

EURO-YEN



CHICAGO MERCANTILE EXCHANGE

The Chicago Mercantile Exchange now adds Euroyen futures, the most actively traded non-U.S. interest rate contract in the world, to its extensive menu of interest rate products. Building on the CME's unique link — known as the Mutual Offset System (MOS) — with the Singapore International Monetary Exchange (SIMEX), Eurodollar and Euroyen positions established on one exchange now are directly fungible with those established on the other. The addition of Euroyen contracts allows traders and investors to take advantage of the depth and liquidity of two highly active exchanges over three time zones, for one product.

Single Margin Structure = Maximum Capital Efficiency

By combining Euroyen and Eurodollar positions on a single exchange, traders can benefit from reduced overall performance bond requirements. To monitor risk, both exchanges use the CME's Standard Portfolio Analysis of Risk (SPAN®) system, designed to evaluate the overall risk in an entire portfolio. To the extent that positions in Euroyen and Eurodollar futures act to reduce the overall risk of a given portfolio, SPAN minimum performance bond requirements may be lower for these portfolios than if the positions were held on separate exchanges. Users will post performance bonds based on true intermarket risk exposure, rather than on a single market segment, resulting in potentially substantial cost savings.

Mutual Offset: Simplicity and Flexibility

The mutual offset link between the CME and SIMEX, which was inaugurated in 1984, remains the most successful system of its kind — allowing traders to take positions on one exchange and offset them on the other. MOS for Euroyen futures offers the marketplace several key advantages:

- The infrastructure for the Euroyen MOS link is already in place. That structure is time-tested, simple, familiar and flexible (positions can be held at or transferred to either exchange).
- Because there is already a robust market for Euroyen on the SIMEX, CME Euroyen contracts provide immediate access to an established and liquid market.

- Traders now have access to open outcry Euroyen futures to manage their risk well beyond the limits of their own trading day. Because Eurodollars and Euroyen are available simultaneously at the CME, spread strategies can be easily implemented in a cost-effective way.

CME Euroyen Futures

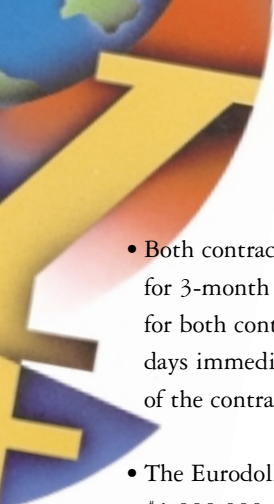
The specifications of CME Euroyen futures are identical to those traded on the SIMEX, with the exception of trading hours.

Contract Size:	¥ 100,000,000
Tick Size:	.01 = ¥ 2,500
Contract Months:	March, June, September, December
Last Trading Day:	The third business day immediately preceding the third Wednesday of the contract month*
Trading Hours:	7:20 a.m. - 2:00 p.m., Chicago Time
Final Settlement Price:	The CME Euroyen futures contract will settle to the same final settlement price used by SIMEX. The SIMEX settlement price is based on the interest rate for three-month yen deposits offered to prime banks in Tokyo on the SIMEX contract's last trading day, as determined by the Tokyo International Financial Futures Exchange (TIFFE).

**Due to the time zone difference between Chicago and Singapore*

Comparing CME Eurodollar and Euroyen Contracts

- Both Eurodollars and Euroyen are priced in terms of indices — the implied interest rate is subtracted from 100. For example, if the implied U.S. or Japanese 3-month interest rate for a given period is 5.50%, the appropriate futures price is 94.50 (100.00–5.50). This pricing convention applies to both Eurodollars and Euroyen and is shared with a number of other short-term interest rate futures traded worldwide.

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- Both contracts are cash-settled to interbank rates for 3-month time deposits. Final settlement prices for both contracts are determined two business days immediately prior to the third Wednesday of the contract month.
 - The Eurodollar contract is based upon a \$1,000,000, 3-month deposit, while the Euroyen is based upon a ¥100,000,000, 3-month deposit. As a result, although the minimum price change (tick) of .01 is identical for each contract, the value of .01 for the Eurodollar is \$25, while the value of .01 for the Euroyen is ¥2,500. The dollar and yen values of a tick stay the same regardless of the level of interest rates.
 - The fact that Euroyen contracts are yen-denominated means that daily marked-to-market cash flows are paid and received in yen rather than dollars.
 - The SPAN performance bond system is used for both Euroyen and Eurodollar futures on the SIMEX and the CME.

Eurodollar and Euroyen Rates

“Euro” interest rates are rates of interest banks charge each other on loans of foreign currency deposits. These loans are typically one year or less in duration. For example, in the U.S., a transaction involving a Japanese yen deposit would be negotiated at the Euroyen rate because the yen would be considered the foreign currency. In Japan, lending and/or borrowing U.S. dollar deposits would be done at the Eurodollar rate for the same reason.

