for the conservation of intraday liquidity.

In uncollateralized call transactions, such transactions as “12:00 end” contracts have emerged since around November 2006. In these contracts, the counterparties agree to a repayment deadline of up to noon instead of the standard market practice of a 10 a.m. deadline. This allows borrowers to save on the cost of intraday liquidity (the cost of submitting eligible collateral as pooled collateral) by keeping the daily excess amounts of their pooled collateral at below the repayment amounts on uncollateralized call transactions (Chart 21). The contract rate on transactions allowing repayment beyond the deadline under standard market practices is slightly higher than the rate on the standard uncollateralized call transactions that must be repaid by around 10 a.m.[22]

IV. Developments in Operations by Type of Tool

A. Money Market Operations by Type of Operational Tool[23]

a. Outright purchases of JGBs

Outright purchases of JGBs are operations to purchase long-term JGBs. These operations are undertaken through conventional auction where bids are made based on spreads between yields offered by counterparties and benchmark yields determined by the Bank.[24] The amount of purchases has been set at 1.2 trillion yen per month since the October 30, 2002 MPM. In each operation, offered four times a month, the Bank has been purchasing 0.3 trillion yen of JGBs in principle. This was reconfirmed as follows when the target level for the uncollateralized overnight call rate was raised in July 2006 and February 2007. “With respect to the outright purchases of long-term interest-bearing Japanese government bonds, purchases will continue at the current amounts and frequency for some time, with due regard for future conditions of the balance sheet of the Bank.”

[22] Normally, 1 – 2 basis points higher.
[23] See Chart 8 for amounts outstanding by operational tool.
[24] The benchmark yields are derived from “Reference Price (Yields) Table for OTC Bond Transactions” of the Japan Securities Dealers Association (compiled on the previous trading day).

b. Outright purchases of TBs and FBs

Outright purchases of TBs and FBs are operations to purchase TBs and FBs with residual maturity of about 2 months to 1 year. As in the outright purchase of JGBs, operations are undertaken through conventional auction based on yield spreads.

Outright purchases of TBs and FBs have relatively longer maturities among short-term funds-supplying operations. In consideration of the impact on supply and demand conditions in the TB/FB markets, frequent changes were not made in the amount and frequencies of operations during fiscal 2006. Thus, the frequency of operation remained at about once a week. The amount offered per operation was increased to about 500 billion yen after the start of fiscal 2006, but has been reduced to about 400 billion yen since September.

c. Funds-supplying operations against pooled collateral [25]

Funds-supplying operations against pooled collateral consist of loans made by the Bank to counterparties and secured by pooled collateral submitted to the Bank by counterparties. Operations are undertaken through conventional auction based on the lending rate.

Funds-supplying operations against pooled collateral consist of two categories: operations conducted at all offices of the Bank (lending to a wide range of counterparties that have transactions with the Head Office and branches of the Bank), and operations conducted at the Head Office (lending solely to counterparties that have transactions with the Head Office of the Bank). Operations at all offices have been conducted for the purposes of providing stable supplies of funds with relatively longer maturity. Meanwhile, operations at the Head Office have covered a diverse scope of terms ranging from very short-term funds-supplying overnight operations offered on a same-day basis to relatively longer-term operations. This is being used as the primary tool among the short-term funds-supplying operational tools available to the Bank.

In addition to government bonds and other public liabilities, pooled collateral includes corporate and other private bonds deemed eligible by the Bank. Because of the wide

[25] "Funds-supplying operations against pooled collateral" was introduced through revisions made in the transaction method of outright purchases of bills (Section V. A). With certain exceptions, the explanations contained in this section also apply to outright bill purchasing operations offered prior to June 26, 2006.

range of assets that are eligible for use as collateral and the ease with which such collateral can be replaced, pooled collateral is highly convenient for counterparties in operations. A review of the asset structure of pooled collateral shows that JGSs continue to account for a large portion of submitted collateral. However, the submission of private liabilities including short-term corporate bonds and loans on deeds is increasing. As a result, the share of private liabilities in pooled collateral has increased somewhat (Chart 22).

d. Purchases of JGSs with repurchase agreements

Purchases of JGSs with repurchase agreements are operations to purchase JGSs for a determined period with an agreement to resell them at the end of that period. It is often used by securities companies to finance their JGS positions.

Purchases of JGSs with repurchase agreements tend to have lower subscription rates than funds-supplying operations against pooled collateral. This is due to the following factors. First, this is a type of funds-supplying operation that can only be secured by JGSs. Second, purchases of JGSs with repurchase agreements require management of sales and repurchase prices, market value of the JGSs and the amount of net exposure, and collateral used for margin adjustment. Third, this operation has been subject to a maximum bidding limit equal to one-fourth the offer amount (the maximum bidding limit in operations other than purchases of JGSs with repurchase agreements is normally equal to one-half the offer amount). During fiscal 2006, purchases of JGSs with repurchase agreements carried somewhat shorter terms than funds-supplying operations against pooled collateral, and were primarily offered with starting days falling on JGS issuance dates.

e. Purchases of CPs with repurchase agreements

Purchases of CPs with repurchase agreements are operations to purchase CPs and short-term corporate bonds (dematerialized commercial paper) for a determined period with an agreement to resell them at the end of that period. During fiscal 2006, investor demand for CPs was strong. Consequently, the subscription rate remained lower than that for other operations. In light of this and other factors, the amount offered per operation was set at about 300 billion yen with a frequency of once or twice per month.

f. Funds-absorbing operations

Funds-absorbing operations were primarily limited to periods when the uncollateralized overnight call rate showed indications of deviating below the target level, and were offered using overnight and other very short maturities. This was mainly done using outright sales of bills. Sales of JGSs with repurchase agreements were also used as funds-supplying operations on its end date by setting the end date to coincide with days on which significant fund shortages were anticipated. However, such operations were rather limited.

The frequency of funds-absorbing operations was generally lower than the frequency of funds-supplying operations due to the continued decrease in autonomous factors (Chart 12).

During fiscal 2006, sales of JGS with repurchase agreements to provide the markets with a secondary source of JGSs were conducted on three occasions.

B. Complementary Lending Facility

The complementary lending facility is a means by which the Bank lends funds to counterparties upon request. Lending is limited to the borrower’s outstanding amount of pooled collateral that has been submitted. As a rule, these loans are subject to the basic loan rate (0.75 percent as of the end of fiscal 2006) and are repayable on the following business day. The facility is expected to function to mark the upper limit on the overnight interest rate. The basic rule is that the maximum number of days on which counterparties can use the facility at the basic loan rate is five business days per reserve maintenance period. In principle, counterparties that wish to use the facility beyond this maximum number of days must pay a higher rate of 2 percent plus the basic loan rate. However, the restriction on the maximum number of days has been suspended since March 2003 and the basic loan rate has been applied regardless of the number of days used. This measure continues to be maintained.

Movements in the basic loan rate during fiscal 2006 can be summarized as follows. At the MPM of July 2006, the decision was made to raise the basic loan rate to 0.4 percent from 0.1 percent. Furthermore, the basic loan rate was raised to 0.75 percent from 0.4 percent at the MPM of February 2007. Both of these decisions accompanied the decisions to raise the target level of the uncollateralized overnight call rate. As a result, the differential between the basic loan rate and the target level increased from 0.1

percentage points to 0.15 percentage points, and finally to 0.25 percentage points (Chart 1). The differential against the target level takes into consideration the recovery of the function of the money market. Thus, the judgment was made at the MPM of February 2007 that stable rate control would not be obstructed by raising the differential from 0.15 percentage points to 0.25 percentage points.[26]

Developments in the use of the complementary lending facility were as follows. Prior to the MPM of July 2006, large amounts were drawn from the complementary lending facility when the increase in the GC repo rate spilled over to the uncollateralized overnight call rate. After the MPM of July 2006, large amounts were drawn from the complementary lending facility by financial institutions experiencing difficulties in raising funds in the spot market when lenders in the money market adopted a more cautious stance on lending. This occurred at the end of the fiscal year, and immediately prior to and on the days of MPMs with heightened expectation for an increase in rates. Furthermore, when the target level was raised in the MPMs of July 2006 and February 2007, it was anticipated that the new target level would exceed the existing basic loan rate. Acting on this expectation, some financial institutions appeared to have actively borrowed from the complementary lending facility at the basic loan rate before it was raised (Chart 5).

V. Revisions in Operational Tools and Procedures

A. Start of Funds-Supplying Operations against Pooled Collateral

Funds-supplying operations against pooled collateral was introduced by revising the bill purchasing scheme to enhance efficiency in the practical implementation of money market operations by making operation-related processes paperless from the offering all the way to funds settlement at the end-date. The plan to introduce funds-supplying operations against pooled collateral was determined at the MPM of September 7 and 8, 2005, and the “Principal Terms and Conditions for Funds-Supplying Operations against Pooled Collateral” was adopted in the MPM of April 10 and 11, 2006. Actual offers were started on June 26, 2006.

[26] Standing lending facilities similar to the Bank’s complementary lending facility exist at the central banks of the United States, the Euro area, and the United Kingdom for the purpose of stabilizing short-term market rates. In all three cases, the differential between the policy rate and the loan rate on the standing lending facility is 1 percentage point.

B. Periodic Review of Collateral Value of Eligible Collateral

A decision was made in the MPM of September 7 and 8, 2005 to review the collateral value of eligible collateral and other related matters.[27] At the same time, the Bank decided to verify the need for conducting reviews at the frequency of about once a year, as a rule. Subsequent to this verification, collateral value and other related matters were revised in the MPM of October 12 and 13, 2006. New collateral values were made effective on October 26, 2006.

C. Revision in the format of "Sources of Changes in Current Account Balances at the Bank of Japan and Market Operations"

Due to the large current account balances held by counterparties not subject to reserve requirements, it became increasingly difficult to gauge actual excesses and shortages of funds in the market as current account balances at the Bank decreased. Consequently, beginning on June 16, 2006, the outstanding deposits of the Japan Post, which were previously treated the same as the reserve balances of counterparties subject to reserve requirements, were removed from the outstanding reserve balances. These were then combined with the current account balances of other counterparties that were not subject to reserve requirements to be released under the heading of "Current account balances held by OTHER institutions." For the same reason, starting on the same day, the Bank began to release projections (estimates) of reserve balances (rounded figures) for each business day at around 9:20 a.m. of the same day.[28]

D. Revision of Maximum Bidding Amounts in Operations

The Bank changed the maximum bidding amount of any single counterparty to the Bank's funds-absorbing operations on March 16, 2006. At this time, with a view to smoothing the absorption of excess funds in the process of reducing current account balances at the Bank, the maximum bidding amount was raised to the full amount of the offer. However, the maximum bidding amount was reduced to one-half the offer amount beginning with operations offered on June 29, 2006.

[27] In addition to the collateral value of eligible collateral, matters to be reviewed include: the margin ratios of JGSs used in JGS transactions with repurchase agreements; the collateral value of margin collateral; and, margin ratios of JGSs used in sales of JGSs with repurchase agreements to provide the markets with a secondary source of JGSs.

[28] As part of the "Measures for Improving the Function of the Money Market," the time of the release of the daily projected reserve balance was moved up to around 8:00 a.m. on April 16, 2007.

Beginning with operations offered on July 3, 2006, the maximum bidding amount in purchases of JGSs with repurchase agreements was changed from one-half of the offer amount to one-fourth of the offer amount with the aim of preventing the concentration of funds provision to any particular counterparty. Furthermore, when large same-day funds-supplying operations are conducted, the Bank has flexibly adjusted the maximum bidding amount for each offer in cases where it is deemed appropriate to restrict the share of funds provided to any particular counterparty to within certain levels.

E. Revision of Minimum Unit of Bid Rates in Operations

Beginning with operations offered on July 24, 2006, the minimum unit of bid rates was changed from 0.001 percent to 0.01 percent for all operations, with the exception of JGB buying/selling operations and TB/FB buying/selling operations. The minimum unit of bid rates in these operations had been reduced from 0.01 percent to 0.001 percent beginning in the period of May – July 2001 right after the introduction of the quantitative easing policy.

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[29] Useful references for understanding the Bank of Japan’s monetary policy can be accessed via the Bank’s web site (http://www/boj.or.jp/en/index.htm) under “Monetary Policy.” Research papers can be accessed under “Statistics, Research and Studies” or “Research Papers.”

