

Recent Trends in Foreign Exchange (FX) Margin Trading in Japan

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Foreign exchange (FX) margin trading in Japan has an enormous impact on the recent Tokyo FX market. The common characteristics of Japanese FX margin traders are as follows: (1) they are contrarians who contain FX rate fluctuations, except in cases of dramatic FX rate swings and (2) they are sellers of the yen and buyers of foreign currencies who sometimes exacerbate FX rate swings in times of yen's rapid appreciation, through a forced liquidation of positions under loss cutting rules. FX margin trading in the past several years has witnessed the prevalence of high speed/frequency trading among individual investors called "scalping," as the bid-offer spread has tightened. In addition, the "Swiss franc shock" in January 2015 has brought about changes in the way FX margin trading intermediaries manage their risks. In order to analyze the FX market, it is important to closely monitor the features, trends, and changes in positions of FX margin trading.

Introduction

Foreign exchange (FX) margin trading in Japan has increased dramatically in the past 10 years¹, and Japanese FX margin traders, that mainly consists of individuals, are one of the major players, along with exporters, importers, institutional investors, and speculators (short-term wholesale investors) in the Tokyo FX market. The volume of FX margin trading in Japan seems to be the largest in the world. Consequently, Japanese FX margin traders, or "Mrs. Watanabe," are widely known.

There are trends which indicate the volume of Japanese FX margin trading has increased dramatically since the end of 2012 and the presence of cover deals by FX margin trading intermediaries (hereinafter referred to as "FX firms") at the Tokyo FX market has been growing. In addition, the "Swiss franc shock"² in January 2015, which led to a large amount of uncollected balance for FX firms, gave momentum to strengthen their risk management.

This paper summarizes the outline of FX margin trading in Japan. Thereafter, the features of its trading strategy, impact on the FX market, and its recent trends are examined.

Outline of FX margin trading in Japan

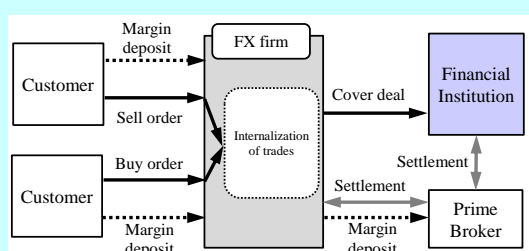
Mechanism of FX margin trading

FX margin trading is defined as an FX transaction³ in which customers deposit a portion of their trading amounts (margin deposit) in FX firms beforehand and the settlement date can be postponed arbitrarily. The ratio of the notional amount to the margin deposit is called "leverage."⁴

In the common mechanism of FX margin trading, FX firms offset their buy and sell orders (internalization of trades)⁵ and then conduct cover deals⁶ for their residual positions. The flow of cover deals influences FX rates (Figure 1). Not a few FX firms conduct cover deals through FX Prime Brokerage Services (hereinafter referred to as "FXPB").^{7,8}

According to the Financial Futures Association of Japan, FX firms conduct cover deals for about 40% of

