Tokyo to Mature in Financial Futures

By Shigeo Abe

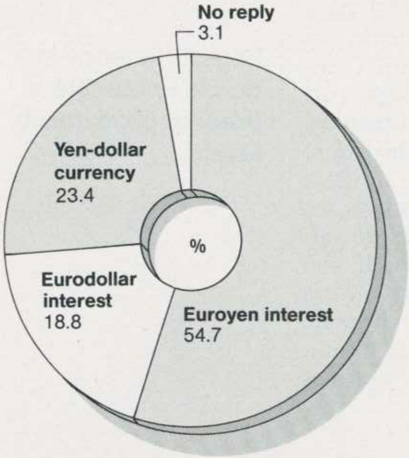
In the words of an executive of a major Japanese commercial bank, "Japan's underdeveloped financial futures market is about to enter a period of full maturity." Trading on the market is currently limited to government bond futures and stock index futures, the former introduced in October 1985 and the latter in September 1987. By the middle of this year, however, trading will begin in two more types of contract–futures based on interest rates and futures based on currency rates.

With a greater variety of futures contracts traded in Tokyo, it should not be very long before the market catches up with the Chicago and London futures markets not only in volume but also in quality. Arbitrage between futures and spot markets and the development of new futures-related financial products will give further impetus to the growth of the financial and capital markets in Tokyo.

Studying systems

Final preparations are under way for the June opening of the Tokyo Financial Futures Exchange (TFFE) which will handle contracts based on interest and exchange rates. A number of questions, however, remain undecided about the framework of the exchange.

Fig 1. The Three Most Popular Commodities Traded at TFFE



Source: *Nihon Keizai Shimbun* survey

Basically, Japan's banking and securities industries have different interests and different ideas. The financial futures now traded in Japan–government bond and stock index futures–are listed on the Tokyo Stock Exchange (TSE) and the Osaka Securities Exchange (OSE), leaving the banking industry with no futures exchange of its own.

Not surprisingly, banks have been calling for the creation of an integrated market. As a precedent, they pointed to the Chicago Board of Trade (CBT) and the Chicago Mercantile Exchange (CME), which both handle a broad range of contracts including not only commodity futures but also bond, interest-rate, currency and stock index futures. Bankers argued that Japan's new financial futures exchange should be made an integrated market from the beginning, consolidating the current futures markets in Tokyo and Osaka.

The securities industry, on the other hand, maintained that it was the spot and futures markets which must be integrated. It contended that the two markets could not be separated, noting that in the case of both bond futures and stock index futures, arbitrage between futures and spot markets has expanded trading volume for both.

Thus the plan to create a Tokyo financial futures market threw the banking and securities industries into conflict, the former pushing for a market of its own and the latter stubbornly defending its vested interests. Even within the Ministry of Finance, a turf war developed between the Banking Bureau and the Securities Bureau.

The result was a compromise formula. The stock exchanges and the new futures exchange would exist side by side, it was decreed, and banks would be allowed to act as brokers for bond futures. Thus a long-standing wish of the banking industry–entry into bond futures brokerage–is finally being fulfilled.

The compromise formula is reflected in the "dual structure" of the necessary government legislation. Government bond futures and stock index futures are covered by the revised Securities and Exchange Law, while the new interest-rate and currency futures to be listed on the TFFE are provided for in the new Financial Futures Exchange Law.

Questions unresolved

These are the reasons why, with the clock ticking down toward June, some questions are still unresolved regarding the basic framework of the TFFE. One concerns the eligibility of a clearing member. Unlike the TSE and other stock exchanges, the TFFE will have a clearing house for the settlement of futures transactions, and clearing members will be required to have greater capital resources than general members. The banking industry had proposed that clearing members be required to have net assets of ¥100 billion or more, but that would have left only about eight securities companies, including the Big Four–Nomura, Daiwa, Nikko and Yamaichi–able to meet the eligibility requirement.

Predictably, the proposal touched a raw nerve in the securities industry, prompting it to counterpropose that banks should be required to have net assets of ¥100 billion or more to obtain broker's licenses for bond futures. At present, about 200 banks are authorized to deal in cash public bonds, but only 50 or 60 would have been able to satisfy such a requirement. If this pending question is not settled, the scheduled opening of the TFFE may be delayed.

Another unresolved question is how to settle currency futures contracts. Initially, three futures–yen-dollar currency futures, 3-month Eurodollar futures and 3-month Euroyen futures–will be listed on the TFFE, with the yen-dollar currency and Eurodollar futures to be settled in dollars. The banking industry proposed that these to be settled in New York through Chase Manhattan Bank in accordance with current trading rules on the foreign exchange market. The securities industry, however, insists they be settled in dollars in Tokyo.

