

Revitalization of Japan's Money Markets

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- **Money markets under quantitative easing policy**
- **Challenges facing the money markets at the conclusion of QEP**
- **Improvements in functions of money markets**
- **Backgrounds for the improvements in functioning of money markets**
- **Challenges facing the future of money markets**
- **Bank of Japan's efforts**

I. Money markets under quantitative easing policy (QEP, hereafter)

(I) Changes in the balance sheet structure of banks

- Bank deposits increased while bank loans decreased; most notable with “Major Banks”

Changes in the Balance Sheet Structure of Banks

Balance Sheet Structure of Domestically Licensed Banks [Banking Accounts] (trillion yen)

	End of 2000	End of 2005	change
Deposits + Debentures (A)	511	535	24
Loans and Bills Discounted + Stocks (B)	507	429	-78
Net Balance of Deposits against Loans (A)-(B)	4	106	102
Government Bonds	69	97	28

Balance Sheet Structure of City Banks [Banking Accounts] (trillion yen)

	End of 2000	End of 2005	change
Deposits + Debentures (A)	213	251	38
Loans and Bills Discounted + Stocks (B)	243	201	-42
Net Balance of Deposits against Loans (A)-(B)	-30	50	80
Government Bonds	37	57	20

Source: Bank of Japan

→ changes in roster of lenders and borrowers in money markets; “Major Banks” which used to be borrowers are now lenders

I. Money markets under quantitative easing policy

(2) Mergers of large financial institutions

- **The number of major market participants decreased through mergers of large financial institutions**
 - these players exert greater influences on markets
 - increase in their settlement amounts resulted in uncertainties of their cash positions

(3) Increased awareness of counterparty risk

- **Instability of our financial system during the mid 90's led to increased awareness of counterparty risks**
 - setting rigid credit lines in accordance with creditworthiness of counterparties

I. Money markets under quantitative easing policy

(4) Introduction of RTGS and expansion of intraday funds fluctuations

- **Bank of Japan introduced RTGS to its current account deposits with a view to reducing settlement risks**
 - resulting in temporary increase in the needs for funds to make settlements in the course of a single day
- **Effects of expanded demand for intraday liquidity or measures to reduce settlement did not materialize under QEP**
 - few opportunities for “learning by experiences”

I. Money markets under quantitative easing policy

(5) Shrinkages in money markets

- The size of money markets (especially the call market and the Euro-yen markets) shrank significantly because large amounts of funds supplied under QEP

	Outstanding (trillion yen)		
	end-1995	end-2005	change
Call market	38.6	21.2	-17.4
Uncollateralized	29.3	7.6	-21.7
Collateralized	9.3	13.6	4.3
Euro-yen/currency swap (Figures on the right: JOM)	23.6	2.9	-20.7
Securities lending with cash collateral/Repo	11.1	89.8	78.7
Repo	11.1	28.1	17.0
Securities lending with cash collateral	0.0	61.7	61.7

(Reference)

	Outstanding (trillion yen)		
	end-1995	end-2005	change
Certificates of Deposit	24.3	30.6	6.3
Commercial Paper	7.8	18.7	10.9
Treasury Bills	12.1	30.3	18.2
Financing Bills	0.0	50.0	50.0

Sources:
Bank of Japan, Japan Securities Dealers Association

→ basis for smooth transactions, such as credit line network or operational capacities by financial institutions, has contracted

2. Challenges facing the money markets at the conclusion of QEP

- **With these evolutions in money markets and the subsequent reduction of the current account balance by the Bank of Japan, how could we (re)construct the well-functioning money markets?**
 - **It is crucial to both an efficient transmission of our policy effects and an efficient allocation of the funds to economic agents**
 - **How could “borrowers” smoothly shift their funding sources from BOJ market operations to transactions by “lenders”?**