[Figure 1] Mechanism of FX margin trading

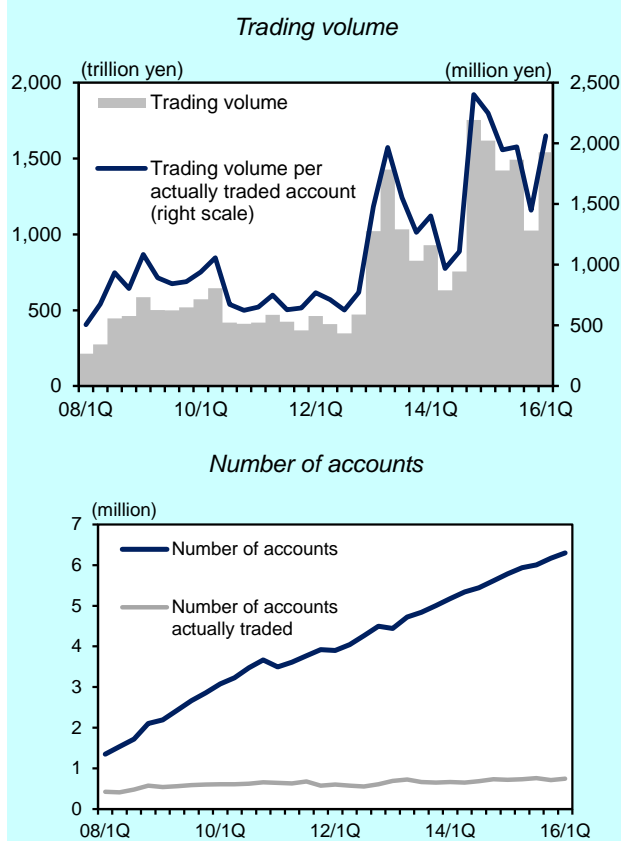


their customer orders on average.⁹ The amount of their cover deals¹⁰ is equivalent to roughly 30% of the total amount of spot trading in the Tokyo FX market.¹¹ In this regard, Japanese FX margin trading contributes considerably to the liquidity of the Tokyo FX market.

Transition of the trading volume

While the volume of Japanese FX margin trading had remained at the same level since the financial crisis in 2008, it has been increasing dramatically with some fluctuations since the end of 2012. Despite the increasing trend in the number of FX accounts, the number of active FX accounts (accounts of FX margin traders that actually traded during each quarter) has remained almost unchanged¹² (Figure 2).

[Figure 2] Volume/accounts of FX margin trading in Japan



Note: "Trading volume" represents the total amount traded during each quarter. "Number of accounts" shows the number at the end of each quarter. "Number of accounts actually traded" represents those that were actually traded during each quarter.
Source: Financial Future Association of Japan

Features of FX margin traders' strategy and its impacts on the FX market

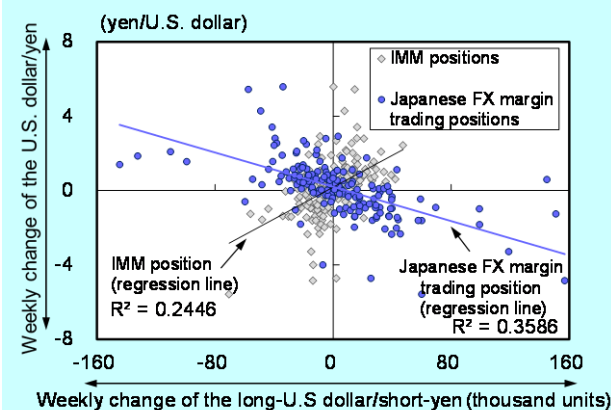
The features of Japanese FX margin traders' strategy can be expressed as follows: (1) conducting contrarian trading where traders take positions against short-term market movements and (2) taking

short-yen/long-foreign currencies positions.¹³

Feature 1: Contrarian trading strategy

Japanese FX margin traders tend to take the contrarian trading strategy; in other words, they take the opposite position to the short-term market movement by buying (selling) a currency when the currency depreciates (appreciates). This tendency helps to contain FX market swings unless such swings are dramatic. Indeed, according to the position data from the U.S. Commodity Futures Trading Commission called International Monetary Market position (hereinafter referred to as "IMM position"), which expresses the positions of speculators (such as hedge funds), the positions tend to lean toward long-U.S. dollar/short-yen when the U.S. dollar/yen rallies. However, the positions of Japanese FX margin traders usually move in the opposite direction. In other words, they often take short-U.S. dollar/long-yen positions when the U.S. dollar/yen rallies (Figure 3). With regard to this point, market participants point out that Japanese FX margin traders might be containing market swings during Tokyo time although it is difficult to confirm this notion with data.

