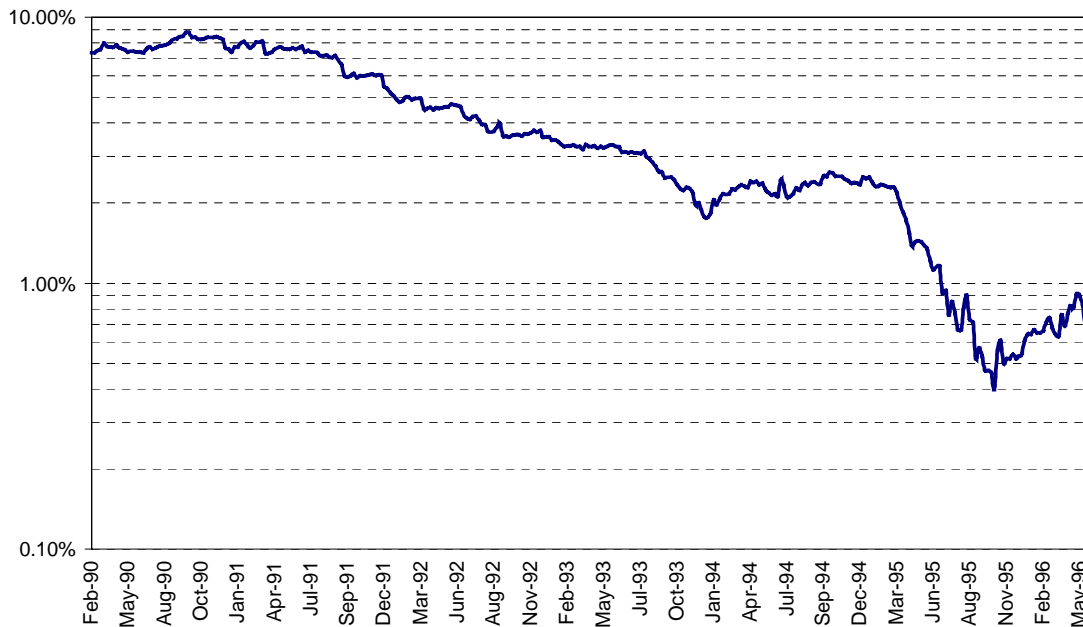


A Matter Of No Small Interest

Ernest Hemingway once noted that the difference between the rich and the rest of us is they have more money. Not more brains or talent, just more money. What would Papa have thought of Daiwa Bank in bonds, Sumitomo in copper, Rockefeller Center, Pebble Beach, ... ? The Sun Also Sets?

The Bank of Japan has had to think about these matters and more over the past decade. They were faced with collapsed land values, a stock market languishing at just over half of its 1989 peak, and a host of functionally-insolvent commercial banks, so it did what any self-respecting central bank would do under similar circumstances: It printed money in an attempt to reflate the economy. The plunge in Euroyen yields has been severe.

Weekly Euroyen Yields



While the words "It can't go any higher (lower)!" are frequently the battle cry of a trader about to lose a lot of money quickly, the chart above just begs to be sold. First, Euroyen, like Eurodollars, are not backed by the full faith and credit of a government, they are yen on deposit in banks outside of Japan. Therefore, their theoretical minimum yield is not the 0% of a government instrument, but something closer to the 0.3% that we see in late 1995 in order to reflect the credit risks of the international banking system. The maximum price of a Euroyen contract should be on the order of $[100 - .3]$, or 99.70.

Second, evidence of a Japanese economic recovery has been mounting. This should increase credit demands and place upward pressure on interest rates. Third, the critical overvaluation of the yen relative to the dollar seen in the first half of 1995, and the simultaneous threat of runaway deflation in Japan are now things of the past.