In addition, papers of the Federal Reserve Bank of New York and the European Central Bank can be accessed at their respective web sites (http://www.ny.frb.org/markets/annual_reports .html and http://www.ecb.int/pub/html/index.en.html).

[Chart 1] Developments in Guidelines for Money Market Operations

Official Announcement of March 9, 2006 (excerpts)

(Change in the Guideline for Money Market Operations)
At the Monetary Policy Meeting held today, the Bank of Japan decided to change the operating target of money market operations from the outstanding balance of current accounts at the Bank to the uncollateralized overnight call rate, and to set the following guideline for money market operations for the intermeeting period....

The Bank of Japan will encourage the uncollateralized overnight call rate to remain at effectively zero percent.

(Measures concerning Money Market Operations)
The outstanding balance of current accounts at the Bank of Japan will be reduced towards a level in line with required reserves…. [T]he reduction in current account balance is expected to be carried out over a period of a few months, taking full account of conditions in the short-term money market… With respect to the complementary lending facility, the loan rate will remain at the current level. The temporary waiver of add-on rates for frequent users of the facility, in effect since March 2003, will also be maintained.

Official Announcement of July 14, 2006 (excerpts)

1. At the Monetary Policy Meeting held today, the Bank of Japan decided … to change the guideline for money market operations for the intermeeting period….

The Bank of Japan will encourage the uncollateralized overnight call rate to remain at around 0.25 percent.

2. With respect to the complementary lending facility, the Bank decided … to change the basic loan rate applicable under the facility to 0.4 percent, … and maintain the temporary waiver of add-on rates for frequent users of the facility.

Official Announcement of February 21, 2007 (excerpts)

1. At the Monetary Policy Meeting held today, the Bank of Japan decided … to change the guideline for money market operations for the intermeeting period as stated below....

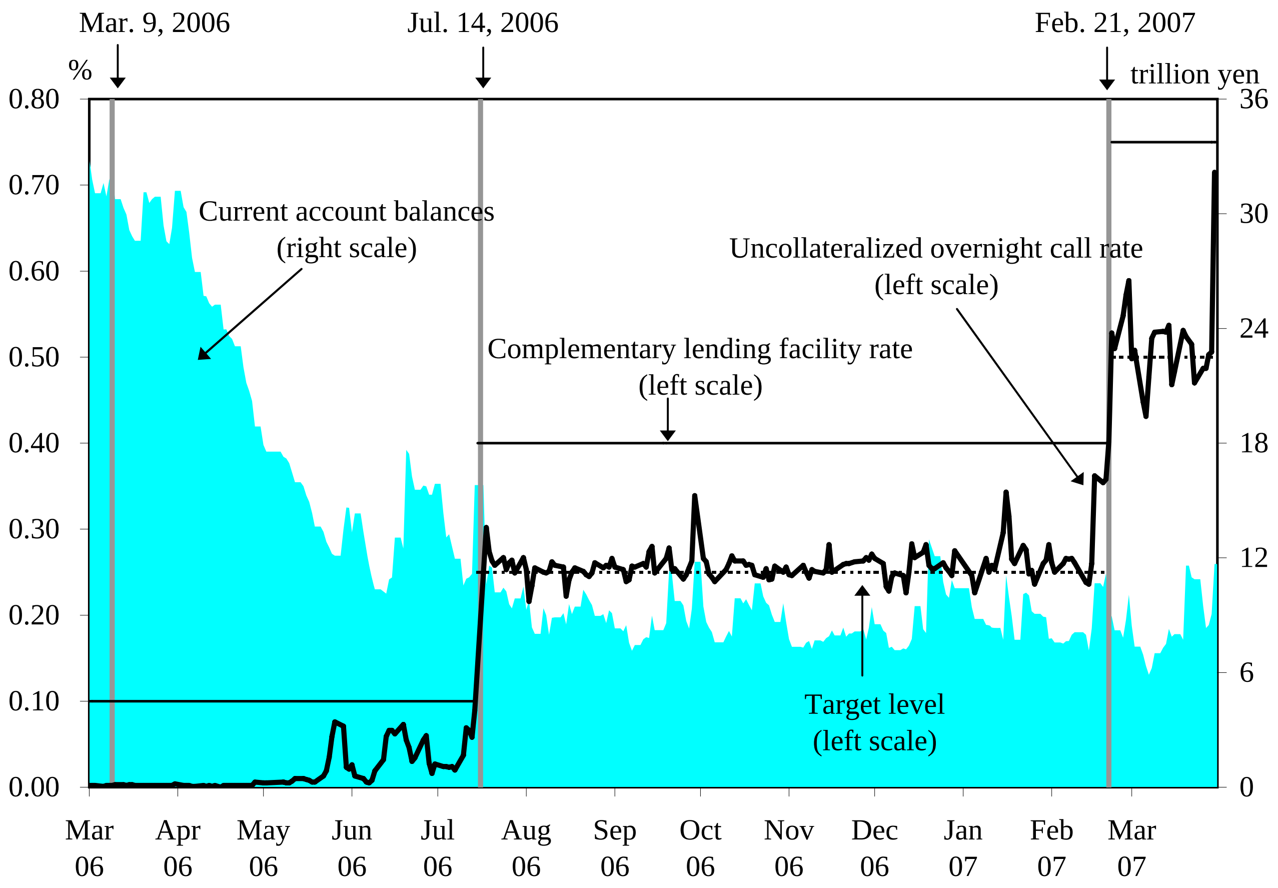
The Bank of Japan will encourage the uncollateralized overnight call rate to remain at around 0.5 percent.

2. With respect to the complementary lending facility, the Bank decided … to change the basic loan rate applicable under the facility to 0.75 percent….

(Reference)
Developments in the Target Rate and the Basic Loan Rate

	Mar. 9 - Jul. 14, 2006	Jul. 14 - Feb. 21, 2007	Feb. 21 -
Operating Target (A) (Uncollateralized overnight call rate)	Effectively zero percent	Around 0.25 percent	Around 0.5 percent
Basic loan rate (B)	0.1%	0.4%	0.75%
(B - A)	0.10%	0.15%	0.25%

[Chart 2] Current Account Balances and the Uncollateralized Overnight Call Rate



Source: Bank of Japan

[Chart 3] Changes in Autonomous Factors Affecting Current Account Balances (CABs) at the Bank

(Developments during Fiscal 2006)

trillion yen

		FY2005	FY2006	y/y change
Banknotes		- 0.3	- 0.9	- 0.6
Treasury funds and others		- 12.1	- 15.8	- 3.7
	Fiscal payments	+ 43.3	+ 39.6	- 3.7
	JGBs	- 63.6	- 51.8	+ 11.8
	FBs	+ 8.3	- 6.7	- 15.0
	Foreign exchange	+ 0.0	+ 0.0	+ 0.0
	Others	- 0.1	+ 3.2	+ 3.3
Excess/shortage of funds		- 12.4	- 16.7	- 4.3

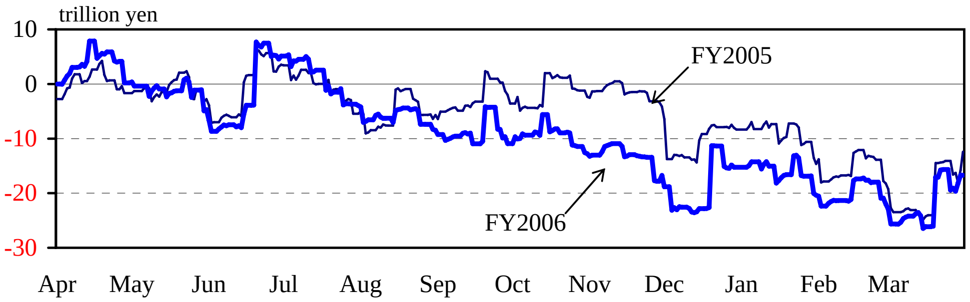
(Reference)

	FY2005	FY2006
Outstanding balance of banknotes	75.0	75.9

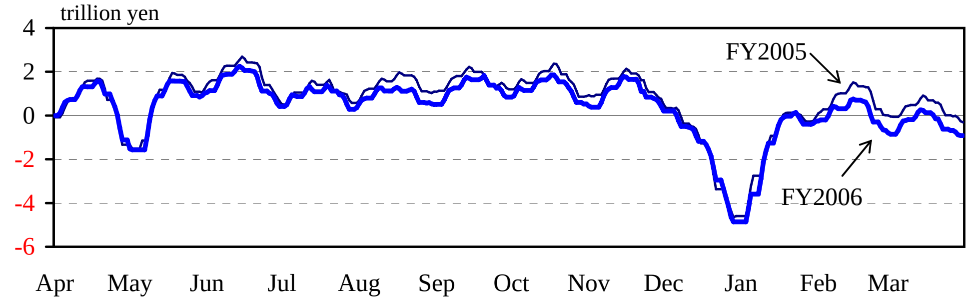
Notes: Banknotes: Negative figures show net issuance.
Treasury funds and others: Negative figures show net receipts, and positive figures show net payments (adjusted for effects of TB/FB purchasing/selling operations).
Excess/shortage of funds: Negative figures show decrease, and positive figures show increase, to the CABs (adjusted for effects of TB/FB purchasing/selling operations).

(Daily Developments during Fiscal 2006)

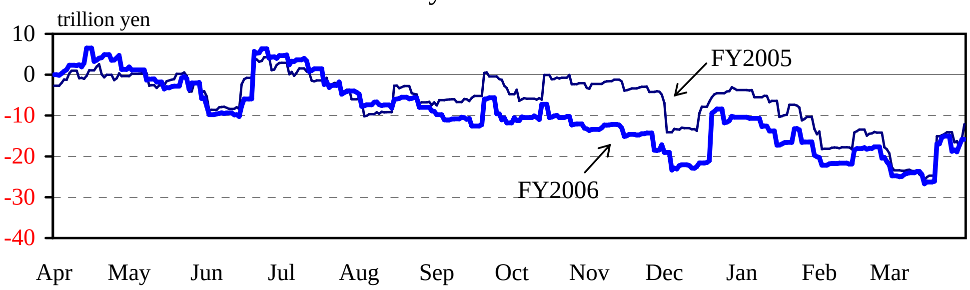
Excess/Shortage of Funds (Banknotes + Treasury Funds and Others)



Banknotes



Treasury Funds and Others



Note: Cumulative figures for fiscal 2006. Adjusted for effects of TB/FB purchasing/selling operations.
Source: Bank of Japan

[Chart 4] Accuracy of Projections of Autonomous Factors

Excess/Shortage of Funds (Banknotes + Treasury Funds and Others) 100 mil yen

		Actual average	Average error	Maximum error	Minimum error
FY2006		9,570	524	4,593	1
	Apr	10,393	517	1,662	83
	May	9,537	877	2,396	89
	Jun	12,389	621	2,030	3
	Jul	9,450	434	1,815	65
	Aug	6,517	482	4,593	14
	Sep	9,332	410	1,078	37
	Oct	7,822	559	3,326	8
	Nov	6,350	450	1,375	11
	Dec	12,513	731	2,208	2
	Jan	10,515	357	1,315	9
	Feb	7,228	403	1,320	1
	Mar	12,684	424	1,662	21

Banknotes 100 mil yen

		Actual average	Average error	Maximum error	Minimum error
FY2006		1,673	199	1,192	3
	Apr	2,135	230	522	60
	May	2,258	319	879	52
	Jun	1,391	139	309	16
	Jul	1,395	151	370	4
	Aug	974	182	503	3
	Sep	1,295	190	470	9
	Oct	1,251	168	501	16
	Nov	1,461	210	491	5
	Dec	2,534	159	438	3
	Jan	2,984	342	1,192	32
	Feb	1,406	130	355	10
	Mar	1,181	182	349	19

Treasury Funds and Others 100 mil yen

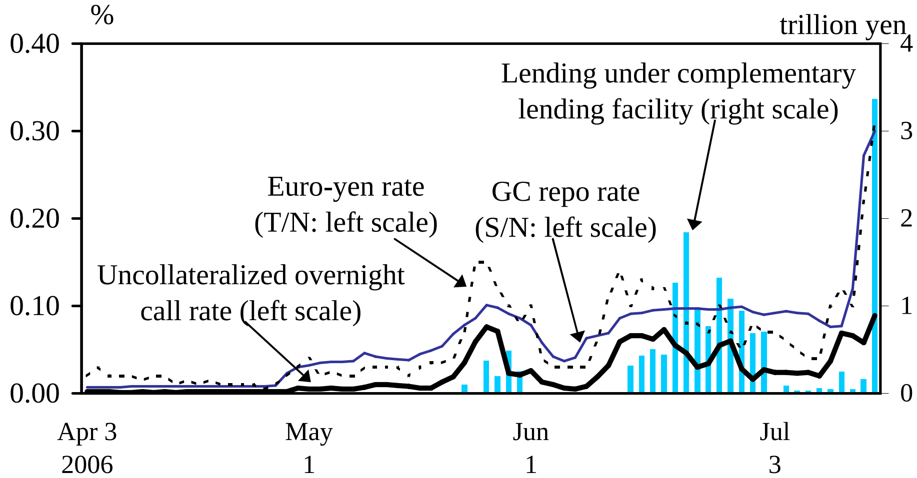
		Actual average	Average error	Maximum error	Minimum error
FY2006		9,536	469	4,436	2
	Apr	10,185	528	1,321	46
	May	9,076	735	2,139	65
	Jun	12,118	615	1,992	2
	Jul	10,002	371	1,867	36
	Aug	6,330	424	4,436	11
	Sep	9,125	334	1,064	47
	Oct	7,875	480	3,352	12
	Nov	6,470	462	1,597	46
	Dec	13,493	712	2,034	37
	Jan	9,899	211	841	5
	Feb	6,910	394	1,288	31
	Mar	12,785	337	1,418	55

Notes:
1. Actual average is the average of the absolute size of actual daily autonomous factors for the given period.
2. Errors represent the absolute difference between the actual size of autonomous factors and projection made on the previous business day (not adjusted for effects of TB/FB purchasing/ selling operations). The average, maximum and minimum are the average, maximum and minimum of this error for the given period.