[Figure 3] Relationship between positions (Japanese FX margin trading positions and IMM positions) and the U.S. dollar/yen rate

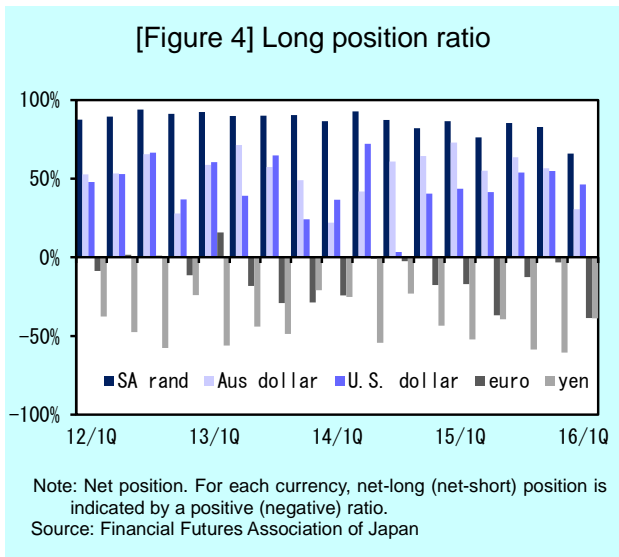


Note: Japanese FX margin trading position is that of transactions on the Exchange (Click 365) while IMM position is the total positions of non-commercial and non-reportable positions. Each data is from the beginning of 2013 to the end of May 2016.
Sources: Bloomberg; Tokyo Financial Exchange.

Feature 2: Short-yen, long-foreign currencies positions

The other aspect of Japanese FX margin traders is that many of them take "short-yen/long-foreign currencies" positions.¹⁴ The ratio of their long positions to their total (long and short) positions (hereinafter referred to as "long position ratio") for each currency shows the following: (1) for high-yield emerging currencies (such as the South African [SA]

rand), FX positions remain net-long (net-short for the yen) regardless of market movements¹⁵; and (2) for relatively high-yield currencies among the developed countries (such as the Australian dollar) and the U.S. dollar, FX positions also remain net-long despite being fluctuated by market movements¹⁶ (Figure 4).



Since positions of Japanese FX margin traders lean toward short-yen/long-foreign currencies, as stated above, a yen rally has sometimes been accelerated by a forced liquidation of positions under loss cutting rules (hereinafter referred to as "loss-cut") in times of rapid yen appreciation¹⁷ (see BOX). In addition, it is pointed out that the risk of loss-cut is relatively high (1) during early morning on Mondays and Japanese holidays, when market liquidity is relatively scarce, and (2) for emerging/high-yield currencies, whose long position ratio is higher and liquidity is lower than those of developed countries' currencies.¹⁸

Furthermore, since the emerging/high-yield currencies against the yen market are relatively illiquid, loss-cut is basically executed through the U.S. dollar. For instance, the loss-cut for the SA rand against the yen is divided into "sell SA rand/buy U.S. dollar transactions and sell U.S. dollar/buy yen transactions." Therefore, it can also impact the U.S. dollar/yen rate. When the SA rand/yen fell by about 13% early in the morning on January 11, 2016, which