This disagreement also reflects the longstanding turf war between the banking and securities industries. All TFFE members will be required to conduct transactions in dollars, but at present only authorized foriegn exchange banks are in principle allowed to handle foreign exchange. Major securities companies are allowed to conduct dollar transactions, but only where real demand exists. This long-standing principle of giving foreign exchange banks the lion's share of foreign exchange transactions could collapse if medium-sized securities companies join the TFFE to conduct dollar dealings. The banking industry is determined to defend the old "foreign exchange banks first" policy against the inroads of securities companies, which believe it to be out of sync with modern reality.

The securities industry has made many other demands regarding the operation of the TFFE. For example, securities companies say it is difficult to settle transactions with customers the day after trading. They want the settlement date to be four days after trading, as is currently the rule on the TSE. The securities industry also says it is unreasonable to require TFFE general members to limit the number of institutions they will commission to perform clearing services, and further propose that financial institutions acting as brokers be prohibited from advancing loans for settlement losses and margin payments.

In the opinion of the securities industry, acceptance of all these requests is essential to ensure that banks and brokerages compete on a level playing field. In an effort to iron out the differences between the two industries, Mitsubishi Bank and Nomura Securities Co. thrashed out the problems involved, with Nomura speaking for the securities industry and Mitsubishi for banking.

Yet no one doubts that the TFFE will start in due course, and everyone is getting ready. Banks, for their part, began laying the groundwork a long time ago. Dai-Ichi Kangyo Bank, for example, has joined hands with Dean Witter Reynolds, a major U.S. futures dealer. The tie-up agreement calls for the mutual commissioning of brokering services, and is expected to enable the bank to provide such services in collaboration with overseas futures markets, including the Chicago markets.

Risk management

Mitsui Bank has gone ahead and set up a brokerage house in Singapore in a move to start brokering on overseas futures exchanges. The bank has also been strengthening its domestic presence by sending trainees overseas and doubling its staff of yen-fund dealers.

Mitsubishi Bank, meanwhile, plans to create a market planning department to manage interest-rate risks for its assets in the deposit and lending and market divisions. The plan is based on Mitsubishi's judgment that a new futures exchange calls for a new approach to risk management. What is needed, the argument goes, is a better system of identifying interest-rate mismatch for all assets in order to determine the right proportion of risk hedging through futures trading. In the past, asset liability management (ALM) in Japan has been lacking in both efficiency and effectiveness. Now, with Japan entering an era of full-fledged financial futures trading, ALM, too, is coming of age.

The rush to prepare for this new era in financial futures is already having an effect on bank hiring policies. There is competition to attract people with the right qualifications. All the major commercial banks are planning to hire between 50 and 70 university science department graduates this spring. That is 10 to 20% of the number of non-technical university graduates expected to be hired at the same time, an unusually high ratio. Postgraduate students in particular are in great demand.

Behind these stepped-up efforts to snare talented graduates is the belief that futures and options dealings will be more effective in improving the balance sheet than cash (spot) dealings. This is especially true because Japanese banks are required to raise their capital adequacy ratios under an agreement reached last year among members of the Bank for International Settlements (BIS).

The arrival of full-fledged financial futures in Japan could mean new competition for financial institutions the world over. Banks such as Dai-Ichi Kangyo and Mitsui are already seeking membership of futures exchanges in the United States and Europe, since trading on these exchanges is expected to be allowed after the opening of the TFFE. By acquiring membership on major overseas futures exchanges, these and other Japanese institutions hope not only to gain necessary know-how but also to build a 24-hour trading network. Currently, the CME has 17 Japanese members, including both clearing and non-clearing members, while the CBT has 16. The London International Financial Futures Exchange (LIFFE) has no less than 30 Japanese members.

Nomura Securities Co., meanwhile, has become the first Japanese institution to establish a bridgehead on the Paris financial futures exchange, the Marché à Terme d'Instrument Financier (MATIF).

Of the three types of futures to be listed on the TFFE, Euroyen futures are expected to see the most business. A recent survey of 52 banks, securities companies and institutional investors by the *Nihon Keizai Shimbun*, Japan's leading economic daily, found that 35 plan to deal mainly in Euroyen contracts.

In the case of trust banks, which hold large foreign currency assets including those they had in trust, three out of seven replied they were interested in Eurodollar futures. Many life and nonlife insurance companies and investment trusts gave priority to yen-dollar futures. Their main purpose is not so much to hedge risks against short-term assets as to avoid foreign exchange losses. They thus seem interested primarily in currency futures.

A third wave of financial futures trading will sweep Japan once the first and second waves are passed–trading in government bond futures and stock index futures. But the future is not all a bed of roses. One problem concerns taxation.