Using CME Euroyen Futures

Euroyen futures contracts allow institutions with yen interest rate exposure to change the nature of that risk. For example, a holder of floating rate, yen-denominated debt can transform this floating rate asset into a fixed rate asset by buying futures. Alternatively, the cost of anticipated borrowings can be fixed in advance by selling futures. Because futures and options are off-balance-sheet instruments, marked to the market daily and guaranteed by the CME Clearing House, they offer an extremely efficient means of managing risk.

Euroyen futures can be used to:

- Hedge Euroyen loans, swaps, and deposits
- Hedge yen forward foreign exchange exposure
- Spread against other CME financial products, such as Eurodollar futures
- Create synthetic assets and liabilities via “strip” trading



Trading Interest Rate Differentials with CME Eurodollar and Euroyen Futures

The fixed tick value and the matching final settlement dates greatly simplify spreading activity between Eurodollar and Euroyen futures contracts. Consider an example using the following assumptions.

JPY/USD exchange rate:	98.61 (yen per dollar)
Price of June 1996 Euroyen futures:	99.50
Implied 3-month interest rate on yen deposits:	0.50%
Price of June 1996 Eurodollar futures:	94.69
Implied 3-month rate on USD deposits:	5.31%
Spread:	481 basis points, or 4.81%

The spread of 481 basis points indicates that the market believes that 3-month Eurodollar rates will be 481 basis points higher than 3-month Euroyen rates on Monday, June 17, 1996 — the day the final settlement price is determined for both contracts. The common final settlement date means that both contracts cover the same mid-June to mid-September time frame.

This makes the spread “clean,” despite the difference in last trading days.

The spread value will only change with *relative* changes in implied interest rates. For instance, interest rates in both the United States and Japan can rise, fall, or remain unchanged.

If the interest rates move in the same direction and by the same amount, the value of the spread will not change, regardless of the extent to which the interest rates change.

Another significant factor in trading the Eurodollar and Euroyen spread is determining the appropriate number of each contract to buy or sell. Daily profits and losses for Eurodollar futures are denominated in dollars, while those for Euroyen are denominated in yen. This currency mismatch means that traders may want to insulate the interest rate aspect of the trade from variations in the U.S. dollar/ Japanese yen exchange rate. This can be done by taking into account (1) the size of each contract, and (2) the current exchange rate, per the following formula:

$$\frac{\text{Number of Euroyen contracts}}{\text{Number of Eurodollar contracts}} = \frac{\text{Eurodollar contract size}}{\text{Euroyen contract size}} \times \text{JPY/USD exchange rate}$$

$$\frac{\text{Number of Euroyen contracts}}{\text{Number of Eurodollar contracts}} = \frac{\$1,000,000}{¥100,000,000} \times 98.61 = .99$$

This means that .99 Euroyen futures should be bought/sold for every Eurodollar contract in each spread transacted: for example, 99 Euroyen contracts per 100 Eurodollars. The dynamic element in this equation is, of course, the exchange rate. Therefore the hedge ratio may need to be rebalanced periodically if there are significant changes in the exchange rate.

Moneychanger: Making Yen Funds Available

Initial and maintenance performance bonds as well as profits in the Euroyen contract are denominated in Japanese yen. This means that an investor must have the ability to transfer funds in yen in order to trade Euroyen futures. Because many investors do not have this ability, the CME offers the Moneychanger Service. This service, offered by the Exchange to its clearing members, provides traders with access to overnight funds in yen, as well as many other currencies. The Moneychanger makes one transaction per day, and is available to all CME clearing members at competitive bid/ask spreads free of charge for the transfer of funds to satisfy the terms of a futures contract or any other legal transaction. For more information about the Moneychanger Service, please call the CME Clearing House.

Conclusion

Euroyen futures traded at the Chicago Mercantile Exchange respond to the marketplace's demand for efficient, global risk management tools. Euroyen futures, the world's most actively traded non-U.S. interest rate contract, now trade alongside the most liquid interest rate products in the world. This, combined with the CME's unique mutual offset agreement with SIMEX, provides unparalleled risk management opportunity.

For Further Information

The CME has several other publications for those interested in interest rate futures. Copies of the following can be obtained by contacting your broker or the CME.

*What's New in CME Interest Rates, Parts I and II**

Forward Eurodollar Pricing Revisited

Strips: Arbitraging the Eurodollar Cash and Futures Markets

Comparing Eurodollar Strips to Interest Rate Swaps

Moneychanger Q&A

*The Financial Safeguard System of the CME**

*A World Marketplace**

CME/SIMEX Mutual Offset System

**These titles are also available in Japanese.*

For a complete listing of product news and prices, visit the CME Home Page on the World Wide Web at <http://www.cme.com/>

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