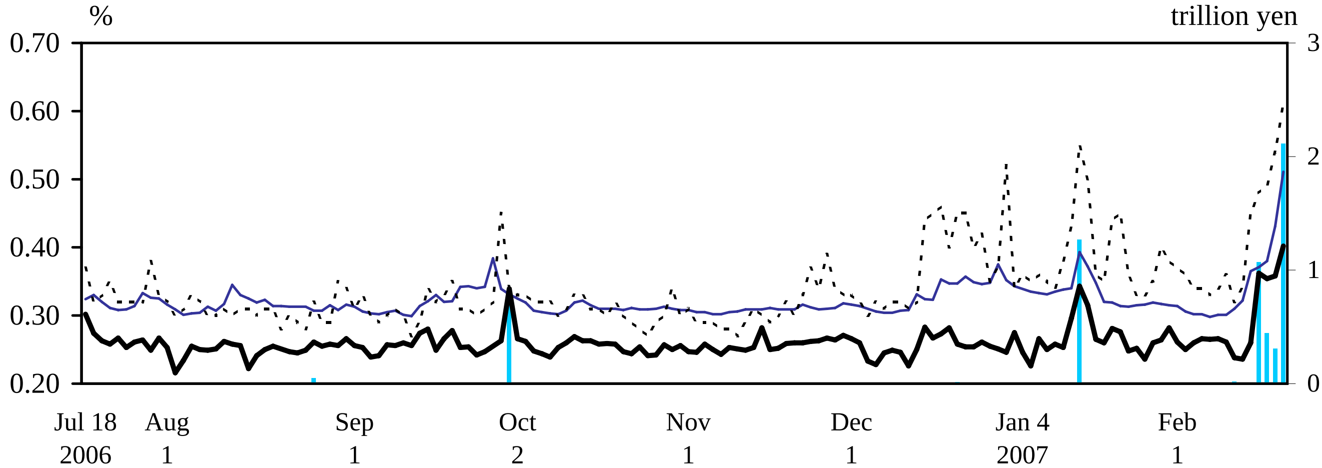
Source: Bank of Japan

[Chart 5] Money Market Rates and Lending under Complementary Lending Facility

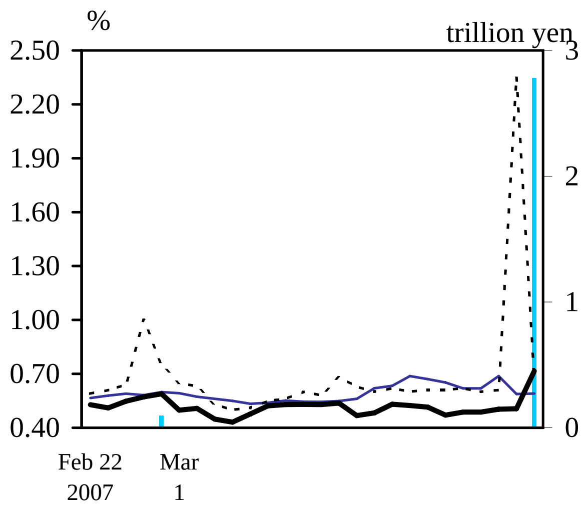
(1) April 3, 2006 – July 14, 2006 (Target: "Effectively zero")



(2) July 18, 2006 – February 21, 2007 (Target: "Around 0.25 percent")



(3) February 22, 2007 – March 30, 2007 (Target: "Around 0.5 percent")



Note: Contract date basis.
Source: QUICK, Bank of Japan

[Chart 6] Money Market Operations at the Time of MPM of January and February 2007

January 2007 trillion yen

	Jan 16	Jan 17 (MPM)	Jan 18 (MPM)
Projected current account balances at the Bank (Before offers of same-day operations)	8.2	7.9	7.7
Projected reserve balances	5.0	4.8	4.6
Amount offered in same-day operations	+ 1.6	+ 2.0	+ 1.2
Same-day funds-supplying operations	+ 1.6	+ 2.0	+ 1.2
Same-day funds-absorbing operations	-	-	-
Lending under complementary lending facility	+ 1.3	+ 0.0	-
Current Account Balances at the Bank (actual)	11.1	9.9	9.0
Reserve balances (actual)	7.8	6.8	5.9
Progress rate in reserve accumulation	5.2%	9.8%	13.7%
(Ratio of days elapsed)	(3.2%)	(6.5%)	(9.7%)
Uncollateralized overnight call rate	0.343%	0.315%	0.265%

February 2007 (Guideline for money market operations changed on Feb 21) trillion yen

	Feb 16	Feb 19	Feb 20 (MPM)	Feb 21 (MPM)
Projected current account balances at the Bank (Before offers of same-day operations)	8.0	8.0	8.5	8.4
Projected reserve balances	4.4	4.4	4.2	4.2
Amount offered in same-day operations	+ 1.6	+ 2.1	+ 2.3	- 1.3
Same-day funds-supplying operations	+ 1.6	+ 2.1	+ 2.3	+ 1.5
Same-day funds-absorbing operations	-	-	-	- 2.8
Lending under complementary lending facility	+ 1.1	+ 0.4	+ 0.3	+ 2.1
Current Account Balances at the Bank (actual)	10.7	10.5	11.2	9.2
Reserve balances (actual)	7.1	6.9	7.0	5.2
Progress rate in reserve accumulation	15.9%	21.0%	26.1%	29.6%
(Ratio of days elapsed)	(10.7%)	(14.3%)	(17.9%)	(21.4%)
Uncollateralized overnight call rate	0.362%	0.354%	0.358%	0.402%

Notes:

1. Negative figures show funds absorbed.
2. "Ratio of days elapsed" is the ratio of days elapsed (including all business days and holidays that follow on a business day) since the start of the reserve maintenance period to the total number of days in the reserve maintenance period.

[Chart 7] Bank of Japan's Balance Sheet and Amounts Outstanding of Short-Term Funds-Supplying Operations

(1) Bank of Japan's Balance Sheet

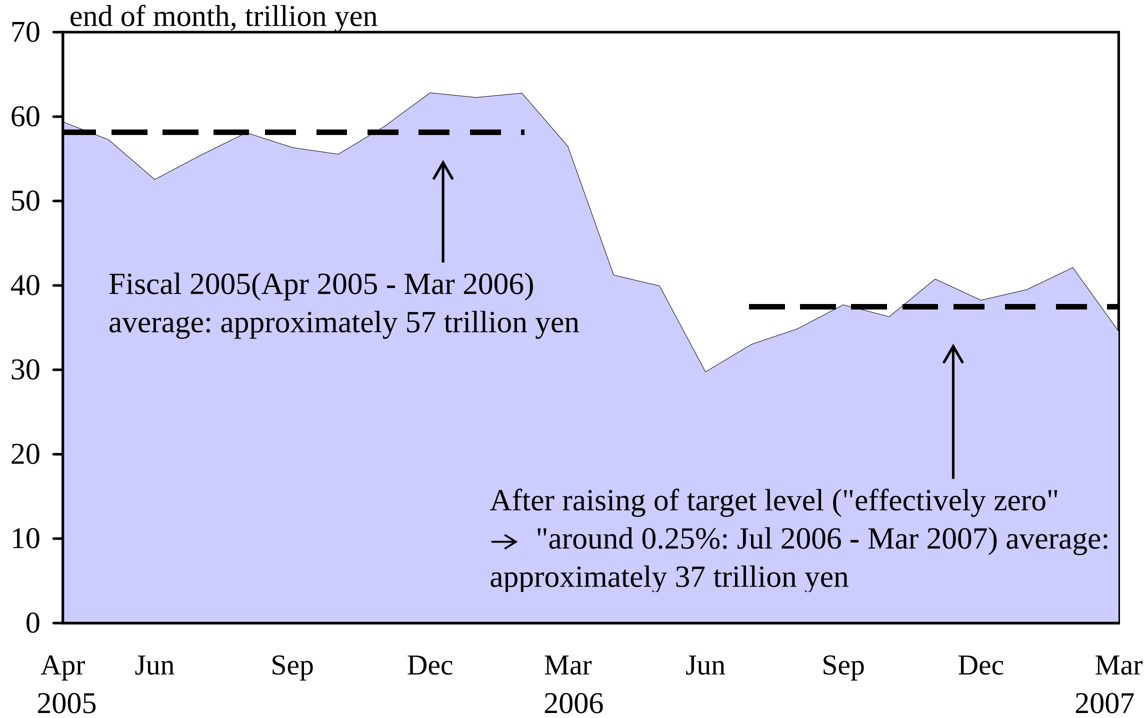
trillion yen

Assets				Liabilities			
	End-March 2007 (a)	End-March 2006 (b)	Change (a-b)		End-March 2007 (a)	End-March 2006 (b)	Change (a-b)
Short-term funds-supplying operations	34.6	56.5	- 21.9	Short-term funds-absorbing operations	0.0	2.0	- 2.0
TBs/FBs underwritten by the Bank (excluding market operations)	17.6	19.5	- 1.9	CABs	11.7	31.2	- 19.5
Long-term JGBs	49.2	60.5	- 11.2	Government deposits and other debt	17.7	27.3	- 9.6
Stocks held as trust property	1.5	2.0	- 0.5	Banknotes	75.9	75.0	+ 0.9

Notes: 1. Only core balance sheet items are shown.
2. "TBs/FBs underwritten by the Bank" includes FBs underwritten by the Bank to supply yen funding to foreign central banks and other overseas account holders and TBs underwritten by the Bank to roll over JGBs and TBs.

Sources: Bank of Japan, "Monetary Base and the Bank of Japan's Transactions," "Bank of Japan's Transactions with the Government."