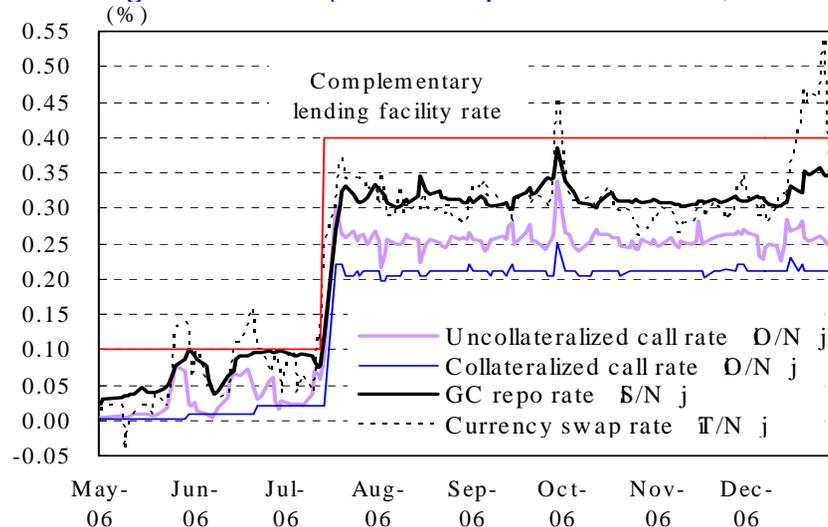
3. Improvements in functions of money markets

(I) Money market rates

- Overnight rates have mostly been stable around the levels in accordance with the **Guidelines for Money Market Operations**

□ Volatilities have been on the decreasing trends

Overnight Rates (from May to Dec. 29, 2006)



Standard Deviation (%)

	Uncollateralized call rate	GC repo rate
5/1-7/14	0.024	0.026
7/18-9/29	0.018	0.016
10/2-12/15	0.011	0.008
12/18-12/29	0.012	0.015

Source: Meitan Tradition, Bank of Japan

Source: Meitan Tradition, Tanshi Association, Bank of Japan

3. Improvements in functions of money markets

(I) Money market rates

- **Spreads in interest rates between respective markets have been stabilized for the most part since the conclusion of “Zero Interest Rate Policy (ZIRP, hereafter)” in July 2006**
- **Longer-term rates (1 week, 1 month etc) have shown larger fluctuations reflecting outlook of our economy and monetary policy**