[BOX] Mechanism of Loss-cut

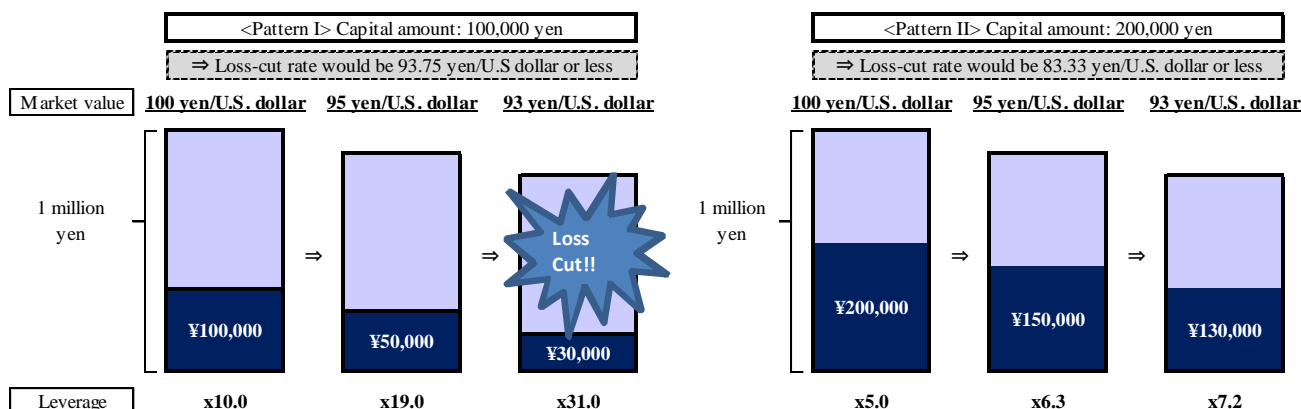
Since February 2010, it has been mandatory for all FX firms in Japan to have and observe loss cutting rules (currently only for individual customers)*. FX firms conduct daily evaluation of customer positions on a mark-to-market basis. If the margin deposit is less than the required amount, FX firms urge the customer to add deposit or to close their positions (margin call). Loss-cut is executed in either case when (1) the customer does not deposit the required amount by the deadline, or (2) the loss is larger than a certain amount.

* The rate at which loss-cut is executed (hereinafter referred to as "loss-cut rate") is determined by each FX firm on the basis of the self-imposed rule by the Financial Futures Association of Japan considering the required amount of deposit (4% of the notional amount) under the leverage regulation (the maximum leverage is 25; currently only for individual customers).

However, loss cutting rules do NOT guarantee that "the loss would always be within a certain amount." That is, since the counter transaction would start at a time after the rate hits the loss-cut rate and the contract rate might differ from the loss-cut rate, the actual loss might become larger. For example, in the case of Pattern I below, when the rate hits the loss-cut rate, (a) the customer will get a refund of just 10,000 yen if the actual contract rate is 91 yen/U.S. dollar, whereas (b) the customer will have to pay an additional 10,000 yen if the contract rate is 89 yen/U.S. dollar.

< Image of Loss-cut >

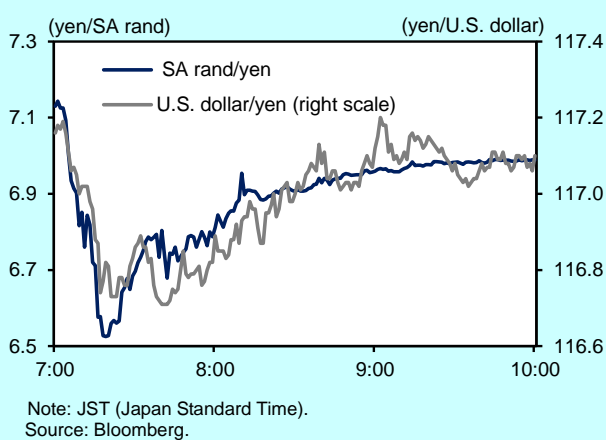
[Precondition] Position: buy \$10,000, Loss-cut rate: 4% of Notional amount, Spot rate: 100 yen/U.S. dollar



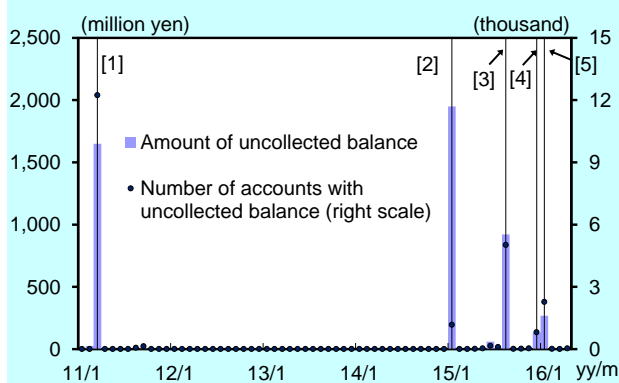
was a Monday and a Japanese holiday, the U.S. dollar/yen also fell by about 0.4%¹⁹ (Figure 5).