Table 1. **Bond Turnover** (¥ billion)

	TSE total	OTC	Futures	Grand total
1975	653	50,904	–	52,209
1976	982	64,897	–	66,860
1977	1,637	113,164	–	116,439
1978	4,392	193,199	–	201,983
1979	2,318	204,235	–	208,872
1980	3,874	272,503	–	280,252
1981	5,578	288,429	–	299,585
1982	6,640	327,108	–	340,389
1983	15,448	385,097	–	415,993
1984	34,359	692,470	–	761,187
1985	61,642	2,164,670	45,255	2,378,464
1986	103,059	2,619,876	939,583	4,705,160
1987	107,899	5,544,392	1,826,163	9,412,517
1988	78,398	4,175,171	1,875,923	8,083,812

Transactions in the new futures instruments will be tax-exempt in fiscal 1989. Beginning in fiscal 1990, however, a transaction tax will be levied on interest-rate and currency futures, according to a decision by the government and the ruling Liberal Democratic Party.

Tax effect

Two kinds of transaction tax are already in effect. One is levied on government bond futures at a rate of 0.001%. The other is a 0.01% tax on commodity futures and stock index futures such as Stock Futures 50 listed on the OSE. If a similar tax is imposed on Euroyen interest-rate futures, investors will likely quickly lose interest, since yields per transaction are expected to be relatively small. A similar problem could arise with currency futures. The banking industry is lobbying strongly to make currency futures tax-exempt, on the grounds that forward foreign exchange contracts, also a means of hedging risk, are currently tax-free. The indications are that a tax rate as low as the existing levy on government bond futures may be introduced in fiscal 1990. Yet the possibility remains that investors may turn their backs on the new financial contracts, depending on how the tax authorities decide to treat them.

How much growth can be expected of the new types of futures to be traded on the TFFE? According to a study by the Daiwa Securities Research Institute, turnover in Euroyen futures could reach ¥1,800 trillion in 1992. Trading volume for yen-dollar futures in the same year is estimated at ¥4,400 trillion. By comparison, currency futures turnover on the Chicago markets is predicted to reach ¥3,670 trillion in 1992.

It is also predicted that a Tokyo Interbank Offered Rate (TIBOR), similar to the London Interbank Offered Rate (LIBOR), will be introduced in the Tokyo market. LIBOR is widely used as the benchmark interest rate for international financial transactions. This prediction is based on the fact that the Euroyen offered rate in the Tokyo market will be the benchmark for the interest rate level to be used at the time of the month's settlement of Euroyen futures contracts. Indeed, the time is not far off when the internationalization of the yen will force American and European markets to monitor the "TIBOR."

As financial futures go, the TSE and the OSE have a head start on the TFFE. Financial futures trading began in Japan in October 1985, when contracts based on Japanese government bonds were introduced on the TSE. Bond futures turnover expanded rapidly through 1987, doubling each year as the Tokyo market achieved phenomenal growth as a world financial center. In 1988, turnover leveled off in reaction to the "overheating" of the market, but in September of the same year futures based on the Tokyo Stock Price Index (TOPIX) and the Nikkei Average debuted respectively on the TSE and the OSE. Volume has continued to grow steadily since then on both exchanges, though there is frequent confusion, as at the time of the change of delivery month.

It is expected to be a long time before the TFFE catches up in volume with the TSE, by far the largest financial futures market in Japan, yet the TSE is already trying to armor itself against the competition with new instruments such as options.

The leveling-off of bond futures trading last year was greeted with both optimism and pessimism. The optimists believe the reaction to overheating in 1987 will work itself out in due course. In 1987 the yield on the benchmark spot bond plummeted temporarily to 2.55%, almost the same as the official discount rate (2.5%), on speculation that the rate might be reduced. The futures bond price, by contrast, soared to a record ¥119 against a par value of ¥100, only to nosedive later, leaving many investors, including hard-hit Tateho Chemical Industries Co., with heavy losses. Industrial companies became more cautious about bond dealings, while banks and securities companies bolstered their risk management to avoid being left holding excessive positions. Nonetheless, the optimists feel the market will regain its strength once the overall situation changes for the better. They believe that the scope of futures activity was restricted during 1988 in large part because fluctuations in the yen-dollar exchange rate were in a relatively narrow range, reducing the need for hedging.

Spot slowdown

The pessimists, on the other hand, believe that the stagnation in the futures market may lead next to a slowdown in the spot market. This belief stems from the assumption that the balance of government bonds in the market will be decreasing gradually over the longer term. The government is publicly committed to reducing deficit bond issues to zero by fiscal 1990. This goal, once seemingly remote, is now very likely to be achieved, thanks in part to the continuing robust expansion of the domestic economy. Now the Fiscal Council is aiming to liquidate the outstanding balance of deficit bonds as its next goal for fiscal reconstruction.

