Bank of Japan Review 2008-E-3

Recent Trends in Japanese Foreign-Exchange Margin Trading

Tai Terada, Naoto Higashio, Jun Iwasaki
Foreign Exchange Operations
Financial Markets Department

September 2008

Foreign-exchange margin trading[1] by individual investors has become common in Japan during the last several years. This paper uses available data to review recent trends in Japanese foreign-exchange margin trading. It finds that turmoil in international financial markets, triggered by the "subprime debacle" since August 2007, resulted in a decline in outstanding positions for foreign-exchange margin trading. There was nonetheless a steady increase in account numbers and trading volumes. Since August 2007, trading approaches and currency selection have also changed. For example, leverage has declined, dollar/yen turnover ratios have increased, and there have been shifts to high-yield currencies.

1. Preface

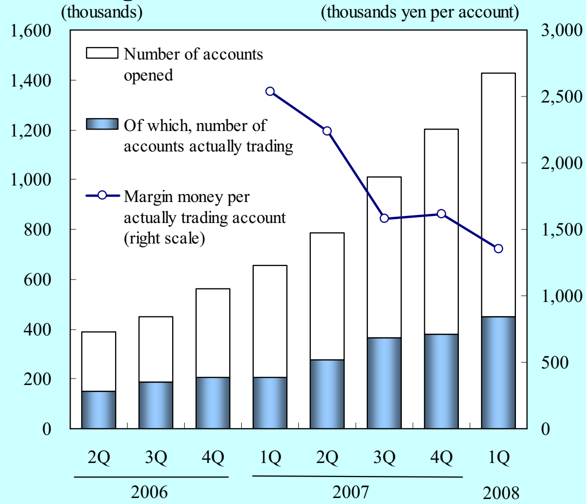
Only recently has foreign-exchange margin trading attracted the interest of individual investors in Japan. That popularity has grown substantially within the last several years. In July 2005, the Tokyo Financial Exchange began listing Exchange Forex Market Contracts.[2] Meanwhile, margin brokers reduced trading commissions, and the spread of Internet trading[3] helped to improve convenience. All of the above changes supported the increase in trading volumes. Individual investors seeking new investment opportunities also supported the expansion in foreign-exchange margin trading.

One of the functions of the Financial Markets Department at the Bank of Japan is to monitor and analyze domestic and foreign financial markets in order to contribute to the appropriate administration of monetary policy. In this paper, we examine Japanese foreign-exchange margin trading, which is increasingly attracting attention in international circles for its growing influence on foreign exchange markets. This paper attempts to summarize recent trends in Japanese foreign-exchange margin trading.[4]

2. Trading volume trends

Among individual Japanese investors, foreign-exchange margin trading has established itself as one of the investment vehicles for foreign-currency-denominated assets. (For a discussion of other foreign investments by individual Japanese investors, see the "**BOX**" on page 2). For example, the number of accounts has doubled over the last year in spite of the turmoil in financial markets that began last summer. On the other hand, the amount of margin money per account has declined, possibly reflecting an increase in participants, including investors with smaller accounts, who are attracted by declines in trading commissions (**Figure 1**).

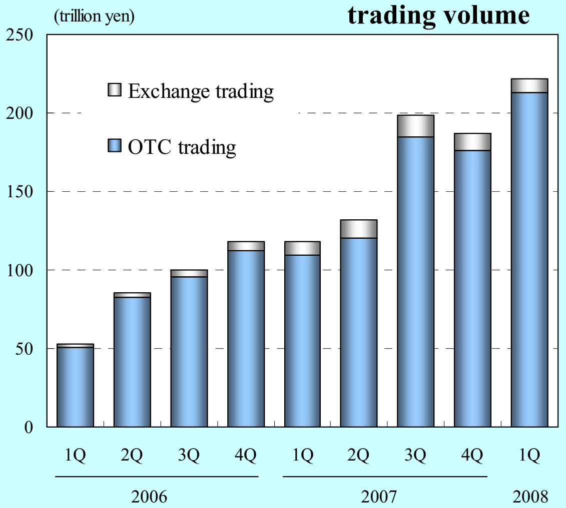
Figure 1: Numbers of accounts



Note: Total OTC and exchange trading. "Accounts actually trading" are those that were actually used for trading during the term.
Source: The Financial Futures Association of Japan (FFAJ)

Likewise, a review of quarterly trading volumes for foreign-exchange margin trading indicates that the market has more than quadrupled from just over 50 trillion yen during the first quarter of 2006 to 230 trillion yen during the first quarter of 2008 (**Figure 2**).