Loss-cut can be executed not only in times of yen's appreciation but also in times of yen's depreciation. However, looking at the data on uncollected balance at FX firms, which is mainly due to loss-cut transactions, much of the uncollected balance has piled up mainly in times of yen's rapid appreciation, as a result of the short-yen/long-foreign currencies positions (Figure 6). Therefore, the acceleration of market swings by FX margin trading generally happens in times of yen's appreciation.

[Figure 5] FX rates in the early morning on January 11, 2016



[Figure 6] Uncollected balances, which is mainly due to loss-cut



Note 1: [1] March 2011: sharp fall of the U.S. dollar/yen (March 17), [2] January 2015: the Swiss Franc Shock (January 15), [3] August 2015: sharp fall of the SA rand/yen and the U.S. dollar/yen (August 24), [4] December 2015: sharp fall of the SA rand/yen (December 10), [5] January 2016: sharp fall of the SA rand/yen (January 11).

Note 2: The data after April 2015 include accounts for corporations.

Note 3: The latest data are as of April 2016.

Source: Financial Futures Association of Japan

In terms of the relationship between leverage and loss-cut, a lower leverage contributes to a higher tolerance for market swings before loss-cut when all other things are equal (see BOX). In this regard, the

average leverage has recently been declining overall. According to the data from the Financial Futures Association of Japan, the average leverage was 6.3 in the second quarter of 2014, which fell to 4.6 in the first quarter of 2016.

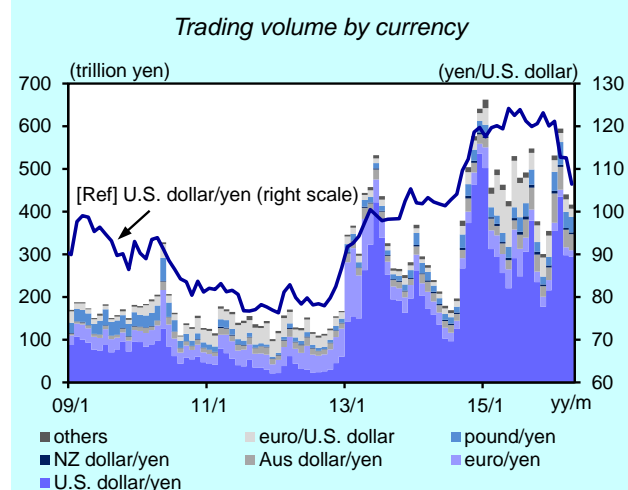
Recent trends in FX margin trading in Japan

In this chapter, recent trends in FX margin trading in Japan are summarized with respect to two major topics: (1) characteristics since the end of 2012; and (2) developments after the "Swiss franc shock" in January 2015.

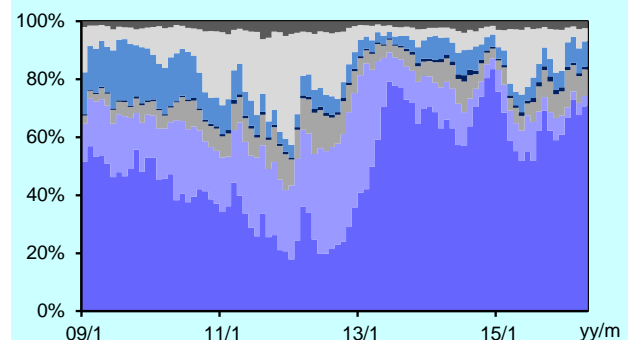
Characteristics since the end of 2012

The trading volume of FX margin trading in Japan has increased rapidly since the end of 2012. By currency, trading volume of the U.S. dollar/yen has especially surged and extended its share in the FX margin trading in Japan (Figure 7).

[Figure 7] Trading volume of FX margin trading in Japan by currency



Trading share by currency



Note: Trading volume represents the total amount traded during each month. The latest data are as of April 2016.