3. Improvements in functions of money markets

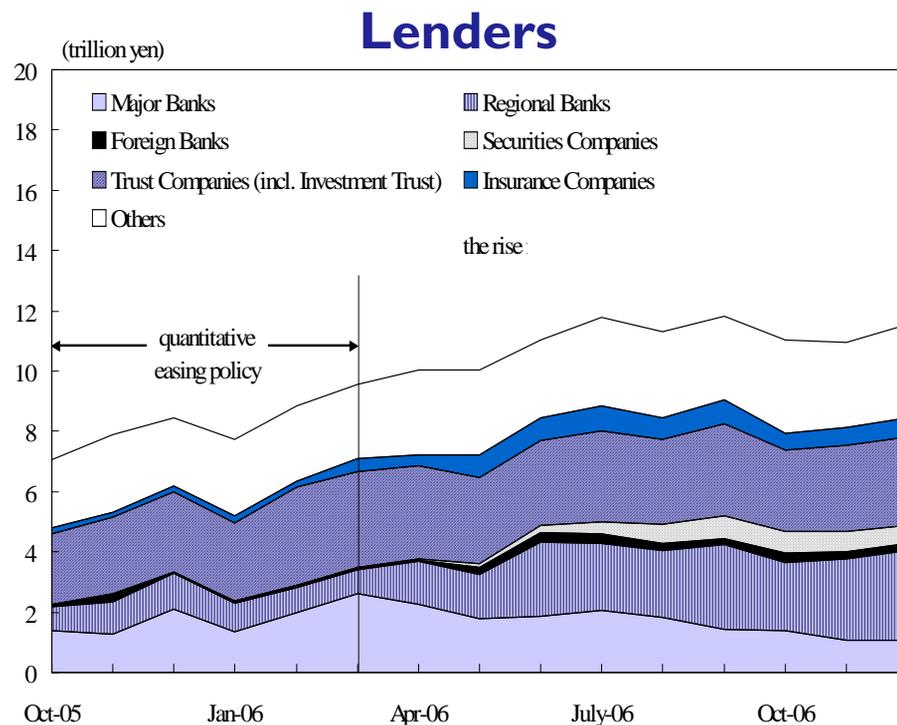
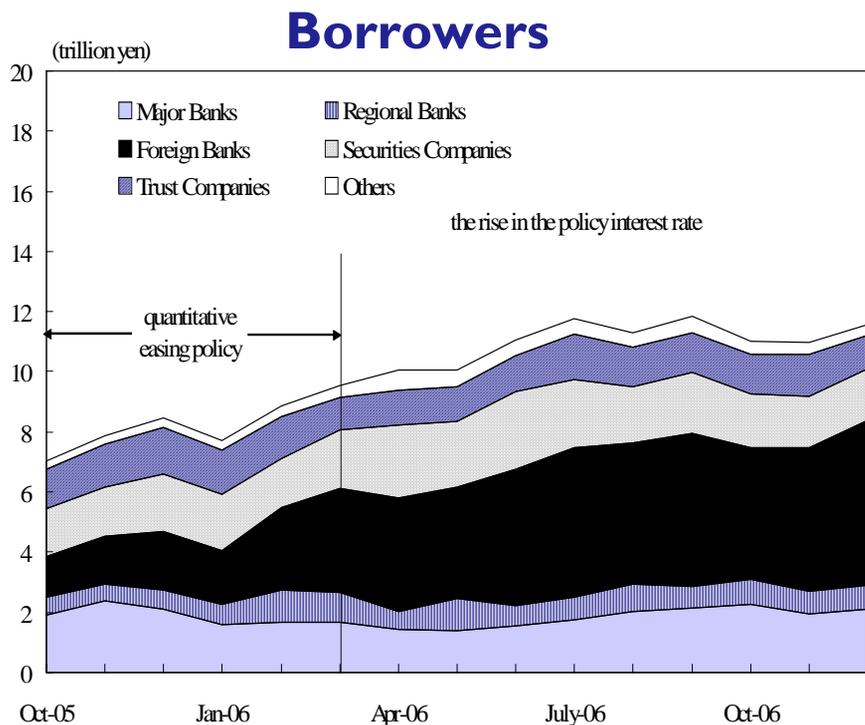
(2) Uncollateralized call market

- **Outstanding amount of overnight call market has been stable since the conclusion of ZIRP**
 - **Meanwhile □ bilateral transaction (“Direct Dealing”), which is not included in figures, seem to have grown moderately**
- **Foreign Banks and Securities Companies have been major borrowers; outstanding amounts by foreign banks increasing**
- **Trust Banks and Regional Banks have been significant lenders; with gradual increase in participations by Insurance Companies and Shinkin Banks**