Figure 2: Japanese foreign-exchange margin trading volume



Note: Total buying and selling transactions reported by FFAJ members (securities companies, futures companies etc.)
Source: FFAJ

While direct comparisons are difficult,[5] the volume of foreign-exchange margin trading is equivalent to about 10% of total yen spot trading, according to global statistics kept by the BIS (as in April 2007).[6] This data indicates that individual Japanese investors are becoming important participants in the foreign-exchange market, joining domestic and foreign institutional investors, importers, exporters and hedge funds (**Figure 3**).

Figure 3: Daily average trading volume comparisons

Yen spot trading volume (global base, BIS figures)		
	April 2007	24.5 trillion yen (*) per day
Japanese foreign-exchange margin trading volume (total OTC and exchange trading, FFAJ figures)		
	1st quarter of 2007	1.9 trillion yen per day (7.7%)
	1st quarter of 2008	3.6 trillion yen per day (14.5%)

(*) 206.0 billion USD
(Conversion rate: Dollar/yen = 118.81)

Note: Figures in parentheses ( ) in the Japanese margin trading volume column are ratios against global-based yen spot trading volumes (April 2007)
Sources: The Bank for International Settlements (BIS), FFAJ

[BOX] Investments in foreign-currency-denominated assets by individual Japanese investors: Comparison of foreign-currency-denominated investment trust and foreign-exchange margin trading

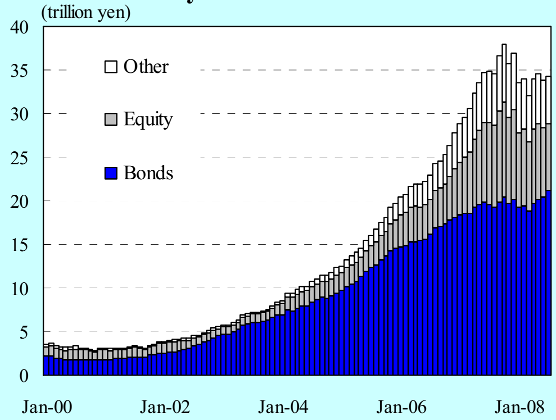
Other than foreign-exchange margin trading, individual Japanese investors use several tools to invest in foreign-currency-denominated assets. Those are foreign-currency-denominated investment trusts, investments in bond placements and other foreign securities and foreign currency deposits. Among them, investments in foreign-currency-denominated investment trusts have enjoyed a significant acceleration in growth since 2002. Nonetheless, in the latter half of 2007, outstanding balances posted a slight decline (**Box Figure 1**).

Comparing the size of each foreign-currency-denominated asset class as of the end of March 2008, on a stock basis, foreign-exchange margin trading had an outstanding balance (gross positions) of 3.1 trillion yen. This was significantly smaller than the balance on foreign-currency-denominated investment trusts (32.1 trillion yen), according to the Investment Trusts Association, Japan. It is also smaller than outstanding household outward investment in securities (12.2 trillion yen) and foreign currency deposits (4.8 trillion yen) in the Flow of Funds Accounts (Bank of Japan).

However, unlike other foreign investments, it is not unusual for foreign-exchange margin trading to see multiple trades during a single day, and indeed the high frequency of trading is one of its distinguishing features. Measuring sizes on a flow basis, foreign-exchange margin trading had a trading volume of 739.6 trillion yen in FY 2007 (from April 2007 to March 2008; figures from FFAJ; aggregate of OTC and exchange trading).

In terms of foreign exchange markets, trading through investment trusts is considered to have a relatively large influence from the perspective of a long-term supply and demand for currencies. Meanwhile, foreign-exchange margin trading has a relatively large impact on short-term market movements and market liquidity due to its trading flow.