Sources: Bloomberg; Financial Futures Association of Japan.

As the background for such an increase, mainly in the U.S. dollar/yen transactions, some facts can be

mentioned, such as: (1) the upward trend of the U.S. dollar/yen rate made it easy for Japanese FX margin traders to make profits; (2) the volume of high speed/frequency trading, including the use of automatic trading programs, increased as the bid-offer spread (the spread between the buying rate and the selling rate) tightened due to increased competition among FX firms; and (3) the short-term trading opportunities increased with the increased volatility of the U.S. dollar/yen rate due to the introduction of the "Quantitative and Qualitative Monetary Easing (QQE)" by the Bank of Japan in April 2013, the expectation for the Federal Reserve to taper its quantitative easing in May 2013, and the expansion of the QQE in October 2014.

As for the high-speed/frequency trading in FX margin trading, there is a strategy called "scalping." It is one of the "day-trading strategies" that does not take an overnight position. Scalpers (traders using scalping) aim to take profits by repeating short-term transactions²⁰ at intervals of seconds or minutes, where each transaction makes only a slight profit. Scalping is generally conducted using automatic trading programs, and it can be both contrarian and a follower of trends. Since the profit for each transaction is based only on a few pips (basis points), scalping is typically conducted when there are (1) large amounts of capital and high leverage and (2) currency pairs where the bid-offer spread is narrow, such as the U.S. dollar/yen. As scalping positions are closed within a very short time, many market participants consider the impact of scalping on the FX market to be limited. However, the impact of the high-speed/frequency trading using automatic trading programs can differ depending on the algorithm of the automatic trading programs.²¹ In addition, it is important to keep in mind the risk of the occurrence of unexpected market turbulence when systemic risks emerge among FX firms because of the surge in trading volumes.²²

Developments after the Swiss franc shock

The turbulence in the FX market in January 2015 is called the Swiss franc shock, which led to a large amount of uncollected balance for FX firms in Japan (Figure 8).

Based on this experience, the following steps are being taken: (1) the Japanese Financial Services Agency has been working toward the enforcement of risk management regulations among FX margin traders;²³ furthermore, (2) many Japanese FX firms have been lowering the upper limit of leverage²⁴ for

[Figure 8] Uncollected balance mainly due to loss-cut among Japanese FX firms caused by the Swiss franc shock

Customer type	Number of incidents	Amount of incidents (million yen)	Per incident (million yen)
Individual	1,137	1,948	1.7
Corporation	92	1,440	15.7
Total	1,229	3,388	2.8

Source: Financial Futures Association of Japan.

their corporate customers.²⁵ These efforts should be appreciated as they lower the average leverage for corporate customers and the corresponding probability of loss-cut. Therefore, they appear to contribute toward stabilizing the FX market.

Furthermore, some financial institutions in Europe and the United States have tightened the criteria for providing FXPB, and some Japanese FX firms have been influenced by the tightening. For example, some financial institutions have raised fees or deposit requirements, tightened credit lines, and even stopped providing their services to some customers. All of these changes should be appreciated, as they reduce the risks for the financial institutions providing FXPB. For FX firms, however, these changes might lead to an increase in their costs. In addition, conducting cover deals by FX firms might become difficult and they can be forced to assume risks by themselves if the new criteria are very severe.²⁶

Conclusion

This paper summarized the outline of FX margin trading in Japan. Thereafter, the features of its trading strategy, impact on the FX market, and its recent trends were examined.

The volume of FX margin trading in Japan has followed an increasing trend with some fluctuations, and the flows from FX firms have a significant presence in the Tokyo FX market. Under these circumstances, it is important to continue to carefully monitor their trading strategy and positions in order to analyze their impacts on the FX market. It is also important to monitor the impact of the changes in regulations and structures in the FX market on the FX margin trading in Japan.

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¹ FX margin trading started with the revision of the Foreign Exchange and Foreign Trade Control Act in April 1998 and has become more active since the revision of the Financial Futures

Trading Law in July 2005.