(2) Amounts Outstanding of Short-Term Funds-Supplying Operations



Source: Bank of Japan, "Monetary Base and the Bank of Japan's Transactions"

[Chart 8] Amounts Outstanding of Money Market Operations

trillion yen

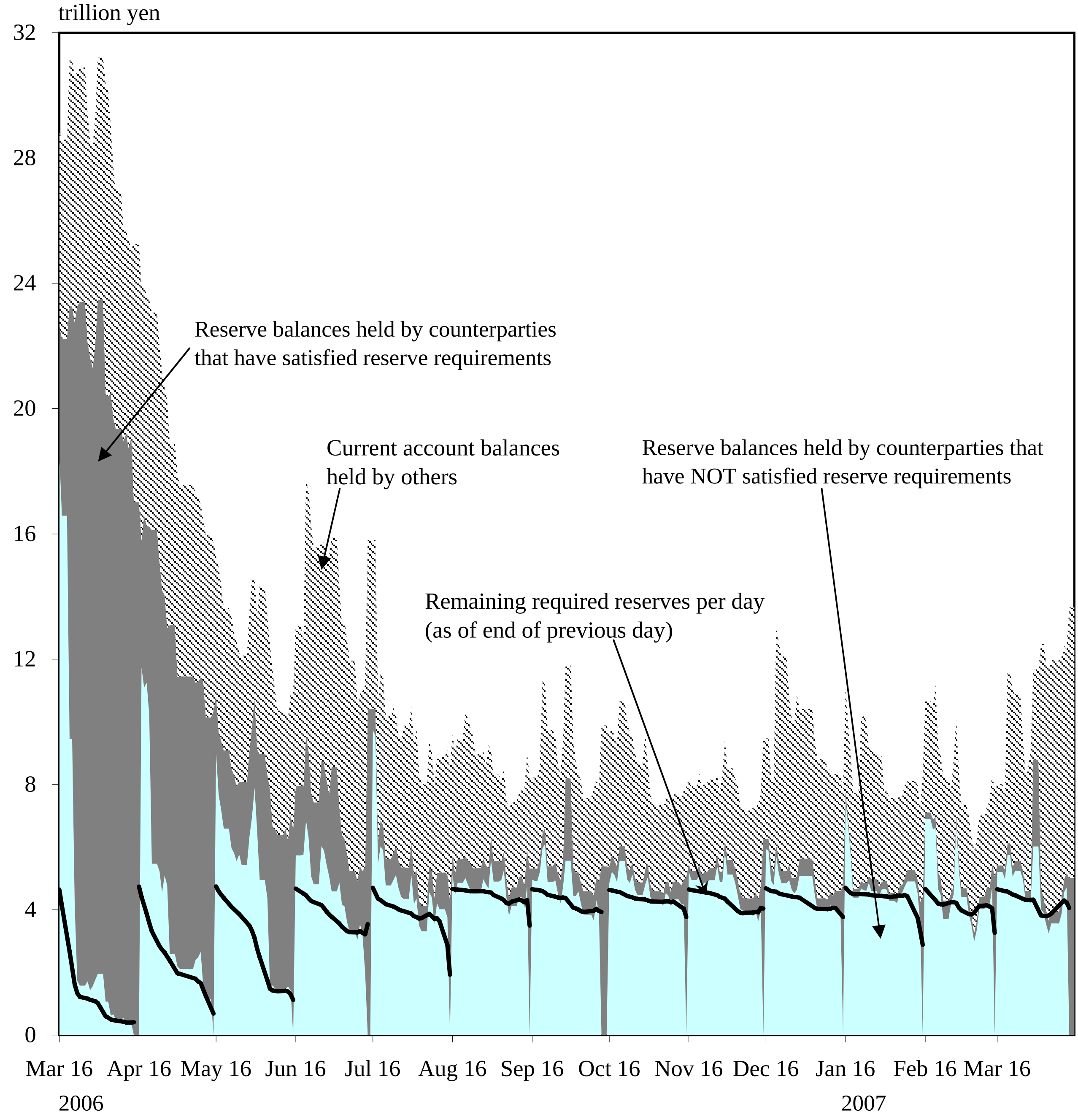
	End-Mar 2006	End-Sep 2006	End-Mar 2007
Net amounts outstanding of short-term funds-supplying operations	54.5	37.7	34.6
Short-term funds-supplying operations	56.5	37.7	34.6
Purchases of JGSs with repurchase agreements	2.8	6.6	4.2
Funds-supplying operations against pooled collateral	37.8	20.2	20.4
At the Head Office	14.2	14.8	14.2
At all offices	23.6	5.4	6.2
Purchases of CPs with repurchase agreements	2.4	0.6	0.3
Outright purchases of TBs/FBs	13.4	10.3	9.6
Outright purchases of ABSs	0.1	-	-
Short-term funds-absorbing operations	2.0	0.0	0.0
Outright sales of bills	1.4	0.0	0.0
Sales of JGSs with repurchase agreements	0.6	0.0	0.0
Outright sales of TBs/FBs	0.0	0.0	0.0
Outright purchases of long-term JGBs	60.5	53.6	49.2

Notes:

1. "Outright purchases of long-term JGBs" is the total amount of outright purchases of JGBs and JGSs rolled over and underwritten by the Bank at maturity.
2. Amount of "Funds-supplying operations against pooled collateral" for end-March 2006 is the amuont of outright purchases of bills.

Source: Bank of Japan

[Chart 9] Current Account Balances and Reserve Balances



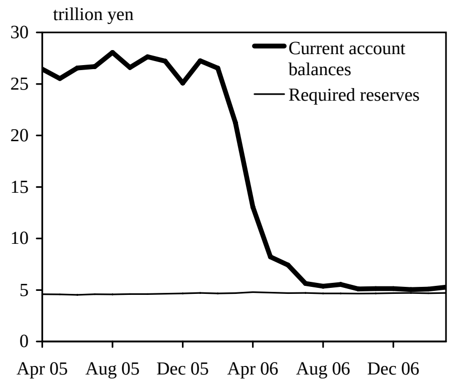
Notes:

1. "Counterparties that have satisfied reserve requirements" are counterparties subject to reserve requirements that have completed the accumulation of reserves required for the current reserve maintenance period as of the end of the day.
2. "Counterparties that have NOT satisfied reserve requirements" are counterparties subject to reserve requirements that have not completed the accumulation of reserves required for the current reserve maintenance period as of the end of the day.
3. "Others" are counterparties not subject to reserve requirements (including the Japan Post).
4. "Remaining required reserves per day (as of end of previous day)" is the average daily amount of reserves that must be accumulated by counterparties that have NOT satisfied the requirements as of the end of the previous day in order to complete accumulating the reserves required for the current reserve maintenance period by the end of the period in case those counterparties decided to accumulate at a constant pace.

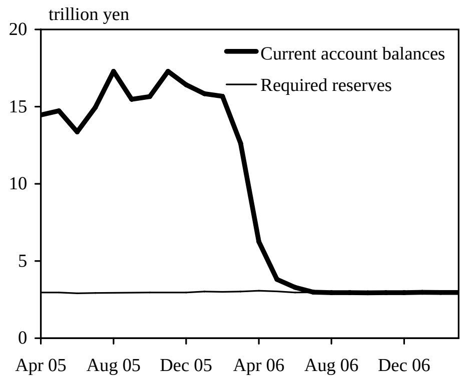
Source: Bank of Japan

[Chart 10] Current Account Balances by Sector

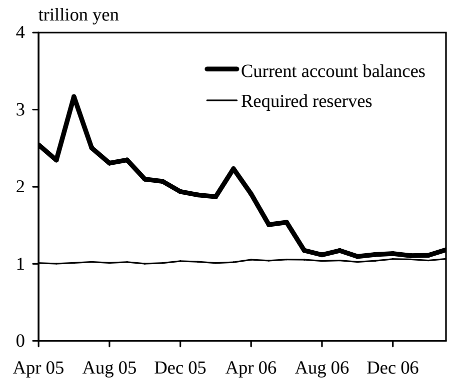
(1) Total for Institutions Subject to the Reserve Requirement System



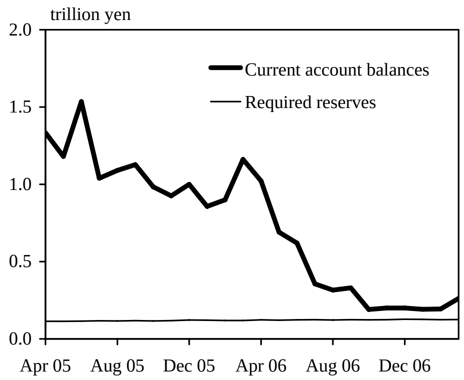
(1) – [1] City Banks



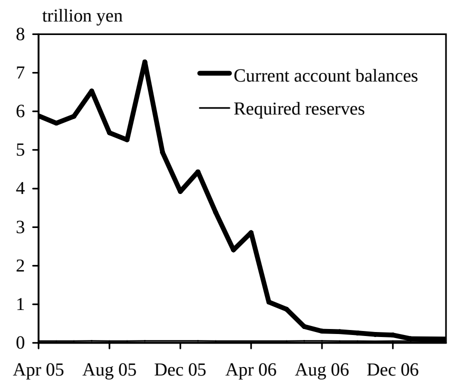
(1) – [2] Regional Banks



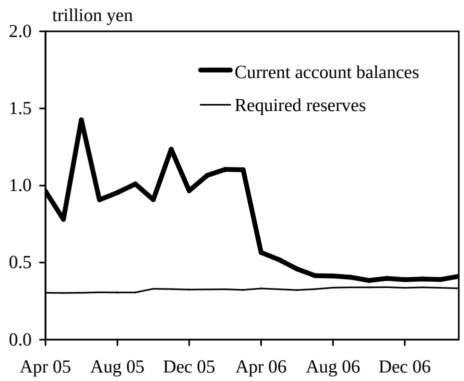
(1) – [3] Regional Banks II



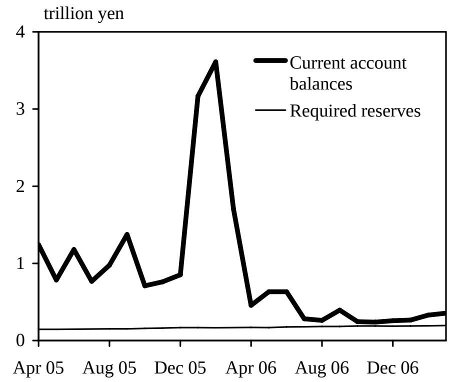
(1) – [4] Foreign Banks



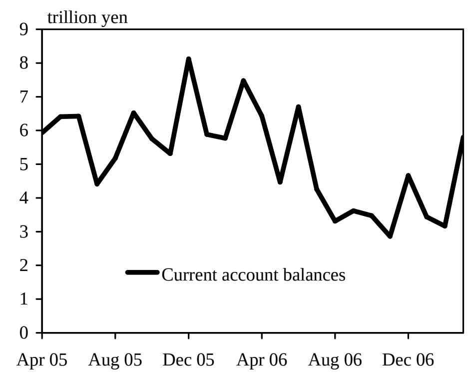
(1) – [5] Trust Banks



(1) – [6] Other Institutions Subject to the Reserve Requirement System



(2) Other Institutions

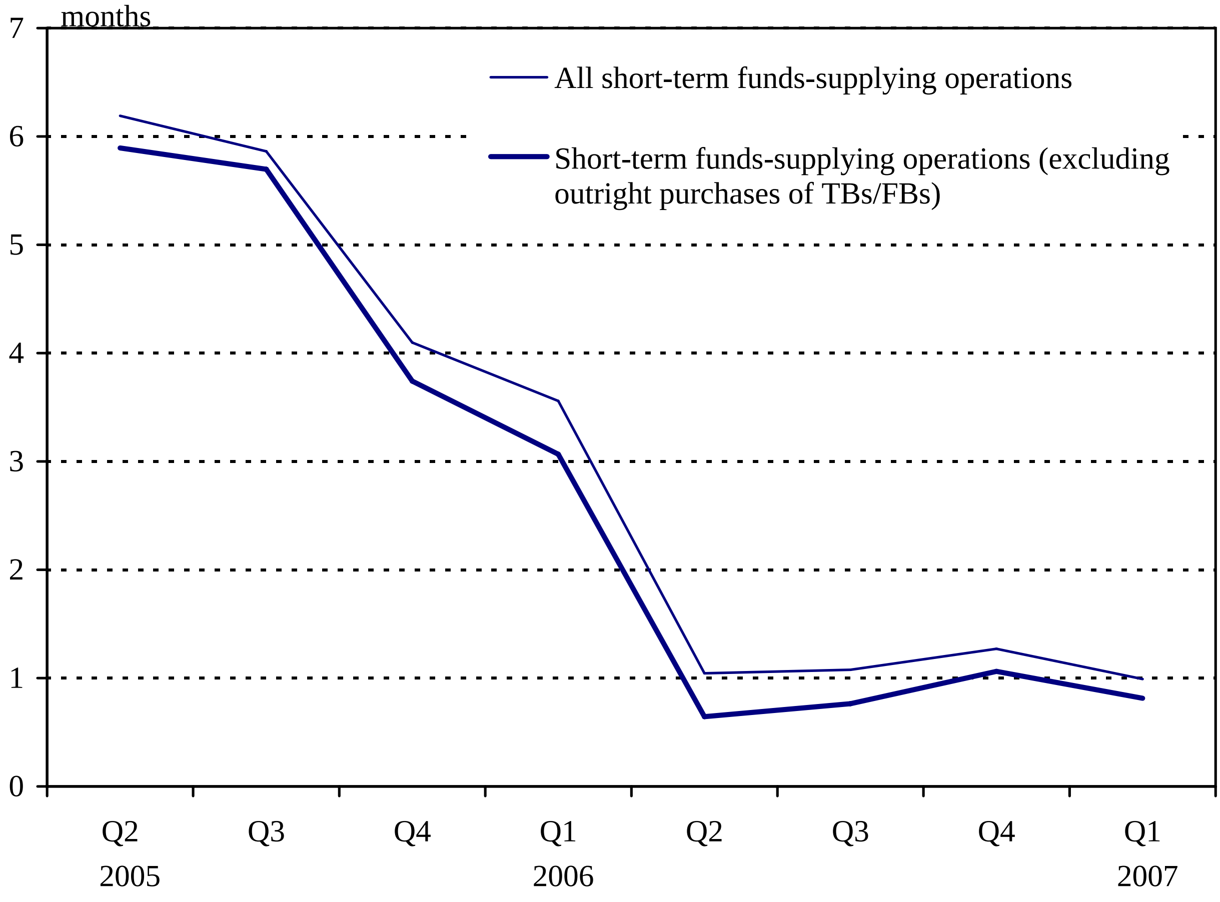


Notes:

1. Average amount outstanding for each reserve maintenance period.
2. The Japan Post is included in "Other Institutions."