3. Improvements in functions of money markets

(2) Uncollateralized call market

Amounts Outstanding in the Uncollateralized Call Market



Source: Bank of Japan

3. Improvements in functions of money markets

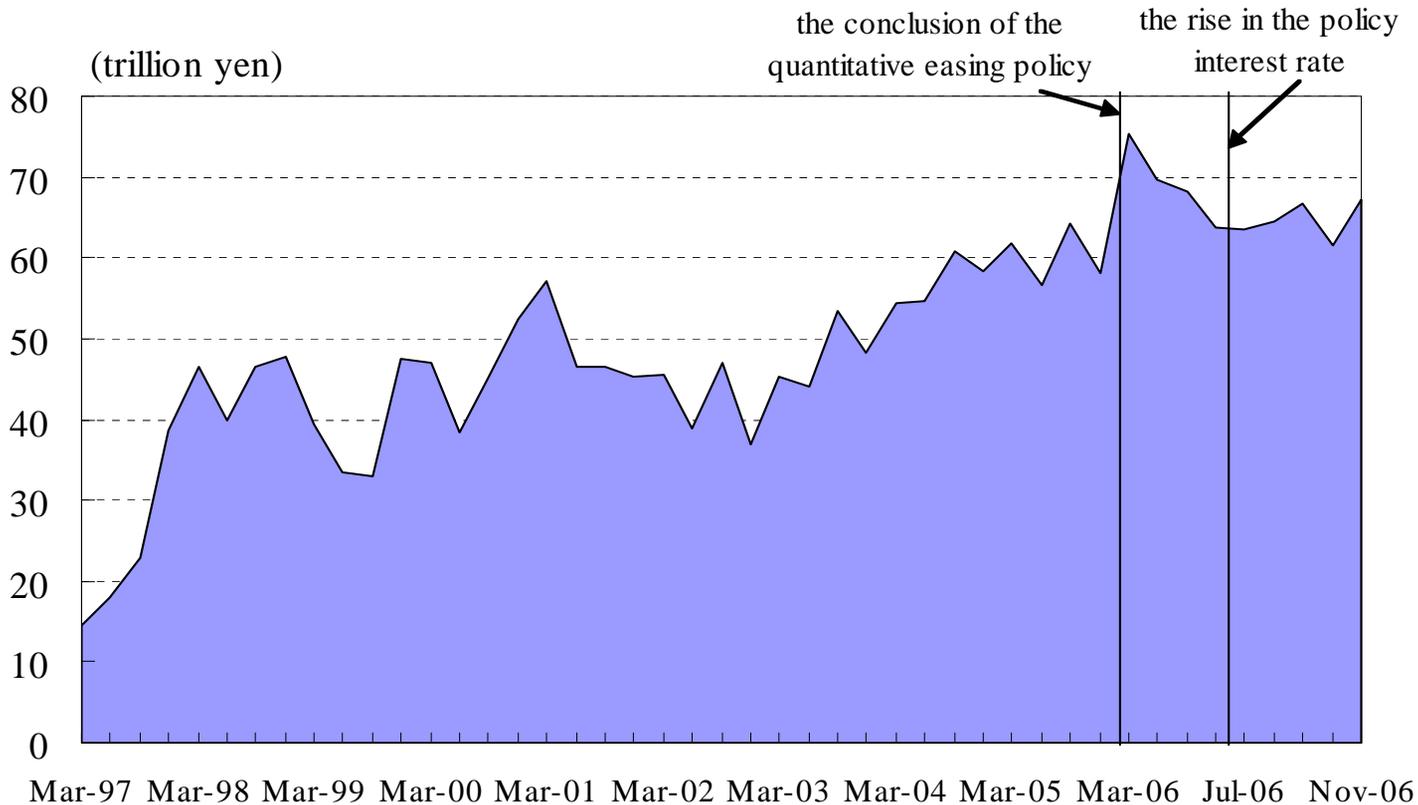
(3) Repo market

- **Outstanding amount of repo market has been on the increasing trend; nevertheless, it showed relatively large swings since the conclusion of ZIRP**
- **As for General Collateral transactions, Securities Companies (both domestic and foreign) have been major borrowers of funds while Trust Banks and Major Banks have been major lenders**
- **Still, higher volatilities were observed at some occasions largely due to smaller participation of lenders**