Box Figure 1: Outstanding balances in foreign currency-denominated investment trusts



Source: The Investment Trusts Association, Japan (ITAJ)

3. Distinguishing features of trading and investment approaches

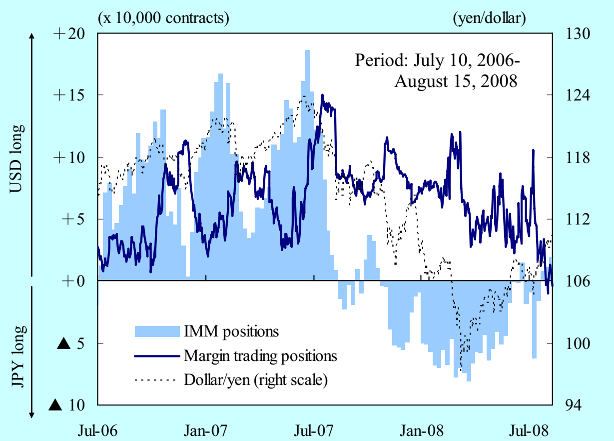
To identify the basic distinguishing features of Japanese foreign-exchange margin trading, we looked at the positions of foreign-exchange margin traders on the Tokyo Financial Exchange (TFX) and non-commercial, non-reportable investor positions on the IMM, a division of the Chicago Mercantile Exchange. The latter are considered to be the positions taken by some hedge funds and other short-term wholesale investors. Comparing the positions of both players, we identified the following distinctive features of Japanese foreign-exchange margin trading.

(1) Trading primarily takes the form of "yen-shorts and foreign currency-longs"

Looking at the trends in Japanese margin trading positions from a slightly long-term perspective, one can see that they change according to market environments, but primarily take the form of selling yen and buying foreign currency.

For example, in the dollar/yen market, short-term wholesale investors have had positions that are either dollar-long or yen-long, depending upon changes in the market. At the same time, positions for Japanese foreign-exchange margin trading have basically always been dollar-long (yen-short) even when the dollar/yen rate fell below 100 yen in March 2008 (**Figure 4**).[7]

Figure 4: Japanese FX margin trading and IMM short-term investors net positions (dollar/yen)



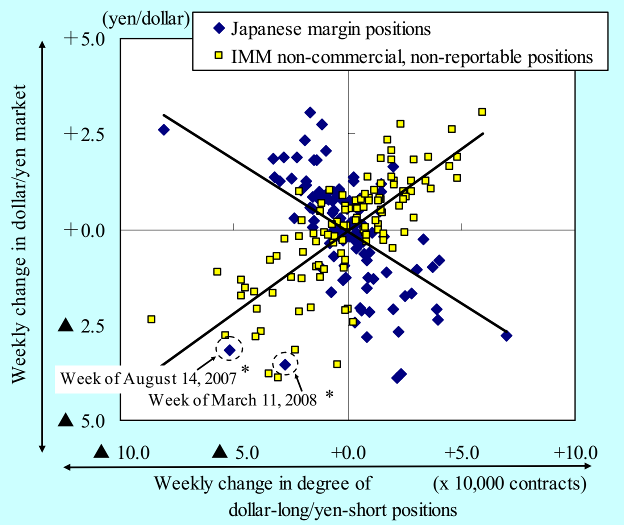
Notes: Net positions = long positions - short positions. For Japanese margin trading, positions on Tokyo Financial Exchange (TFX) trading are used. For IMM short-term trading, positions of weekly totals for non-commercial, non-reportable investors are used.
Sources: TFX, Commodity Futures Trading Commission (CFTC),

Active attempts by individual Japanese investors to use foreign-exchange margin trading to earn profits on interest rate differentials (the "carry") are said to be behind this "selling yen and buying foreign currency" feature. In other words, in foreign-exchange margin trading, taking long positions in relatively high-yield currencies results in daily additions to earnings from the carry (swap points). Individual Japanese investors try to earn these profits by going short in yen, which is a low-interest rate currency, and simultaneously going long in high-yield currencies (can be referred to as "carry trades"[8]).