Source: Bank of Japan

[Chart 11] Average Length of Short-Term Funds-Supplying Operations



Notes:

1. "All short-term funds-supplying operations" is the weighted average of [1] the length of funds-supplying operations against pooled collateral, outright purchases of bills, purchases of JGSs with repurchase agreements and purchases of CPs with repurchase agreements, and [2] the residual maturity of TBs/FBs purchased in outright purchases of TBs/FBs, weighted by the successful bid amount.
2. "Short-term funds-supplying operations (excluding outright purchases of TBs/FBs) is the weighted average of [1] above, weighted by the successful bid amount.

Source: Bank of Japan

[Chart 12] Number of Operations Offered

	Short-term funds-supplying operations						Short-term funds-absorbing operations				
		T+0 (same day)	Future-dated					T+0 (same day)	Future-dated		
				T+1	T+2	T+3				T+1	T+2
Apr 05	17	0	17	0	17	0	5	0	5	1	4
May 05	15	0	15	0	15	0	2	0	2	2	0
Jun 05	17	0	17	0	17	0	4	0	4	1	3
Jul 05	23	0	23	0	23	0	0	0	0	0	0
Aug 05	14	0	14	0	14	0	3	0	3	2	1
Sep 05	9	0	9	0	9	0	8	0	8	5	3
Oct 05	15	0	15	0	15	0	6	0	6	4	2
Nov 05	23	0	23	0	23	0	5	0	5	2	3
Dec 05	15	0	15	0	15	0	6	0	6	3	3
Jan 06	17	0	17	0	17	0	11	0	11	8	3
Feb 06	21	0	21	0	21	0	5	0	5	3	2
Mar 06	10	0	10	1	9	0	6	0	6	2	4
Apr 06	8	0	8	2	6	0	6	0	6	4	2
May 06	26	3	23	6	14	3	4	0	4	3	1
Jun 06	45	5	40	5	32	3	1	1	0	0	0
Jul 06	56	12	44	5	32	7	5	5	0	0	0
Aug 06	43	5	38	6	29	3	10	10	0	0	0
Sep 06	43	3	40	10	30	0	5	5	0	0	0
Oct 06	41	2	39	7	32	0	7	7	0	0	0
Nov 06	44	5	39	2	37	0	8	4	4	3	1
Dec 06	36	4	32	4	28	0	8	8	0	0	0
Jan 07	46	7	39	4	35	0	3	3	0	0	0
Feb 07	50	13	37	2	35	0	5	4	1	1	0
Mar 07	39	6	33	2	30	1	10	10	0	0	0

Note: Outright purchases of JGBs, outright purchases/sales of TBs/FBs, sales of JGSs with repurchase agreements to provide the markets with a secondary source of JGSs, and outright purchases of ABSs are not included.

Source: Bank of Japan

[Chart 13] Deviation of the Uncollateralized Overnight Call Rate from the Target

Reserve maintenance period	Number of business days (days)	Target (A) (%)	Deviation from target (B) (%)	Relative deviation (B)/(A)	Rate of complementary lending facility (C) (%)	Deviation relative to the rate of complementary lending facility (B)/(C)	Range of daily weighted average of uncollateralized overnight call rate (%)
August, 1998	(3)	0.25	0.02	0.09			0.23 - 0.28
September, 1998	(21)	0.25	0.05	0.21			0.20 - 0.47
October, 1998	(20)	0.25	0.05	0.20			0.15 - 0.33
November, 1998	(21)	0.25	0.04	0.17			0.17 - 0.30
December, 1998	(19)	0.25	0.04	0.14			0.18 - 0.32
January, 1999	(19)	0.25	0.02	0.07			0.22 - 0.28
July, 2000	(2)	0.25	0.11	0.43			0.10 - 0.22
August, 2000	(22)	0.25	0.01	0.04			0.24 - 0.28
September, 2000	(19)	0.25	0.01	0.04			0.23 - 0.28
October, 2000	(22)	0.25	0.01	0.03			0.23 - 0.26
November, 2000	(21)	0.25	0.00	0.02			0.24 - 0.26
December, 2000	(17)	0.25	0.02	0.08			0.20 - 0.28
January, 2001	(22)	0.25	0.01	0.05			0.23 - 0.28
February, 2001	(9)	0.25	0.01	0.02			0.24 - 0.26
February, 2001	(11)	0.15	0.01	0.04			0.14 - 0.16
March, 2001	(2)	0.15	0.02	0.11	0.25	0.06	0.13 - 0.14
July, 2006	(21)	0.25	0.02	0.07	0.40	0.05	0.216 - 0.302
August, 2006	(23)	0.25	0.01	0.04	0.40	0.03	0.239 - 0.280
September, 2006	(18)	0.25	0.02	0.10	0.40	0.06	0.239 - 0.339
October, 2006	(22)	0.25	0.01	0.04	0.40	0.02	0.241 - 0.282
November, 2006	(21)	0.25	0.01	0.06	0.40	0.04	0.226 - 0.283
December, 2006	(17)	0.25	0.02	0.07	0.40	0.04	0.226 - 0.296
January, 2007	(22)	0.25	0.03	0.11	0.40	0.07	0.236 - 0.343
February, 2007	(4)	0.25	0.12	0.48	0.40	0.30	0.354 - 0.402
February, 2007	(16)	0.50	0.04	0.09	0.75	0.06	0.431 - 0.589
March, 2007	(20)	0.50	0.05	0.11	0.75	0.07	0.469 - 0.715

Notes:

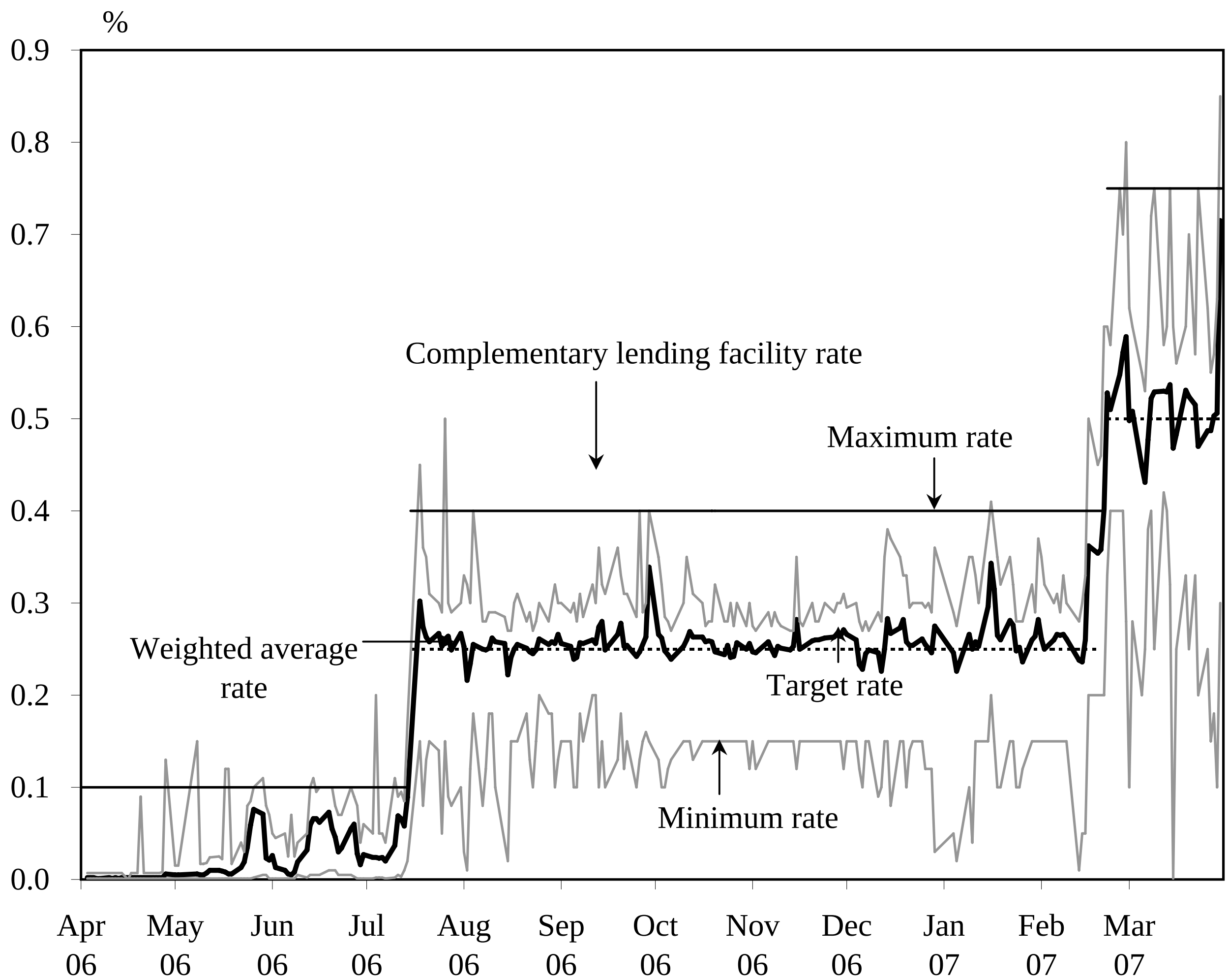
1. Deviation from the target is defined as follows:

$$\text{Deviation} = \sqrt{\frac{\sum(\text{weighted average rate} - \text{target rate})^2}{\text{number of business days}}}$$

2. Excludes periods in which the target for the uncollateralized overnight call rate was effectively zero (Feb. 1999 – Aug. 2000, Mar. 2006 – Jul. 2006), and the duration of the quantitative easing policy (Mar. 2001 – Mar. 2006).
3. The complementary lending facility went into effect in March 2001.