² At approximately 6:30 pm JST on January 15, 2015, the Swiss National Bank announced the abolishment of the Swiss franc's upper limit against the euro, and the Swiss franc appreciated by about 30% against the euro in just around 20 minutes.

³ Currency-related derivative transactions regulated by the Financial Instruments and Exchange Act.

⁴ It is mandatory for FX firms to be registered as a Financial Instruments Business Operator. There are two types of FX margin trading. One is the over-the-counter (hereinafter referred to as "OTC") transaction, and the other is the exchange transaction ("Click 365" and "Click 365 Large" provided by the Tokyo Financial Exchange). Since more than 99% of the transactions are OTC transactions, FX margin trading is denoted as an OTC transaction, unless otherwise explicitly noted in this paper.

⁵ By the internalization of trades, the spread between the bid price and offer price for customers would directly become profits for FX firms.

⁶ A cover deal is a transaction that FX firms conduct with financial institutions to adjust residual positions that occur through transactions with customers.

⁷ FXPB enables FX firms to conduct cover deals with multiple financial institutions within a certain credit limit. Without FXPB, FX firms have to generally conduct cover deals with limited numbers/attributes of financial institutions. When utilizing FXPB, a prime broker conducts settlements with a financial institution (counterpart of the cover deal) and the FX firm pays a trading fee to the prime broker in addition to the margin deposit.

⁸ According to the Financial Futures Association of Japan, "Results for the Actual Conditions Survey of Over-The-Counter Retail Foreign Exchange Margin Trading" (August 2015), 17 FX firms out of 56 FX firms currently utilize FXPB.

⁹ See Financial Futures Association of Japan, "Results for the Actual Conditions Survey of Over-The-Counter Retail Foreign Exchange Margin Trading" (August 2015).

¹⁰ The total amount of cover deals and exchange transactions. In exchange transactions, customer orders are sent into the interbank market directly since there are no internalization of trades or cover deals. Therefore, the flow from cover deals of OTC transactions and that from exchange transactions influence the FX market.

¹¹ An estimation based on the Financial Futures Association of Japan, "Results for the Actual Conditions Survey of Over-The-Counter Retail Foreign Exchange Margin Trading" (April 2015) and the Tokyo Foreign Exchange Market Committee, "Results of Turnover Survey of Tokyo Foreign Exchange Market" (April 2015).

¹² Looking closely at the recent developments of trading volume, the volume during the fourth quarter of 2015 fell to the lowest level since the third quarter of 2013, partly because the volatility of the U.S. dollar/yen declined. However, the volume has been increasing since the beginning of 2016 due to yen's rapid appreciation against the U.S. dollar and the rise in volatility of the U.S. dollar/yen. Meanwhile the number of active accounts has been almost unchanged. The reason for this might be that all of the potential customers have already completed the opening of their accounts or that the number of new customers and the number of departing customers have been nearly in balance. See Tetsuo Yamazaki, "Wagakuni no Gaitameshoukokintorihiki no Genjou to Kisei (Current Situation of Japanese Foreign Exchange Margin Trading and its

Regulation) <Available only in Japanese>" (*Journal of Securities Analysts*, April 2016).

¹³ For a paper indicating similar features, see Tomoo Onishi, "Gaikokukawaseshoukokintorihiki to Interbank Shijou tonon Kankei ni tsuite (The Relationship between Foreign Exchange Margin Trading and the Interbank Market) < Available only in Japanese>" (*Journal of Securities Analysts*, April 2016). In addition, these features were also identified in the past. As an example, see Tai Terada, Naoto Higashio, and Jun Iwasaki, "Recent Trends in Japanese Foreign-Exchange Margin Trading" (*Bank of Japan Review*, 2008-E-3, 2008).