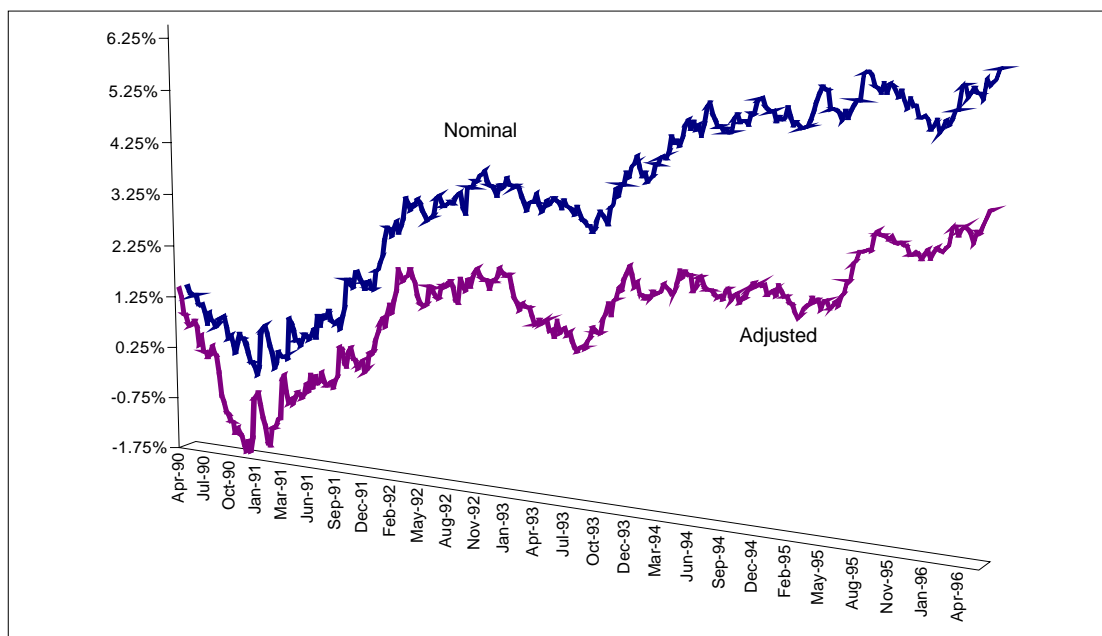
Finally, the Bank of Japan has discovered what its sister central banks have or should have discovered: National monetary policy is a tool of limited effectiveness given the actions of international capital markets. Many of the yen it created were not borrowed by struggling Japanese banks for subsequent relending in Japan, but by financial market players who sought and received higher returns elsewhere. By definition, Japan's persistent trade surpluses with the U.S. mean they must run a capital account deficit, and so many of these cheap yen were used to buy U.S. Treasury debt, a commodity never in short supply. The effects of these flows can be seen in the graph

comparing the nominal and currency-adjusted yield curve spread between Euroyen and U.S. Treasury bonds: the adjusted spread remained fairly constant as Euroyen yields fell. Only recently, as U.S. bond yields have risen and the dollar has strengthened in 1996, has this spread increased.

Despite the Oz-like air of omnipotence central bankers love to exude, they cannot circumvent the laws of finance any more than they can the law of gravity. Consider Fisher's Law: At any maturity, the nominal rate of interest is the real rate of interest plus the expected rate of inflation. Since inflationary expectations at different maturities and across different currencies can differ widely, so can nominal rates. Stripped of these expectations, however, there can only be one real rate, otherwise arbitrage would exist. Indeed, the entire daily trillion-plus dollar volume in foreign exchange ultimately is nothing more than an arbitrage between different expected rates of inflation in different countries.

The implication here for our hubris-soaked brains is sobering: The ability of any central bank to affect real interest rates in a closed (no international capital flows) is questionable at best, and their effort to affect real rates in an open economy is – generously -- an exercise in self-gratification.

U.S. Bond Yields - Euroyen Yields



With the growing international yield spreads, changing policy imperatives, and low yields in the Euroyen market, why hasn't this trade been a one-way money machine for anyone wishing to sell it? First, and most important, while incipient policy changes on the part of the Bank of Japan are on the horizon, they have not yet been effected. Second, and more subtly, the forward rate curve, the rates implied between two points in the future along the yield curve, has been rather steep.

For example, the forward rate between 90-day and 180-day Euroyen is calculated as $[(1 + r_{180})^2 / (1 + r_{90})] - 1$. If a yield curve is positively-sloping, it does not make sense to borrow at a longer maturity and lend at a shorter maturity. The steeper the positive slope, the greater the forward rate of interest, and the greater the incentive to sell (borrow) the front month and buy (lend) the nearby month. The ratio of the forward rate to the 90-day Euroyen rate has been increasing quite rapidly during 1996, which implies that the market has already priced in further rate increases. Until these expectations are realized, sizable returns can be made by simply holding onto 180-day Euroyen deposits financed at 90-day rates. As the expiration of these deposits approaches, their yield falls and their price rises. Thus the frustration of shorts in this market: unless interest rates rise by an amount greater than the forward rate, you will lose money. Given the percentage change in rate levels this implies – note the semilog scale of the Declining Interest chart – this is a surprisingly bad bet.