Source: Bank of Japan

[Chart 14] Daily Developments in the Uncollateralized Overnight Call Rate

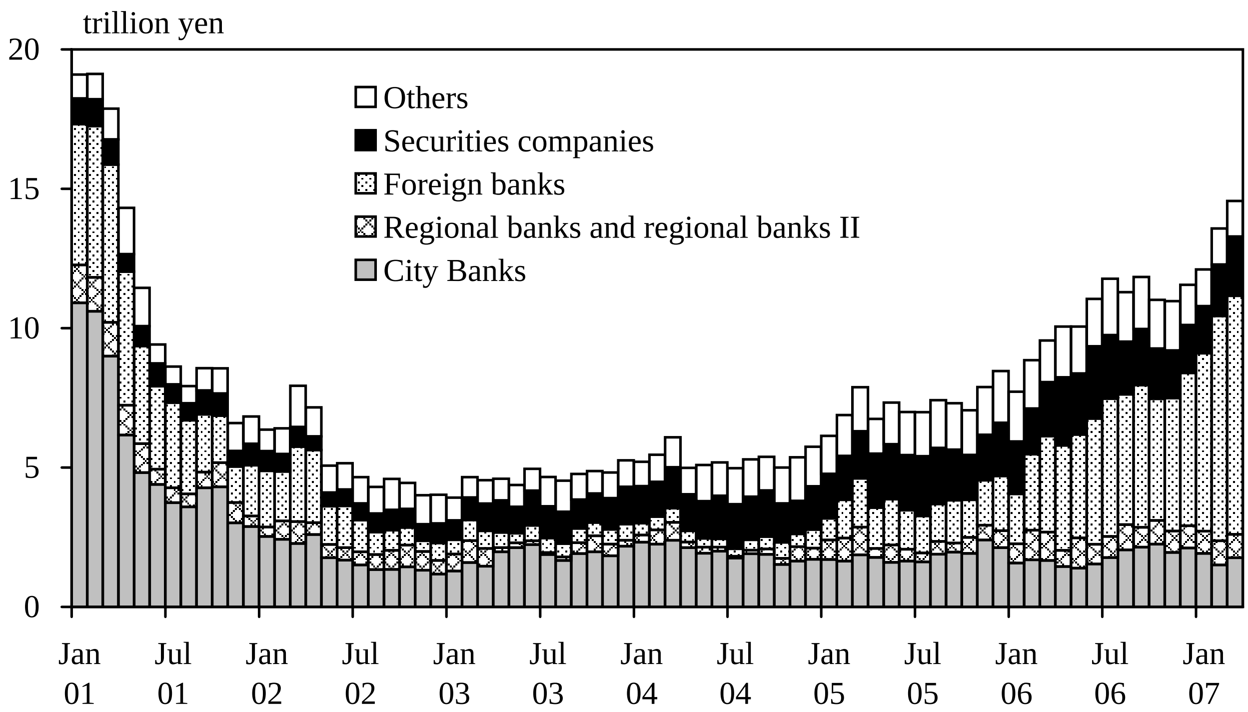


Source: Bank of Japan

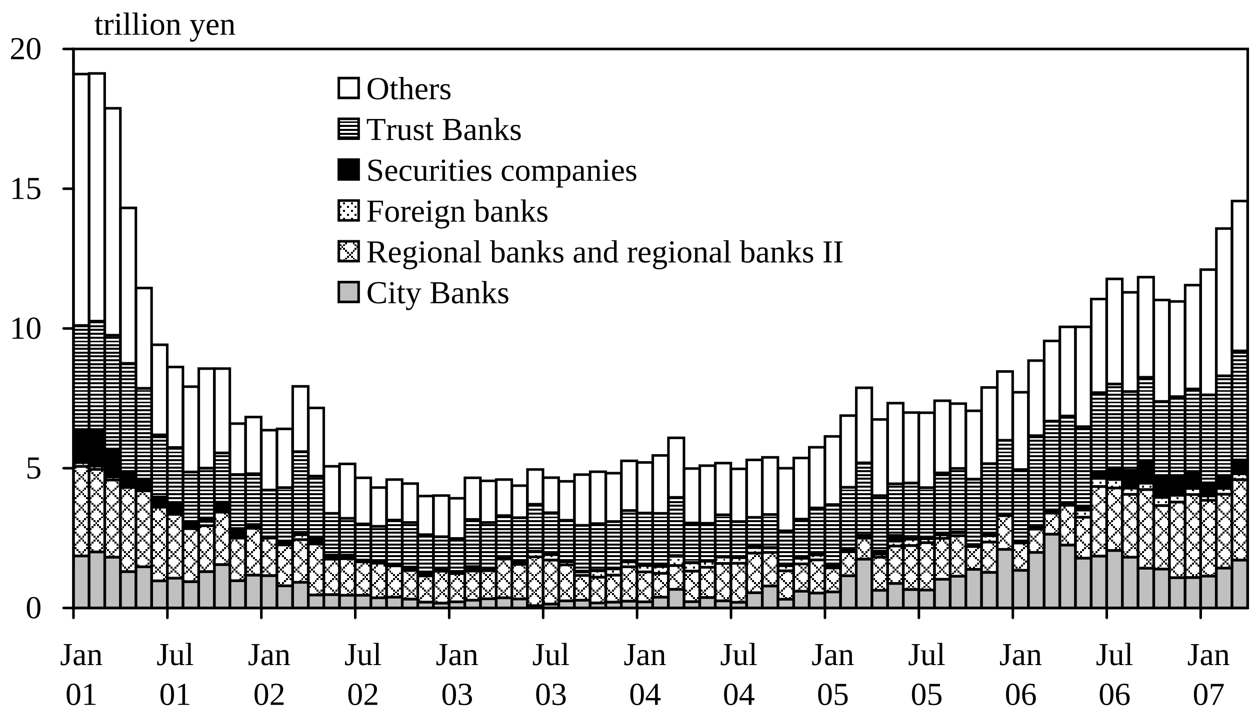
[Chart 15-1] Amounts Outstanding in the Call Market: By Sector of Participants

(1) Uncollateralized Call Market

By Borrower



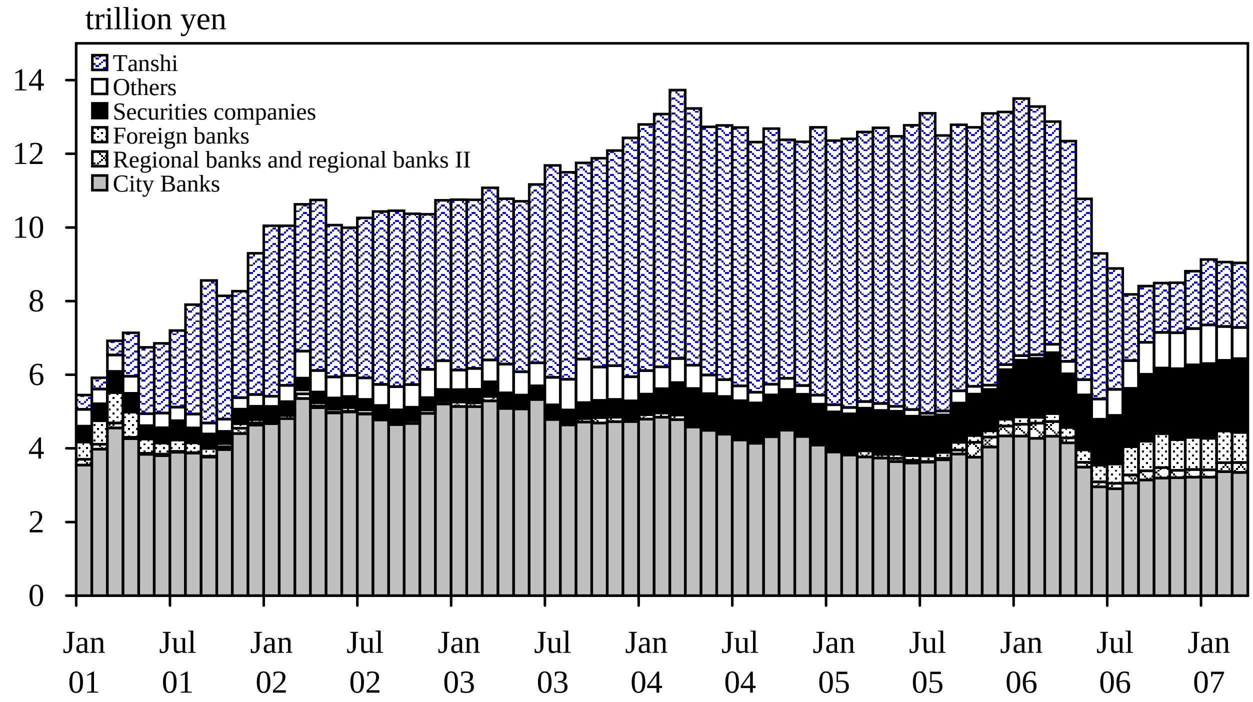
By Lender



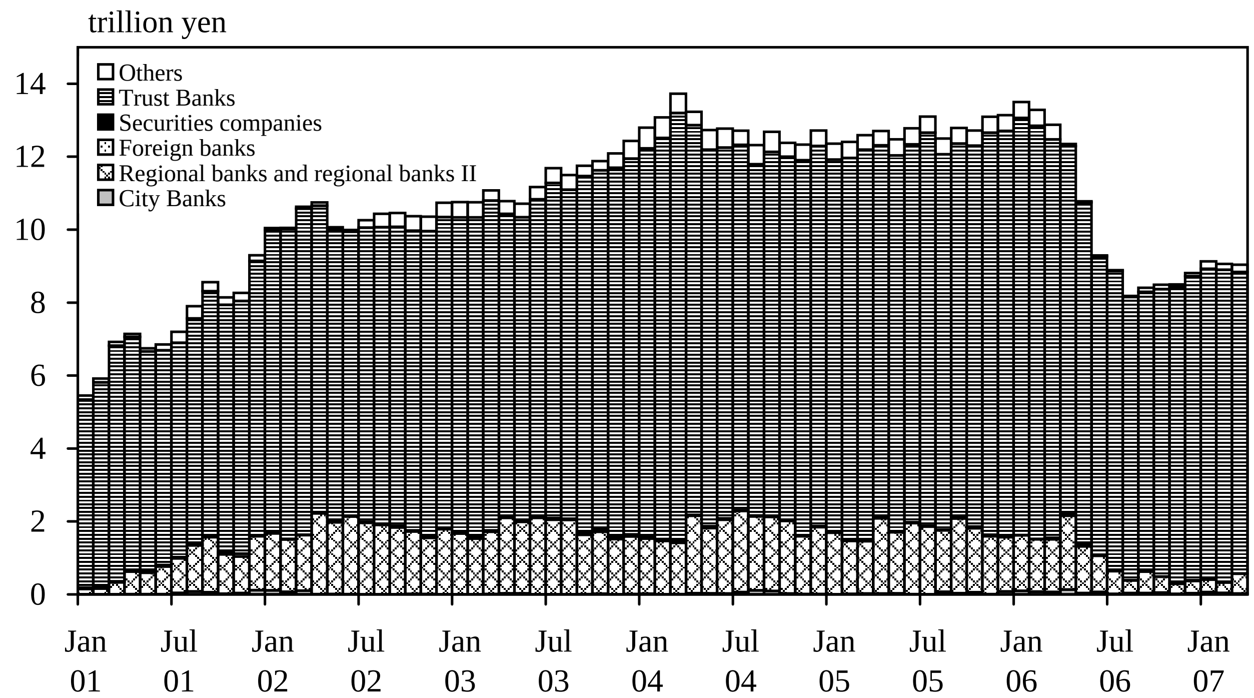
[Chart 15-2] Amounts Outstanding in the Call Market: By Sector of Participants

(2) Collateralized Call Market

By Borrower



By Lender

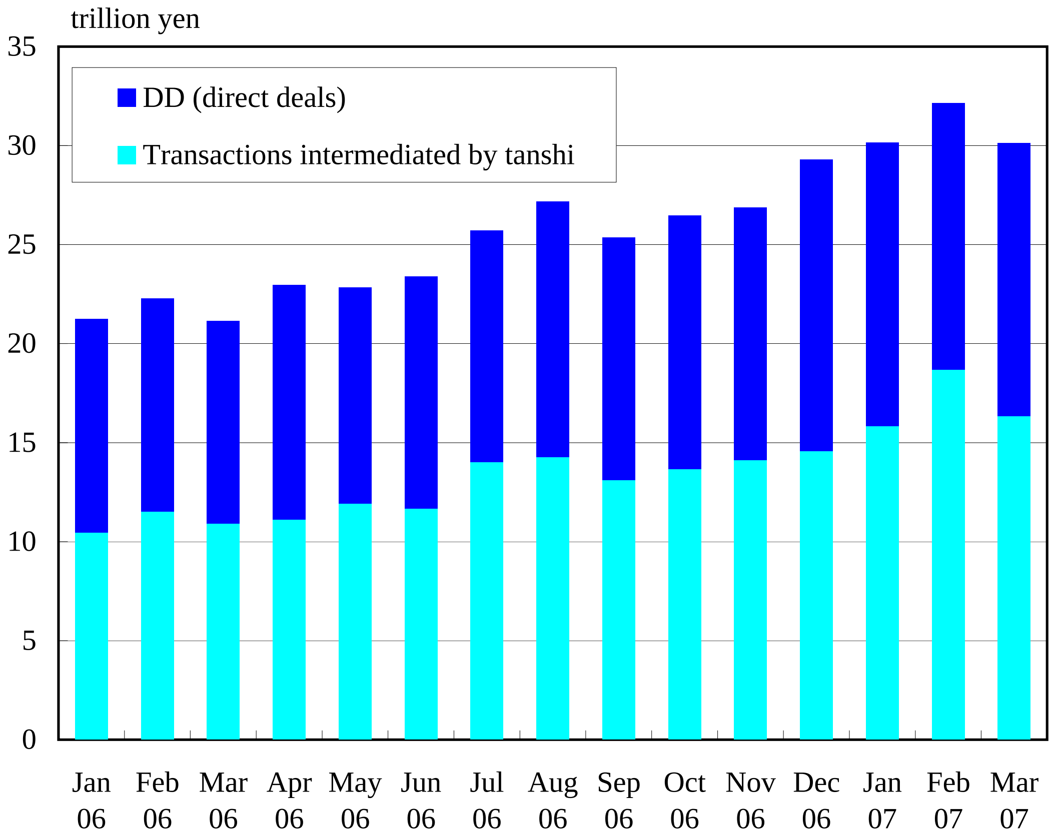


Notes:

1. Transactions intermediated by *tanshi* (average balance).
2. "City banks" includes city banks, Shinsei Bank, and Aozora Bank. "Securities companies" includes securities companies and securities finance companies.