(2) Investors primarily take positions against short-term market directions

From a short-term perspective on the positions in Japanese foreign-exchange margin trading and the positions of short-term wholesale investors, the latter generally align their positions with short-term market directions, while the former tends to build contrary positions that go against short-term market directions as long as the amount of fluctuation does not exceed a certain level (**Figure 5**).[9]

Figure 5: Change in net positions for Japanese margin traders and IMM short-term investors, and their relationship to dollar/yen rate



Notes: Weekly data (period: July 11, 2006-August 12, 2008)
See Note 9 for entries marked with *
Sources: TFX, CFTC, Bloomberg

While Japanese individual investors are basically trying to earn profits on interest rate differentials, when the market goes up (weaker yen, stronger foreign currencies), they tend to lock in profits from the appreciation of the foreign currency with reducing positions in preparation for future price declines.

Conversely, when the market is in decline (stronger yen, weaker foreign currencies), they tend to increase their long foreign currency positions as they consider that the potential for losses from future market declines has been reduced. In addition, as will be discussed below, recently there has been an increase in trading that seeks capital gains, including taking short positions on the US dollar. Even in this trading for capital gains, retail players appear to primarily take contrary positions, buying into declines and selling into gains, unless there is wide divergence from the range initially anticipated. This feature of foreign-exchange margin trading makes it a factor in establishing a certain limit on market fluctuations as long as the change in market levels is not too abrupt.

4. Recent developments and changes

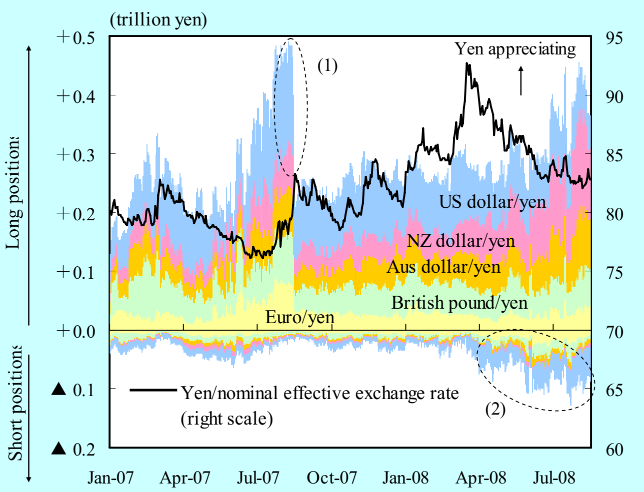
Having discussed the basic features of this segment of the market, we now turn to developments in foreign-exchange margin trading since the start of global financial market turmoil last summer.

(1) Changes that took place around August 2007

Accumulation and unwinding of yen-short /foreign currency-long positions

During 2007, and particularly in July and early August, Japanese margin trading saw a surge in carry trades and a sharp increase in long positions in US dollars and other currencies (short in yen). However, when the short-term money markets were shaken by the subprime problems through the middle of August and the reverberations expanded to international financial markets, the yen turned upwards on the foreign exchange market, which resulted in a significant unwinding of positions. Of particular note is August 16, the date on which the dollar/yen rate plummeted through 115 yen. Large numbers of foreign-exchange margin positions were liquidated under automatic loss cutting rules.[10] The closure of long dollar/yen positions during the decline had an impact on market trends and is viewed as a factor in accelerating the appreciation of the yen during this period (**Figure 6**-(1)).[11]

Figure 6: Total positions (exchange trading base)

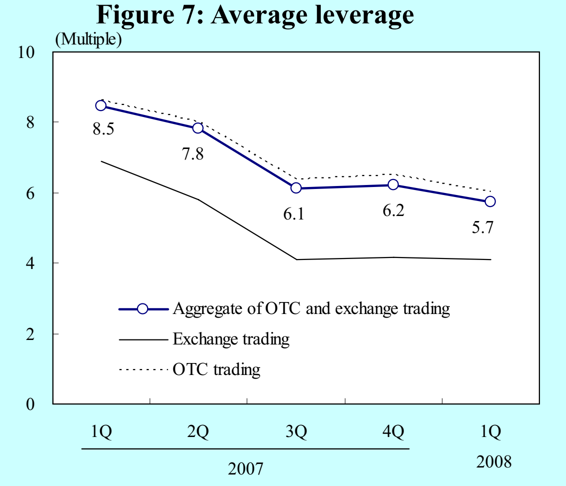


Note: Yen/nominal effective exchange rate calculated by JP Morgan
Sources: TFX, Bloomberg