The government's policy of reducing

the year's bond issue created a difficult situation at the time of the compilation of the 1989 national budget, when the bond underwriting syndicate was forced to accept a smaller share of the new issue. The year-to-year reduction in the share was minimized only through the exceptional measure of suspending the scheduled bond purchase by the Bank of Japan.

The tight supply in the bond market will create expectations that interest rates will drop, thus pushing the profit higher. In the end, however, interest rates remained low, raising the possibility that the downside stabilization of bond yields might reduce the negotiability of bonds themselves. Investors were reluctant to sell their holdings of spot bonds, and dealers found it difficult to secure as much trade as they wanted, with the result that the turnover rate dropped. As it was easier to trade futures bonds than spot bonds, futures turnover did not shrink as much as spot turnover. But the futures market was transformed into an arena in which to secure cash bonds, rather than for hedging or speculation.

Many argue that this anomaly in the bond market sprang from inherent drawbacks such as the prohibition on short selling and the underdeveloped condition of the "repo" or repurchase market. In a move to correct the situation, the Finance Ministry has announced it will reform the secondary market. Aimed specifically at abolishing the short-selling ban and creating a repurchase market similar to that in the U.S. market, the move was timed to coincide with the reform of the primary market scheduled for April 1989 (involving the introduction of a price auction system for long-term government bonds and other measures). Originally, the ministry had planned to initiate changes in both the primary and secondary markets in April, but the preparations for the secondary market reform were delayed by the Securities Bureau's preoccupation with the Recruit stock scandal.

Meanwhile, the TSE is preparing to start trading in bond futures options in the spring of next year. And over-the-counter (OTC) options trading in spot government bonds was set to start this April.

OTC trading is different from exchange trading. Futures options are expected to play a key role in the bond market, since cash bonds are likely to complicate trading. In Chicago, options already account for about 40% of trading volume. The TSE hopes that options will open up a new frontier in financial futures trading. In short, the move is a preemptive strike to maintain TSE leadership in Tokyo futures trading.

Meanwhile, trading in stock index futures, which started only last September, is expanding rapidly. Last December, arbitraging between cash and futures prices played a key role in pushing the Nikkei index to the ¥30,000 mark.

Normally, a futures price is a spot price plus interest. In actual practice, however, futures prices exceed this theoretical level when there are strong expectations that stock prices will go up. Relatively high-priced futures contracts are sold to buy cash stock, and when the futures price begins to drop with the approach of the settlement date, counter dealings are made to gain from the price differential. Foreign securities companies in Tokyo are very good at this kind of arbitrage. The problem is that stock prices can tumble if too much cash stock is sold immediately before the settlement of futures contracts.

To avoid this problem, the Finance Ministry and the TSE have worked out a set of guidelines, including changing the final clearing price at the end of the day's trading to the opening price for the next day, and prohibiting arbitrage settlement from a securities company's own account during the last 30 minutes of the day's trading. Through these and other measures, the ministry and the TSE believe it is possible to prevent confusion immediately before the close of trading on the final trading day before monthly settlements. Meanwhile, the government has decided to ease regulations concerning securities companies and to lift the ban on short-selling, which is considered an impediment to normal arbitrage.

In the United States, too, great tension prevails on clearing day, so much so that it has been dubbed "Three Witches' Day." The confusion now witnessed in the Tokyo market may, in a sense, be unavoidable pending further development of Japan's stock index futures trading. Once this obstacle has been cleared, the nation's financial futures trading can move a step closer to maturity.

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Table 2. **Type of Financial Instruments to Be Traded on TFFE**

	Japanese yen short-term interest futures (3 months, Euroyen basis)	U.S. dollar short-term interest futures (3 months, Eurodollar basis)	Japanese yen currency futures
Transaction unit (per contract)	¥100 million	$1 million	¥12.5 million
Quotation (price listing formula)	100.00 minus annual interest rate (%, 90/360 basis)	100.00 minus annual interest rate (%, 90/360 basis)	Value of U.S. dollar per ¥1
Unit of asked quotation (minimum fluctuations)	0.01 point (equivalent to ¥2,500 per contract)	0.01 point (equivalent to $25 per contract)	0.000001 $/¥ (equivalent to $12.50 per contract)
Limits on price range (maximum fluctuations)	None	None	None
Limits on outstanding transaction volume	To be set	To be set	To be set
Delivery months	March, June, September and December	March, June, September and December	March, June, September, December and the current month
Number of listed contract months	Eight	Eight	(maximum) Six
Final settlement formula	Difference settlement	Difference settlement	Cash settlement

Source: *Nikkei Newsletter on Bond & Money*, May 23, 1988