3. Improvements in functions of money markets

(3) Repo market

Amounts Outstanding of Securities Lending with Cash Collateral



Source: Japan Securities Dealers Association

3. Improvements in functions of money markets

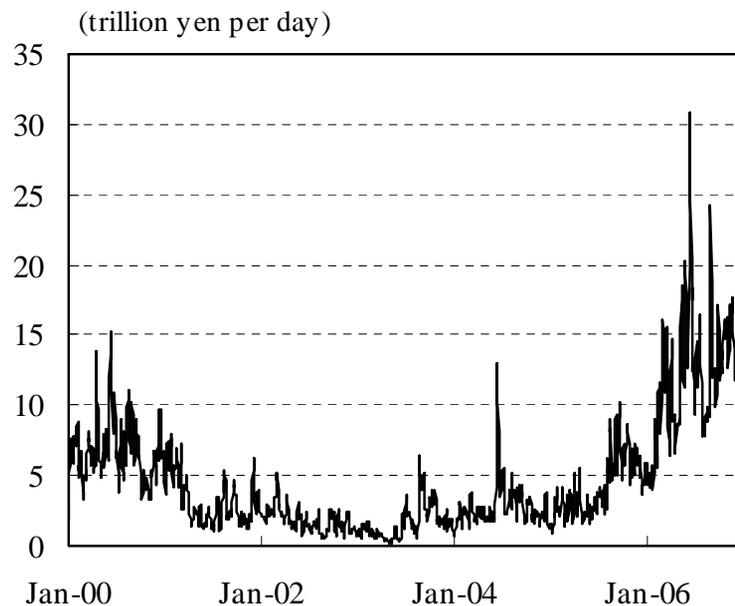
- **Meanwhile, increase in demands for intra-day funds has been moderate, and most of the participants seem to be satisfied with their existing capacities (i.e. JGBs as possible collaterals) for raising such funds**
 - **however, some of the participants (especially with less JPY assets for collateral) expressed cautiousness about tightening conditions for intra-day funds (although, they did not take measures to reduce settlement amounts for now)**

3. Improvements in functions of money markets

(4) Short-term Interest Rate Derivatives

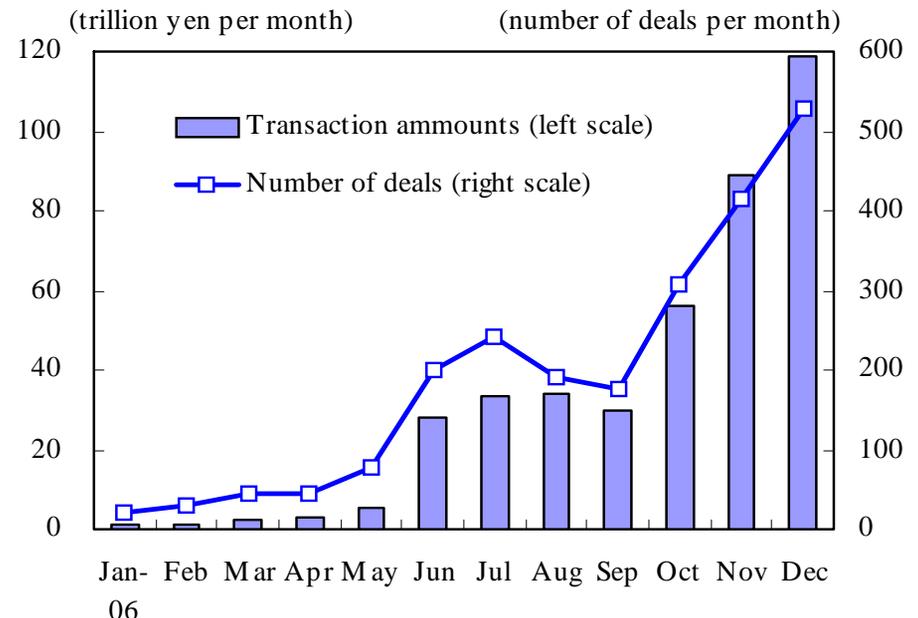
- Turnover of short-term interest rate derivative products such as Euro-yen futures and Overnight Index Swap (OIS, hereafter) have increased rapidly

The trading volume of Euroyen futures



Source: Tokyo Financial Exchange

OIS transactions through Brokers



Source: Money Brokers Association, Tokyo

4. Backgrounds for the improvements in functioning of money markets

(I) Restoration of credit line networks

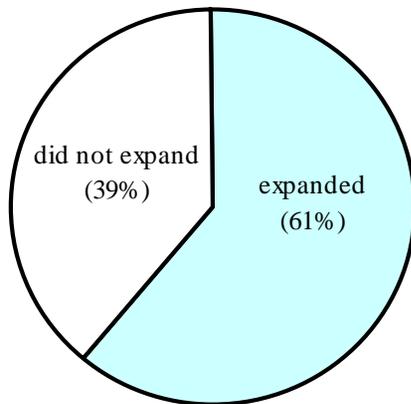
- **Majority of participants (as borrowers and lenders) expanded their own credit lines during both the periods before and after the conclusion of ZIRP**
 - **Foreign Banks and Securities Companies have been most active in this effort**
- **Larger number of them become less cautious in raising funds from overnight call market**
- **At the same time, especially Major Banks are more active in either extending loans here or conducting arbitrage transactions against other kinds of money markets**