Decline in leverage[12]

The higher the leverage (ratio of open positions to margin money) is, the greater the potential is for changes to be accelerated, for example, by automatic loss cutting when there are significant movements in the market. Estimates indicate that the average leverage at the third quarter of 2007 was noticeably lower than the second quarter of 2007 (**Figure 7**). Presumably, this was because the automatic loss cutting rules described above came into play in August 2007, closing out highly-leveraged positions.

Figure 7: Average leverage



Source: FFAJ

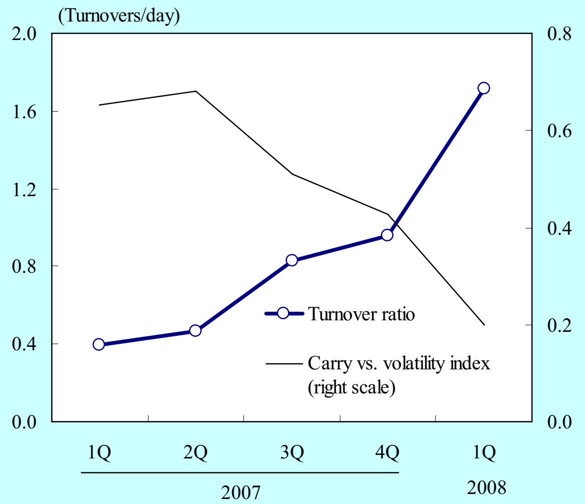
(2) Changes since August 2007

Changes in dollar/yen trading: Increase in short positions and higher turnover ratios

Looking at developments in Japanese retail margin trading since August 2007, one of the major characteristics has been the increase in dollar-short positions since March 2008 (**Figure 6**-(2)). In addition, turnover ratios (i.e., trading volume divided by outstanding positions) have also increased, suggesting more short-term trading (**Figure 8**).

Behind this are the lower costs for taking dollar-short positions due to a contraction of the interest rate differentials, which can also be observed in the decline in the carry vs. volatility index (**Figure 8**). Meanwhile, the increased volatility in the market has led to an increase in short-term trading targeted to earn capital gains. This occurred as investors sold dollars at the peak and then bought them back at cheaper prices thereafter. Another point quite often made with respect to these trading trends is that declines in trading commissions have contributed to reducing the cost of short-term trading.

Figure 8: Turnover ratio and carry vs. volatility index (US dollar/yen)

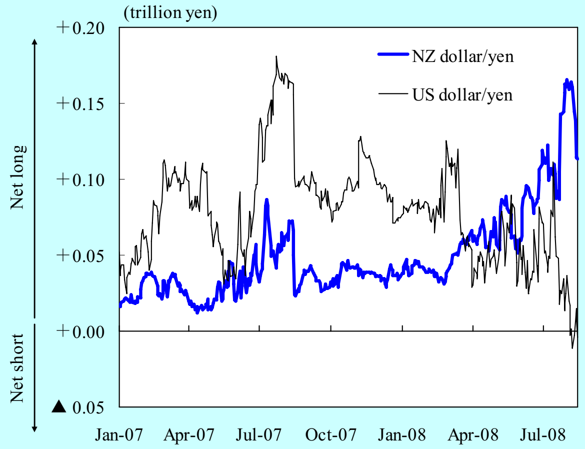


Notes: Turnover ratio = Average daily trading volume (OTC trading) ÷ Outstanding positions (total of long and short as of end of period)
Carry vs. volatility index = 3-month LIBOR interest-rate spread ÷ 3-month implied volatility
Sources: FFAJ, Bloomberg