90-Day Forward/Spot Euroyen Ratio

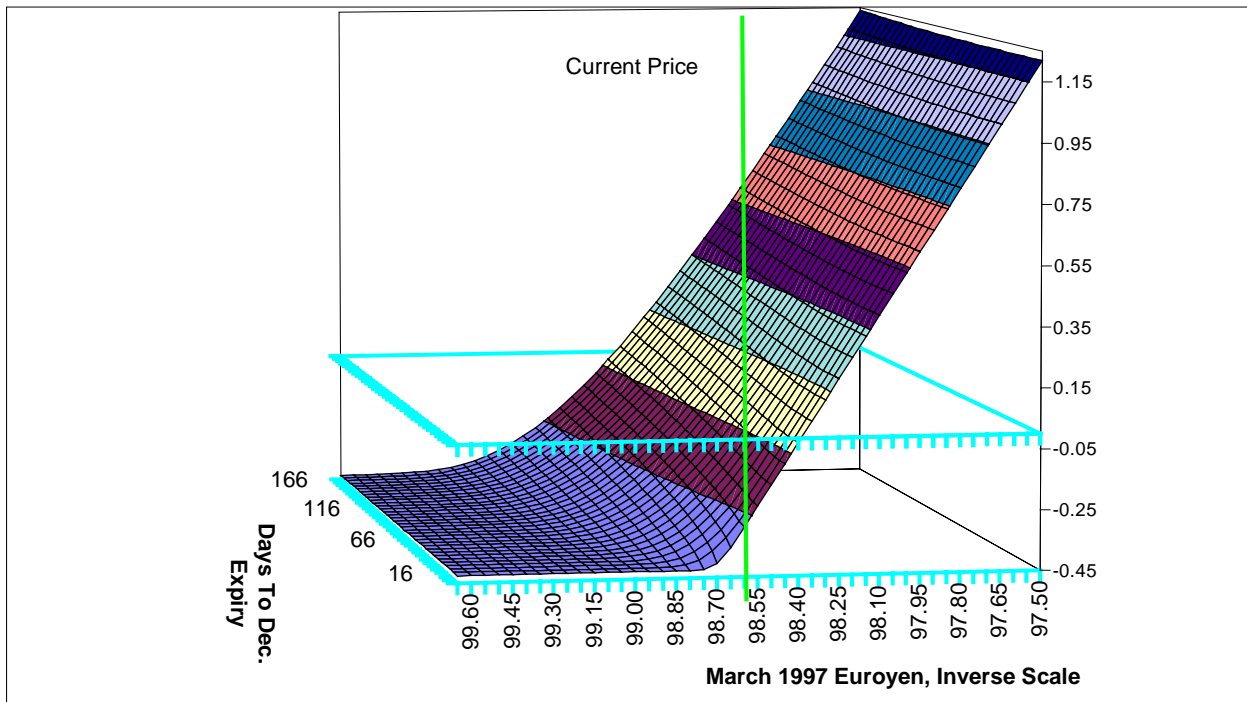


A short position that is protected from this carrying-cost phenomenon is needed. By using the Dynamic Option Selection System, (DOSS, see "Using Options The Spec Way," Futures, July 1994) we can effect the following trade using prices from July 1, 1996, for selling 100 March 1997 Euroyen futures:

Buy 137 December 99.00 calls at .12 with the future at 98.81 and sell 137 March futures at 98.51

A graph of the net financial profit and loss per contract across the dimensions of March price and time remaining to December expiration is shown below.

Net Gain On Calendar Synthetic Put



Since the success of this trade is dependent upon the Dec / Mar spread as well as the yields on the two months, it is important to examine the sensitivity of this trade to the spread at expiration of December options. This is done in the graph below. The "worst-case" scenario is in the region of lower March yields and a negative Dec - Mar spread. This is a near-impossible scenario, since it would imply that the prompt month would be unaffected by a massive rally in the nearby. Yield curves simply do not invert near their natural low limit.

This would suggest that a trade of this structure is applicable in the Euroyen market until such time as the absolute yield level rises well into the single-digit range.

Net Gain On Calendar Synthetic Put