Source: Bank of Japan

[Chart 16] Outstanding Balances of Call Transactions (DD and intermediated by *tanshi*)



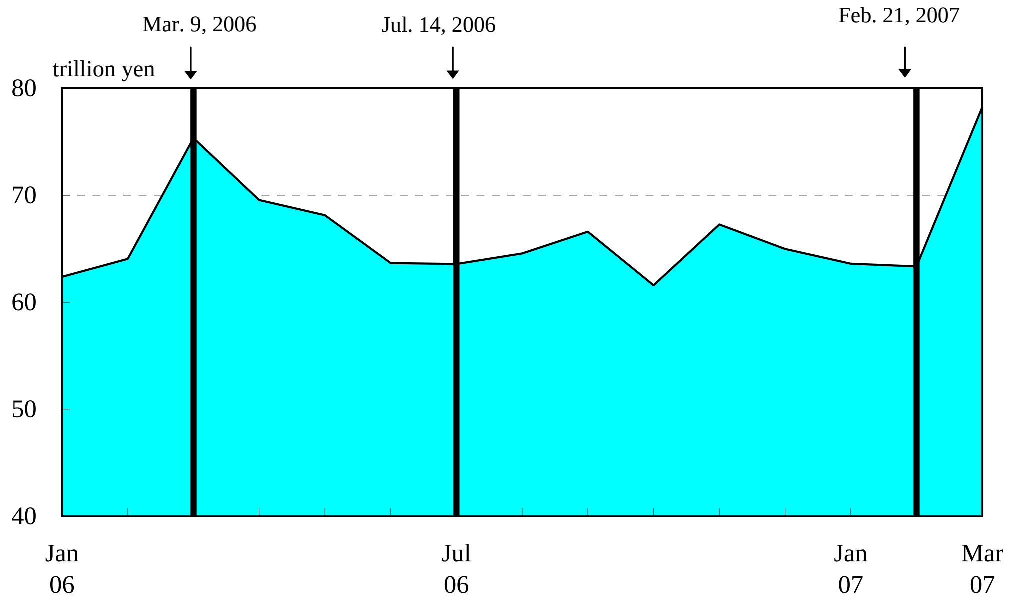
Notes:

1. Total for domestic banks (city banks, trust banks, regional banks, regional banks II) and branches of foreign banks in Japan (outstanding balance at end of month).
2. DD call transactions (direct deal) is computed by subtracting the transactions intermediated by *tanshi* from the total outstanding balance of call money for domestic banks (city banks, trust banks, regional banks, regional banks II) and branches of foreign banks in Japan.

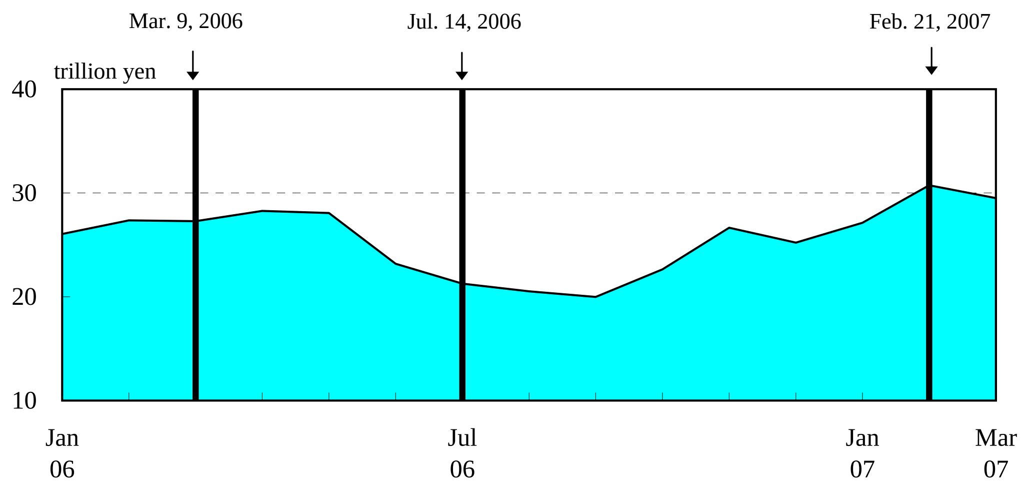
Source: Bank of Japan

[Chart 17] Outstanding Balances in Repo Market

[1] Outstanding balances of securities lending with cash collateral
(fund raising, securities lending)



[2] Outstanding balances of securities sales with repurchase agreements
(fund raising, securities selling)



Notes:

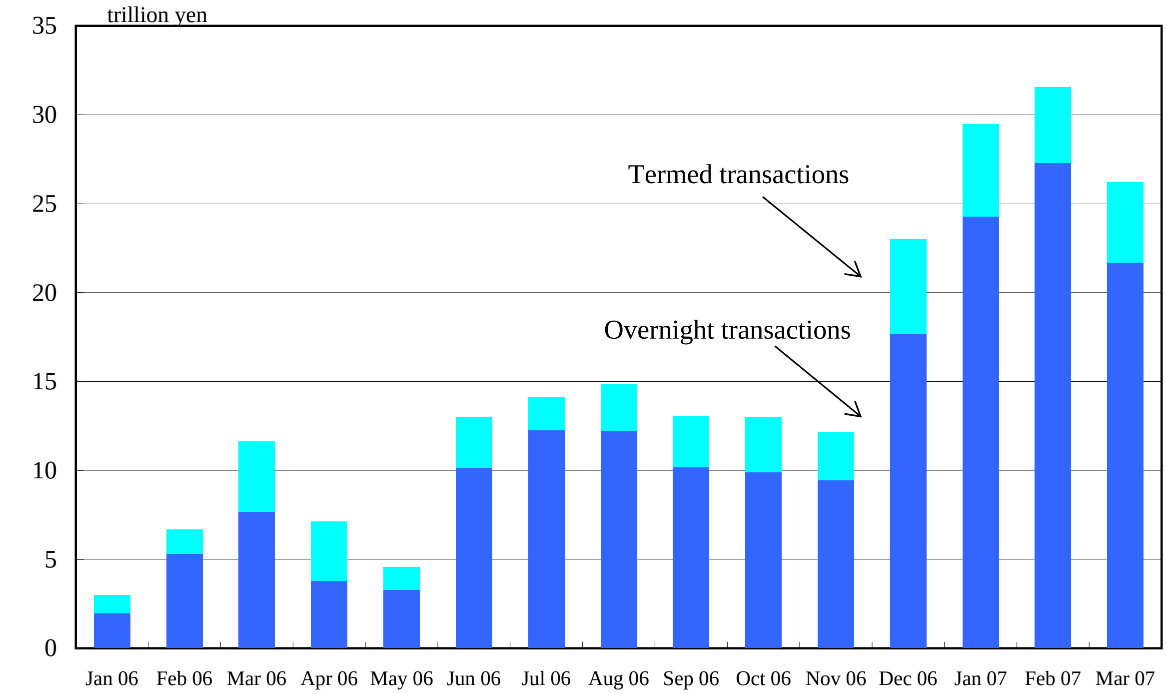
1. Transactions of the Bank of Japan, government, local public organizations, Postal Life Insurance [Kanpo], government agencies are excluded. Bank of Japan and government purchasing transactions with repurchase agreements are deducted.
2. Broadly defined, repo transactions consist of securities lending with cash collateral and securities sales with repurchase agreements. The total outstanding balances of the two types of transactions are given here. However, GC and SC are not differentiated.

   According to a survey of counterparties in operations conducted by the Bank of Japan, outstanding balances of GC and SC as of the end of October 2006 amounted to 32.6 trillion yen and 53.5 trillion yen, respectively (see Bank of Japan, Financial Markets Department, "Financial Markets Report – Supplement – Changes observed in Money Markets after the Rise in the Policy Interest Rate in July 2006," April 19, 2007).

Source: Japan Securities Dealers Association

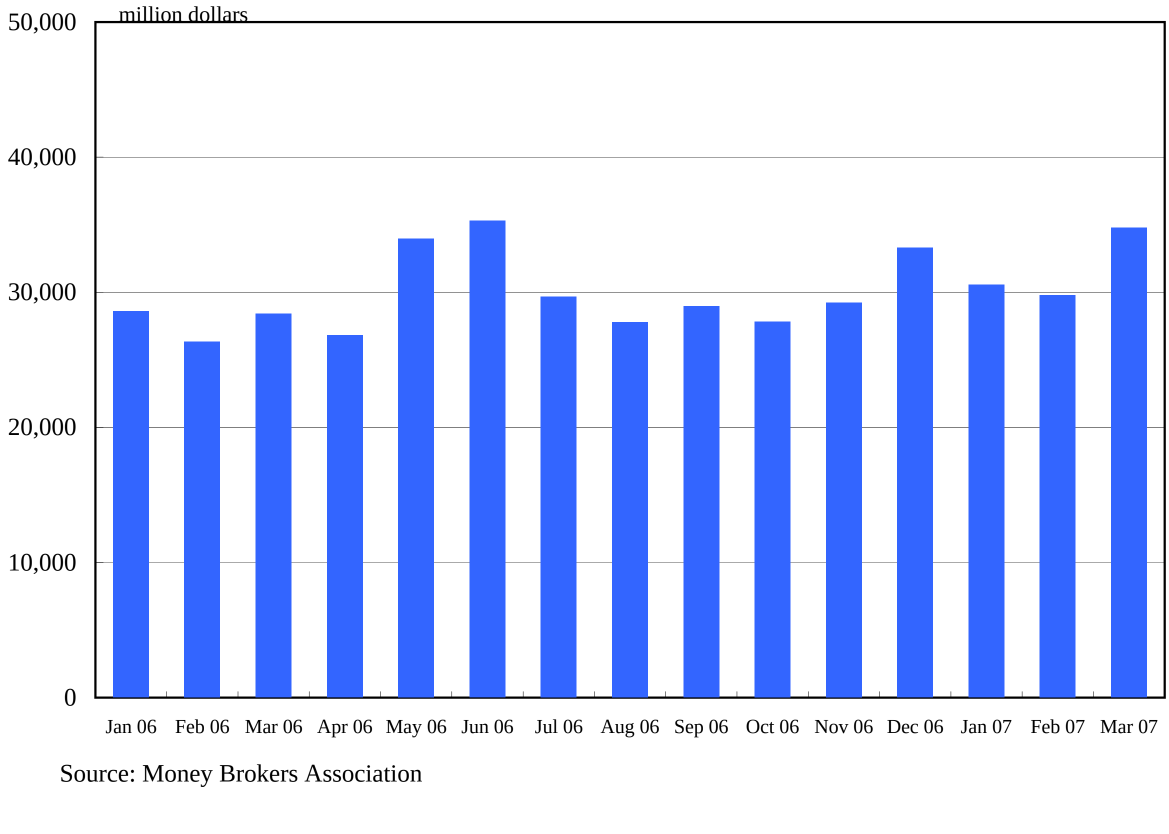
[Chart 18] Amounts of Euro-Yen and Foreign Exchange Swap Transactions

(1) Euro-Yen Transaction Amounts (Tokyo offshore market)