¹⁴ As background, some researchers have identified several facts, including the following: (1) the yen-denominated interest rate has been low (FX margin traders can acquire daily profits based on the interest rate differential between relatively high-yield and low-yield currencies <swap point> by taking long positions of high-yield currencies); and (2) the historical circumstances under which FX margin trading has prevailed as an alternative tool to foreign currency deposits or foreign currency-denominated investment trusts. In FX margin trading, although it is possible to take short-foreign currency positions (unlike foreign currency deposits), Japanese FX margin traders tend to believe that FX margin trading is a way to manage their assets by exchanging the yen for foreign currencies. Consequently, they tend to have short-yen /long-foreign currency positions.

¹⁵ Since the bid-offer spread is relatively wide for high-yield currencies, it is more popular among FX margin traders dealing with high-yield currencies to acquire swap points rather than to obtain capital gains. Therefore, they tend to buy these currencies regardless of market developments.

¹⁶ In contrast, as the euro short-term interest rate (German 2-year bond) turned negative in December 2011, FX margin traders tend to have euro-short positions.

¹⁷ For instance, such risks emerged as the yen appreciated sharply against the U.S. dollar soon after the Great East Japan Earthquake (March 17, 2011). It is said that the loss-cut of FX margin trading further accelerated yen's appreciation against the U.S. dollar.

¹⁸ It is said that there are yen-buying flows that aim to induce loss-cut of Japanese FX margin traders.

¹⁹ In the morning on that day, the SA rand/yen fell by about 13% from 7.2 yen/SA rand (around 7 am JST) to 6.2 yen/SA rand (around 7:30 am JST). After that, however, it rebounded sharply to approximately 7.0 yen/SA rand (around 10 am JST).

²⁰ In the FX market, millisecond transactions called High Frequency Trading (HFT) are conducted by entities such as specialized firms. See Maiko Koga and Atsushi Takeuchi "Gaikokukawaseshijou ni okeru Torihiki no Kousokuka, Jidouka: Shijoukouzou no Henka to Aratana Renten (High-speed Trading and Automatic Trading in the Foreign Exchange Market: Changes in the Market Structure and New Issue) <Available only in Japanese>" (*Bank of Japan Review*, 2013-J-1, 2013). Conversely, scalping is not as frequent or high speed as HFT since it is usually conducted through an ordinary Internet connection.

²¹ The impact on the FX market, however, (ultimately) depends on (1) the frequency and the amount of internationalization of trades conducted by FX firms and (2) the type of logic utilized to conduct cover deals.

²² Although the increase in scalping has positive aspects for FX firms in terms of the increase in customer orders, it also has negative aspects, including a greater systemic burden, as it is conducted at high speed and with great frequency. In this regard, some FX firms have constructed their trading systems,

including cover-dealing logic, appropriate to high speed/frequency trading, and increased their internalization ratio (the ratio that the FX firms offset their customer orders through internalization of trades) in order to expand their profits. However, other FX firms are concerned about the risks of systemic problems and the cost of cover deals. Some of them explicitly prohibited high-speed/frequency trading or the use of automatic trading tools. Others changed the design of their trading systems to make it unsuitable for scalping, such as lowering the trading speed.

²³ In response to the Swiss franc shock, the Japanese Financial Services Agency conducted an investigation of the risk management systems of 21 FX firms, which had a large number of orders regarding FX margin trading. The results were published in the "Financial Monitoring Report" in July 2015. In addition, the agency will introduce new regulations for corporations on margin deposit, taking into consideration the historical FX rate fluctuations of each currency pair.

²⁴ Although the leverage regulation (up to 25 times) is currently applied only to individual customers, many FX firms set their own upper limits of leverage for their corporate customers as well. However, the upper limit for corporate customers is usually higher than that for individual customers.

²⁵ According to the data from the Financial Futures Association of Japan (first quarter of 2016), the trading volume by corporate customers is about 13% of the total volume of FX margin trading in Japan, and the number of accounts of corporate customers is about 1% of the total number of accounts.

²⁶ In the FX market, among the customers who face difficulty in accessing FXPB provided by financial institutions in Europe and the United States, a similar service called "Prime of Prime Brokerage" provided by other FX firms that have access to FXPB seems to prevail.

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