Shift out of US dollars in favor of high-yield currencies

There have also been changes since August 2007 in the selection of currencies for margin trading. Successive policy rate cuts in the United States have significantly narrowed the Japan-US interest-rate spread and prompted a shift to high-yield currencies that offer higher earnings from interest rate spreads. One example can be seen from the positions in the New Zealand dollar vs. the yen. With an official cash rate of 8% (as of August 19, 2008), New Zealand was one of the highest of the major currencies, and between March and August 2008, there was a significant increase in long New Zealand dollar positions against yen (**Figure 9**).[13]

Figure 9: Net position trend (by currency pair)



Sources: TFX, Bloomberg

5. Conclusions

Foreign-exchange margin trading, which is primarily a vehicle for individual Japanese investors, has an increasing presence in foreign exchange markets and trends within the segment help drive market movements. Looking at overall trends in foreign-exchange margin trading, trading features and approaches have changed in response to the changes in international financial markets since August of last year.

Points to watch with respect to foreign-exchange margin trading and its impact on foreign exchange markets include: (1) changes in the investment approaches used in foreign-exchange margin trading; (2) changes in leverage; and (3) changes in currency selection. (In particular, the presence of Japanese foreign-exchange margin trading cannot be ignored for relatively less traded currencies that do not have the same scale of trading as the US dollar or Euro [**Figure 10**]).

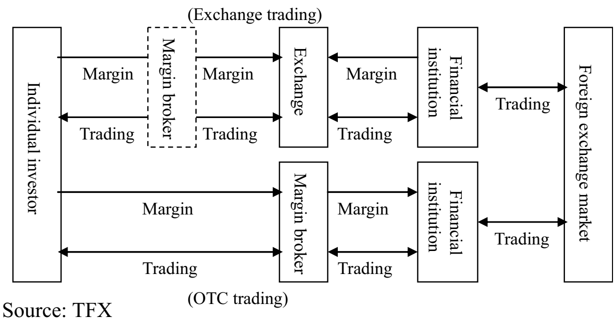
Figure 10: Daily average trading volume

	Foreign-exchange spot trading volume (global base, BIS figures, April 2007) - trillion yen(*) = (a)	Japanese FX margin trading OTC trading volume (FFAJ figures, 1st quarter of 2008) vs. yen trading - trillion yen = (b)	= (b)/(a)
US dollar	93.89	1.80	(1.9%)
EURO	49.90	0.40	(0.8%)
British pound	17.81	0.61	(3.5%)
Swiss Francs	10.46	0.01	(0.1%)
Aus dollar	6.27	0.24	(3.8%)
Canadian dollar	4.57	0.03	(0.8%)
NZ dollar	2.05	0.09	(4.6%)
Rand	0.67	0.02	(3.0%)

(*) Conversion rate: US Dollar/yen = 118.81
Sources: BIS, FFAJ

[1] Foreign-exchange margin trading is a currency trade in which margin money is deposited as security with a broker and trades are settled "on the margin" (the difference in prices). This form of trading first expanded with the 1998 amendments to the Foreign Exchange and Foreign Trade Control Act. In July 2005 it was brought under the Financial Futures Trading Act.

[2] When investors engage in foreign-exchange margin trading, they may either trade on the exchange through a margin broker (exchange trading) or trade directly with a margin broker (OTC trading) (see the figure below).



Source: TFX

[3] Investors primarily engage in margin trading through Internet and telephone accounts. According to data released by the Financial Futures Association of Japan (FFAJ), the share of accounts using the Internet for transactions (number of accounts actually used for trading during the period) has risen from 87.9% (second quarter of 2006) to 97.4% (first quarter of 2008). During this period, the number of Internet accounts increased 232.2%, while the number of telephone accounts declined 35.0%.

[4] Investors who engage in foreign-exchange margin trading are exposed to foreign-exchange fluctuation risk. This paper does not recommend foreign-exchange margin trading, nor does it recommend any specific investment techniques or approaches.

[5] Some margin brokers offset purchase orders and sales orders from individual investors who are their clients and take only the remainder to the foreign exchange market for trading with financial institutions etc. It is not, therefore, the case that all foreign-exchange margin trading takes place on the foreign exchange market.

