The rapid growth of the interest-rate futures market has attracted widespread attention in the financial industry. Increasingly, banks, thrift institutions, government securities dealers, and other institutional money managers are utilizing interest-rate futures to hedge against interest-rate risk.

This Economic Commentary examines some of the ways in which financial institutions can use futures markets to minimize interest-rate risk and focuses on some of the problems confronting potential hedgers.

Hedging and Speculating

Participants in futures markets generally can be classified as either hedgers or speculators—at least in theory. Each futures transaction has two sides: one party to the transaction seeks to avoid the risk of future price fluctuation (hedger), while the other party is willing, for a price, to assume the risk (speculator). Although this dichotomy obviously fails to capture all of the distinctions among market participants and their activities, it does provide a useful framework with which to explain the risk-shifting function of the market.

In the simplest economic justification of a futures market is its role as a mechanism for transferring the risk of price fluctuations to persons more tolerant of such risk. Hedging is the assumption of a futures-market position (equal and opposite to an existing or contemplated cash-market position) as a temporary substitute for the intended future sale or purchase of the actual commodity.

Hedgers are willing to forgo the potential profits of a favorable price move in return for protection against the potential losses that would result from an unfavorable price move. By assuming offsetting short bets in the cash and futures markets (that is, long the cash, short the futures, and vice versa), the hedger expects to gain in one market what he loses in the other. In essence, hedging eliminates the effects of a major change in the price of a commodity and substitutes the more manageable risk of a change in the relationship between cash (or spot) and futures prices.

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4. The percentage of contracts on which delivery is taken tends to be somewhat higher with respect to financial futures than nonfinancial futures. In the GNMA futures market, for example, the ratio of deliveries to maximum open interest for a number of futures contracts that have not been offset by opposite futures transactions or by delivery has been roughly 15 percent. For further discussion, see Treasury Futures Markets: A Study by the Staffs of the U.S. Treasury and Federal Reserve System, May 1979.

interest-rate futures market presumes the existence of a viable cash market. Nevertheless, the ability to deliver the cash commodity against a futures contract ensures a close economic relationship between cash and futures prices.

Cash and futures prices tend to converge as the futures contract approaches its delivery date, both because risk decreases and carrying costs—insurance, storage, financing costs—decline. Actually, the price of the cash commodity may be higher than the futures contract during the delivery month, reflecting a premium for the uncertainty as to the actual delivery date. Cash and futures are not perfect substitutes for each other until the last day of the month, which occurs after trading in a particular futures contract has ceased. At that time, the economic factors determining price behavior in the cash commodity and futures contract are virtually identical. If satisfied by delivery, the futures contract becomes a cash transaction.

The key to hedging is understanding the basis—the arithmetic difference between the immediate cash price of a security (or any other commodity) and the price of a specific futures contract. Hedgers focus on the relationship between cash and futures prices rather than on the absolute level of commodity prices. Because changes may occur in the cash-futures basis, some element of risk is transferred into hedging. A nominal basis is created whenever futures prices are less than 3 percent of all transactions initiated in the futures market. The basis is taken tends to be somewhat higher with respect to financial futures than nonfinancial futures. In the GNMA futures market, for example, the ratio of deliveries to maximum open interest for a number of futures contracts that have not been offset by opposite futures transactions or by delivery has been roughly 15 percent. For further discussion, see Treasury Futures Markets: A Study by the Staffs of the U.S. Treasury and Federal Reserve System, May 1979. Additionally, the ability to deliver the cash commodity against a futures contract ensures a close economic relationship between cash and futures prices.

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The proliferation of interest-rate futures contracts has aroused concern among various financial regulators. In particular, the Federal Reserve System and U.S. Department of the Treasury have expressed concern about the impact of futures markets on the government's ability to market its debt.1

Regulators also are concerned about possible misuse of the futures markets by financial institutions, which could threaten the soundness of individual banks.

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1. The formal structure of a futures market contract with the informal structure of a cash market is its role as a mechanism for transferring the risk of price fluctuations to persons more tolerant of such risk. Hedging is the assumption of a futures-market position (equal and opposite to an existing or contemplated cash-market position) as a temporary substitute for the intended future sale or purchase of the actual commodity.

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2. The opposite side to a hedge's futures transaction also could be another hedger who is offsetting his risk or liquidating a hedge. Similarly, a futures transaction could involve two speculators.

3. In a cash market, transactions for purchase or sale of the physical commodity are made under terms agreeable to the parties to the transaction.

In addition to providing a hedging mechanism, the futures markets offer a vehicle for speculation. Speculators assess the probable direction of future price movements and risk their capital to profit from their accurate forecasts. Speculators are assumed to be taking the opposite side of a hedger's contract by accepting the risk of price fluctuation. In addition, they provide the market with the liquidity necessary for hedgers to buy and sell large amounts of a commodity contract with ease. The liquidity provided by speculators tends to reduce overall price volatility. Futures markets also are required to achieve an abundance of speculators to perform their economic function of providing a risk-transfer mechanism.
ECONOMIC COMMENTARY

In this issue:
Interest-Rate Futures

Interest-rate futures have the potential to modify substantially the way in which business is conducted in the capital markets. Although still in their infancy, interest-rate futures have proven to be a valuable tool for money managers seeking to avoid or minimize their exposure to interest-rate risk.

To date, much of the participation in these markets has been speculative in nature. As contracts continue to proliferate, however, commercial interests can be expected to become more frequent users of this instrument.

The views stated herein are those of the author and not necessarily those of the Federal Reserve Bank of Cleveland or of the Board of Governors of the Federal Reserve System.