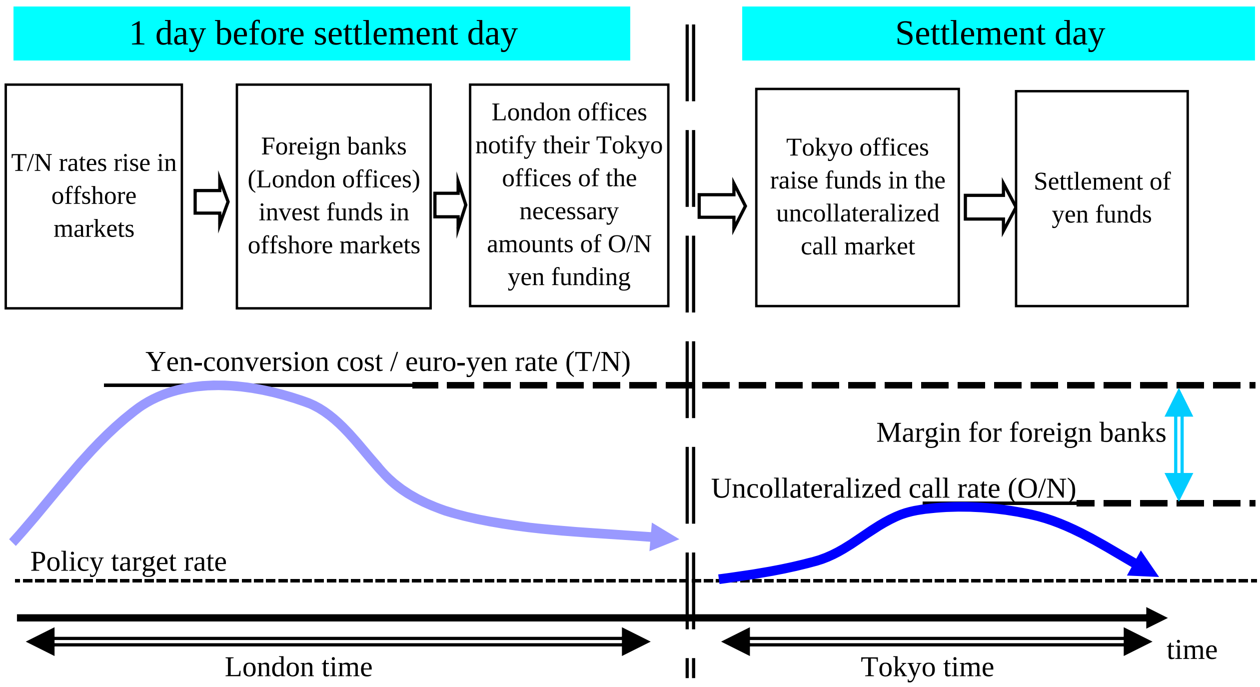
Notes: Cumulative monthly transactions related to "Offshore Accounts."
Source: Bank of Japan

(2) Foreign Exchange Swap Transaction Amounts (dollar/yen transactions, average per business day)



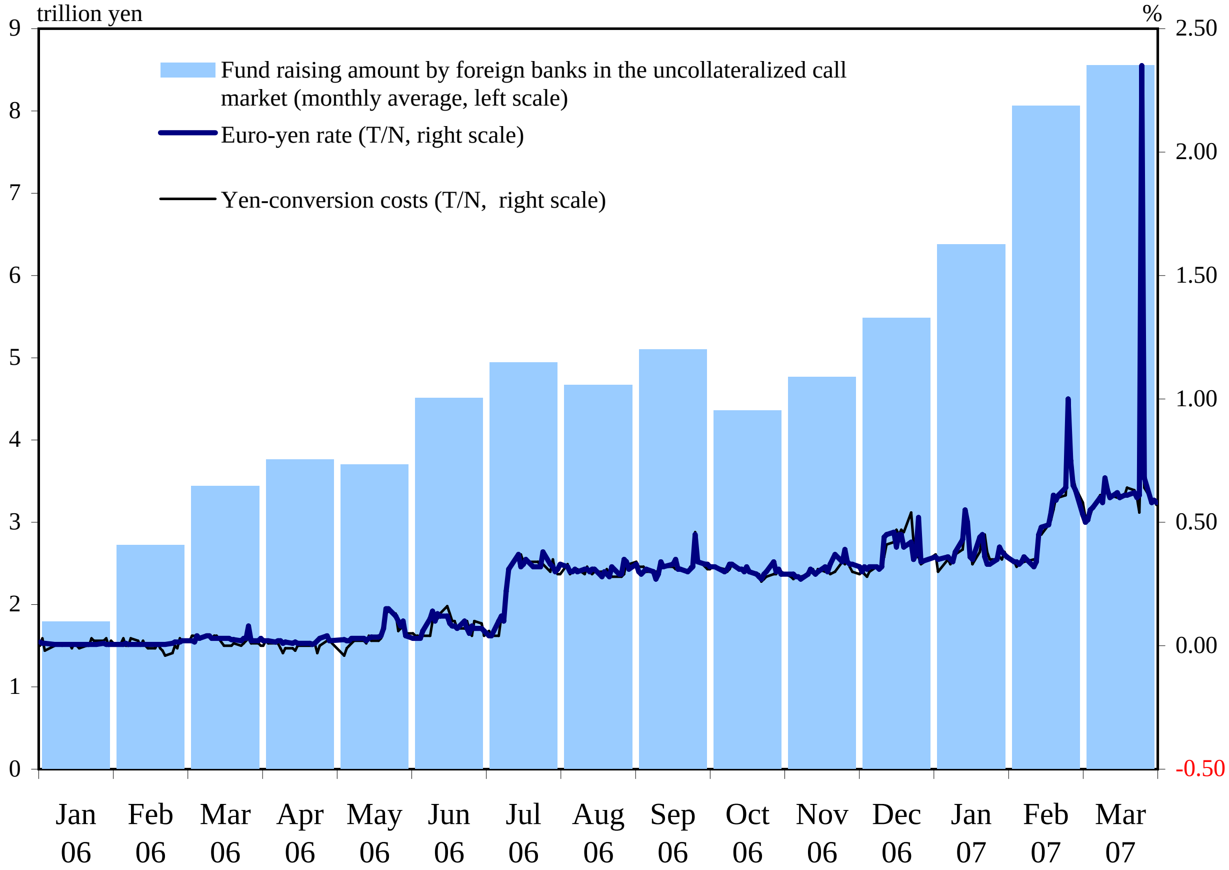
Source: Money Brokers Association

[Chart 19] Arbitrage Trading between Overnight Rates



Note: Example of arbitrage transaction by foreign banks with operating branches in Tokyo.

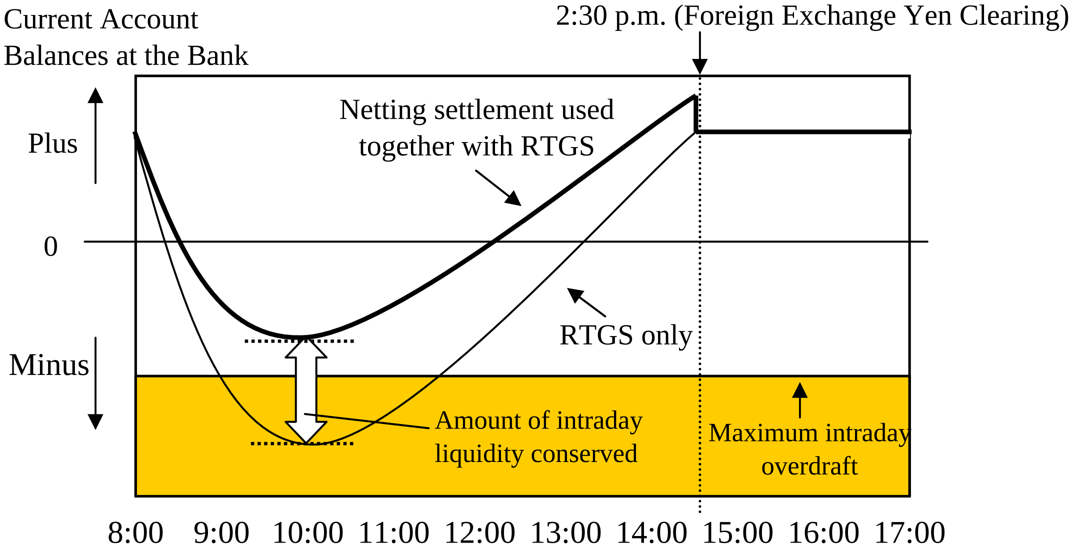
[Chart 20] Euro-Yen Rate and Yen-Conversion Costs (T/N) and Fund raising amounts by Foreign Banks in the Call Market



Source: QUICK, Meitan Tradition, Bank of Japan

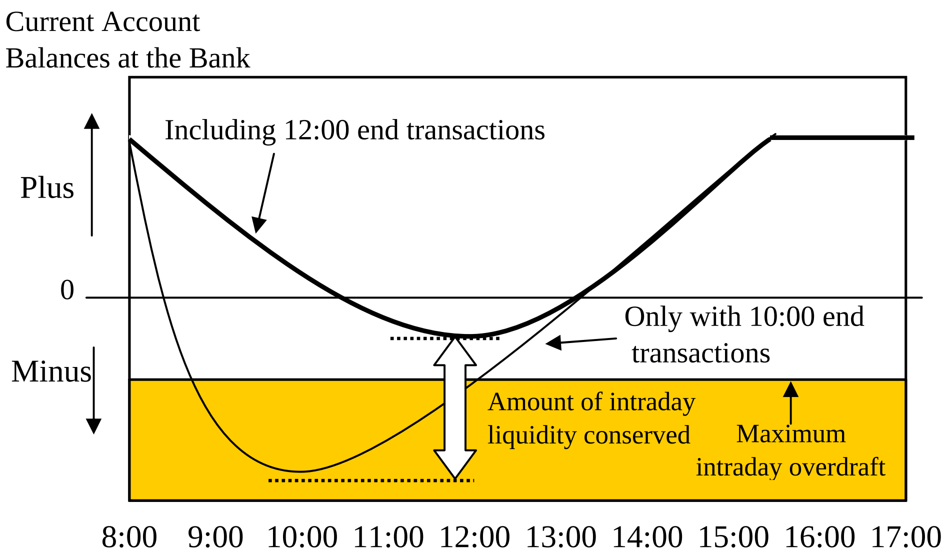
[Chart 21] Scheme of Liquidity Conservation

[1] Using netting in the Foreign Exchange Yen Clearing system



* As compared to when only RTGS settlement is used, the necessary amount of intraday liquidity can be reduced by raising funds in the euro-yen market and using Foreign Exchange Yen Clearing system because this allows repayment amounts prior to 10:00 a.m. to be reduced. At the time of Foreign Exchange Yen Clearing at 2:30 p.m., only the net difference between the euro-yen fund raising and repayment amount is settled.

[2] Using 12:00 end transactions



* As compared to when only regular call transactions are used (repayment by 10:00 a.m.), the necessary amount of intraday liquidity can be reduced by using 12:00 end transactions because this allows repayment amounts prior to 12:00 p.m. to be reduced (with no change in amounts received).

Notes: Negative current account balances at the Bank cannot exceed the amount of the maximum intraday overdraft.

[Chart 22] Amounts of Pooled Collateral Submitted to the Bank

trillion yen

Type of collateral	End-Mar 2006		End-Mar 2007	
	Collateral value	Share in total	Collateral value	Share in total
Total	84.6	100.0%	75.9	100.0%
JGSs	59.7	70.6%	49.6	65.4%
Interest-bearing JGBs [1]	43.8	51.8%	37.9	49.9%
TBs/FBs	15.9	18.8%	11.7	15.5%
Corporate bonds	0.4	0.5%	0.3	0.5%
Other bonds	4.0	4.7%	4.5	6.0%
Of which, short-term corporate bonds	0.9	1.1%	2.0	2.6%
Bills	0.3	0.3%	0.2	0.3%
Of which, CPs	0.0	0.0%	0.0	0.0%
Loans on deeds	20.2	23.9%	21.2	27.9%
To Corporations	0.2	0.3%	0.3	0.4%
To Local allocation taxes special account, etc. [2]	20.0	23.7%	20.8	27.5%
Of which, private liabilities	1.8	2.2%	2.9	3.8%

Notes:
1. Consists of interest-bearing bonds, discount bonds, Converted bonds and STRIPS.
2. Consists of Loans to Local Allocation Tax and Grant Tax Special Account, and assets of Deposit Insurance Corporation of Japan, Industrial Revitalization Corporation of Japan, and Banks' Shareholdings Purchase Corporation.

Source: Bank of Japan