4. Backgrounds for the improvements in functioning of money markets

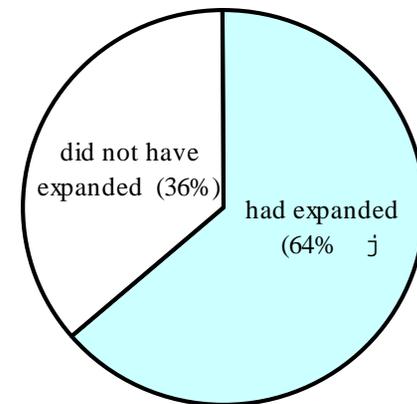
(I) Restoration of credit line networks

Survey Results of the Market Participant's Expansion of Credit Lines during the Last Six Months

(a) Investment (As a Lender)



(b) Fundraising (As a Borrower)



Source: Bank of Japan

4. Backgrounds for the improvements in functioning of money markets

(2) Enhancement of operational capacities for Repo market (to some extent)

- **Some participants enhanced operational capacities (such as investments in human resources computerized systems or organizational settings)**

(3) Increasing “opportunity costs”

- **Upward movement of short-term interest rate has worked as one of the drivers for lending activities as well as arbitrage transactions**

5. Challenges facing the future of money markets

- **Further environmental changes surrounding money markets;**
 - 1) Evolutions of activities of various participants (e.g. increased presence of foreign banks/investment houses or privatization of the Japan Postal Savings)**
 - 2) Growth of JPY funds trading by overseas players with high-tech strategies**
 - 3) Innovation in financial transactions in the areas of settlements, risk management or product developments**
 - 4) Accumulation of JGBs in prospects for their utilization as collaterals**

5. Challenges facing the future of money markets

(I) Enhancing the functions of collateralized markets

- **For a full-fledged functioning of overall money markets, balanced growth of uncollateralized and collateralized transactions would be important**
- **Participation of players are limited and there is room for arbitrage transactions against other markets**
 - **Operational capacity of broader-based players as well as reviews on market practices is important**

5. Challenges facing the future of money markets

(2) Further growth of short-term interest rate derivatives

- As the reference of market outlook of our policy rates, well-functioning short-term interest rate derivatives markets are important
- However, major participants in the OIS market have been foreign banks/investment houses; its turnover volume is still smaller than that of Federal Fund futures in the U.S.
 - Encouragement to the other kinds of participants (especially Major Banks) is needed

6. Bank of Japan's efforts

(1) Cautious operations in money markets during the restoration of their functions

- After the conclusion of QEP, we reduced the current account balance toward a level around required reserves over a few months, keeping a close watch on developments of money markets

(2) Daily announcements of amount of funds

a) "Sources of Changes in Current Account Balances at the Bank of Japan and Market Operations" (Announced at around 18:00 on the BoJ website and to the wire)

- Projections for the next business day
 - Surplus/Shortage of funds (Banknotes and treasury funds)
 - BoJ OMOs and Loans
 - Net change in current account balances

b) Projections for Reserve Balances (Announced at 9:20 to the wire)

6. Bank of Japan's efforts

(2) Providing supports for private sector initiatives

- **Organizing a “Money Market Forum”**
- **Setting up a working group on enhanced transparencies of repo markets**
- **Providing supports for improving the efficiency of the collateralized call market (initiative by the Study Group for Activation of Short-term Money Markets)**
- **Considering on conducting a fact-finding survey on the OIS market**
- **Considering on possible improvements in the availabilities of market related data (see previous page)**