[6] Every three years, the Bank for International Settlements (BIS) coordinates a global central bank survey of foreign exchange and derivatives market activity on behalf of the Markets Committee and the Committee on the Global Financial System. The objective of the survey is to provide comprehensive and internationally consistent information on turnover and amounts of contracts outstanding in these markets. The exercise also serves as a benchmark for the semiannual OTC derivatives market statistics, which are limited to banks and dealers in the most important financial centers. In April 2007, central banks and monetary authorities from 54 countries and jurisdictions collected data on turnover in traditional foreign exchange markets (those for spot, outright forwards and swaps) and in the OTC currency and interest rate derivatives markets (available from the BIS website: http://www.bis.org/triennial.htm). The global yen spot trading volumes used in this paper are the yen spot trading volumes against all non-yen currencies as tabulated by the BIS.

[7] In August 2008, dollar/yen positions in Japanese foreign exchange margin trading temporarily showed slight dollar-shorts/ yen-longs on a net basis on several occasions. However, when other currencies are added in, the trend continues to be in favor of foreign currency longs.

[8] As an indicator that shows the attractiveness of carry (interest-rate spread) trading, one may, for example, use the "carry vs. volatility index" which is derived by dividing the interest-rate spread by the market volatility (this is referred to in this document [**Figure 8**]). The higher this index, the greater the interest-rate spread compared to market volatility and the more attractive carry transactions are. Conversely, the lower this figure, the greater the volatility compared to the interest-rate spread (i.e., potential for capital losses) and the less attractive carry transactions are.

[9] When the dollar/yen market shifted sharply towards a weaker dollar and stronger yen during the weeks of August 14, 2007 and March 11, 2008, dollar-long positions contracted due to automatic loss cutting rules (see Note 10).

[10] An outline of the position management mechanisms used by margin brokers in foreign-exchange margin trading is as following. The margin broker marks the client's position to market, and if the margin money is below the required amount, a "margin call" is made to inform the investor that he/she must either deposit the shortfall or settle the position. If the position has a large loss or the amount of shortfall is large, an automatic liquidation of positions is conducted (a long position is sold and a short position bought; "automatic loss cutting"). The level of margin money at which automatic loss cutting takes place is set by each margin broker.

As one example of automatic loss cutting, consider an investor who is long 1 dollar/yen contract (10,000 dollars), which is purchased for a unit price of 123.00 yen, with leverage of 10x and a margin money requirement of 123,000 yen. If the automatic loss cutting level is 70%, then when unrealized losses reach 70% of the deposited margin money (86,100 yen), a counter-trade is executed (10,000 dollars in dollars sold) and 36,900 yen in funds remain in the investor's account. Note that the loss cutting level in this example is 114.39 yen ((1.23 million yen - 86,100 yen) / 10,000).

[11] Daily position data is based on the data published on foreign-exchange margin trading at the Tokyo Financial Exchange (TFX). Looking at Japanese foreign-exchange margin trading as a whole, trading on the TFX is relatively small compared to trading on the OTC (**Figure 2**), but our market contacts suggest that TFX trading data basically tracks the overall trends in margin trading.

[12] Foreign-exchange margin trading enables the investor to invest in foreign-exchange worth several times the margin money. This multiple is called the "leverage." The level of leverage actually available in actual trading can range from a few fold to more than 100-fold, depending upon the margin broker.

[13] When the New Zealand dollar market declined during the middle of August 2008, automatic loss cutting etc. resulted in a contraction in NZ dollar-long positions.

The authors would like to thank Akina Ida, Hiroki Inaba, Masafumi Miya and Fumiko Haraguchi for their generous assistance in the writing of this paper.

Bank of Japan Review is published by the Bank of Japan to explain recent economic and financial topics for a wide range of readers. This report, 2008-E-3, is a translation of the original Japanese issue, 2008-J-7, published in August 2008. The views expressed in the Review are those of the authors and do not necessarily represent those of the Bank of Japan. If you have comments or questions, please contact Takeshi Kimura, Director, Financial Markets Department (takeshi.kimura@ boj.or.jp). Bank of Japan Review E-series and Bank of Japan Working Paper E-series can be obtained through the Bank of Japan's Web site (http://www.boj.or.jp/en).