

## Do hedge funds and commodity funds affect commodity prices?

*The nature and size of hedge funds and commodity funds have changed in recent years, making their influence on commodities markets potentially greater.*

Commodity prices have been extremely volatile in recent years. For example, December 1996 wheat futures prices on the Chicago Board of Trade went from a low of \$3.62 a bushel in early 1996 to a high of \$6.23 a bushel, settling at \$4.00 (*Wall Street Journal*, 13 December 1996). Such volatility is larger than we have seen in recent years, raising the concern that the nature of wheat and other commodity markets has changed. If so, strategies for dealing with price volatility need to be examined—particularly in developing countries, which often depend on commodities for a large source of their export revenue. In 1992 primary commodities (including energy) accounted for 76 percent of merchandise exports from Sub-Saharan Africa and 47 percent of merchandise exports from all low- and middle-income developing countries (World Bank 1994).

Hedge funds and commodity funds are one possible source of increased price volatility. These funds have received considerable attention in recent years, and some analysts have attributed movements in commodity prices to the behavior of these funds. Speculators have always existed in commodity markets, and they have long provided needed liquidity. In recent years, however, the nature and size of this segment of the market have changed, making their influence potentially greater.

Several studies have found that commodity funds and hedge funds influence short-term commodity price trends. Gilbert (1994) concludes that the rise in cocoa prices during 1993–94 was due to fund investment. Robin Adams of Resource Strategies, Inc. credits much of the rise in metals prices in 1994 to fund activity (*The Financial Times*, 31 March 1995). Continuing this line of inquiry, this note examines the recent behavior of hedge and commodity funds and assesses their impact on commodity price movements.

The emergence of hedge funds and commodity funds during the 1980s vastly increased the capitalization available to speculators by pooling investment funds from wealthy individuals and pension funds. Several hedge and commodity funds have assets of more than \$1 billion, and they often borrow money to increase their leverage. Because of their size and trading behavior, these funds are alleged to follow—and perhaps accentuate—price trends. When these funds are directed to a single futures market, as was reportedly the case when George Soros's Quantum hedge fund invested \$10 billion in the currency market in 1992, the impact is large. So far, however, such large investments have been concentrated in financial futures and currencies. Commodity markets are still bit players by comparison.

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**RECENT  
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## What are commodity and hedge funds?

The distinction between commodity funds and hedge funds is important. Commodity funds act through commodity trading advisers and are regulated in the United States under the 1974 Commodities Exchange Act. Commodity funds are like mutual funds except that they hold futures contracts instead of equities or bonds.

The term *commodity fund* comes from the legislation under which these funds are regulated rather than from their investments. In fact, commodity funds have invested more in financial futures than in commodity futures. These funds expanded rapidly during the 1980s as investors sought access to futures markets and to professional management. Commodity funds may be either long or short—a long position means that the fund has bought futures contracts, while a short position means that the fund has sold futures contracts with the hope of repurchasing them at a lower price in the future—and often apply technical trading strategies. U.S. commodity funds manage an estimated \$19 billion (*Barrows*, 30 October 1995).

The term *hedge fund* is not legally defined and is therefore open to interpretation. Hedge funds are limited partnerships that hold or trade a wide variety of assets including equities, bonds, real estate, and futures contracts. They are not restricted to long positions, so they can and often do hold short positions on these investments. These funds may use futures to hedge a position in an underlying asset (say, by selling index futures to hedge an equity portfolio), to increase leverage, or to establish a long or short position.

Commodities traditionally have not been a major investment vehicle for hedge funds, but in 1993–94 hedge funds allocated a small portion of their funds to commodities. Because hedge funds are very large, however, even this small allocation amounted to a sizable influx of money for the commodity markets. Industry sources estimate that hedge funds manage about \$100 billion. Most hedge funds are based in the United States, although an increasing number are located in other countries.

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Hedge funds and  
commodity funds  
can move  
markets . . .

Many institutional investors invest in commodity markets because it increases portfolio diversification. Studies have found that an index of commodity prices is negatively correlated with stock and bond prices. That finding suggests that devoting a small portion of an investment portfolio to commodities lowers the riskiness of a bond or equities portfolio without significantly reducing the portfolio's expected returns. Calculations by Goldman Sachs indicate that the total return on primary commodities is comparable to that on equities (Wadhwani and Shah 1993). Commodity futures contracts are held in the amount of the portfolio (without leverage); funds not required for margin are invested in treasury bills. The total return, then, is the capital gain from holding the futures contracts plus the interest gained on the treasury bills plus the gain (or loss) when the futures contracts are rolled over into the next available contract as each contract expires.

Hedge funds are not required to report their trading activity, so it is difficult to know what effect they have on futures prices. However, all trades on U.S. futures markets must be reported to the Commodity Futures Trading Commission, which reports net positions weekly and distinguishes among large speculators, small speculators, and hedgers. Hedge funds are classified as large speculators. Some commodity funds are also classified as large speculators. Thus it is possible to identify movements in the large speculative net position using hedge fund movements.

## Evidence from coffee and cocoa markets

Two recent examples from the coffee and cocoa futures markets provide evidence of large speculators' activities (Gilbert 1994, 1996). Plotting the net positions of large speculators, small speculators, and hedgers for coffee contracts on the New York Coffee, Sugar, and Cocoa Exchange from October 1992 to March 1995 shows that large speculators took large positions in December 1992 and again in the summer of 1993 (figure 1). These speculators entered 1994 with a slightly negative net position, but their position peaked at

20,000 contracts in April 1994. These positions declined after frosts hit coffee-growing regions in Brazil in June–July 1994, and by the end of 1994 they were back to zero.

The smaller buildup during the spring and summer of 1993 coincided with producer discussions that led to agreement on an export retention scheme in September. These positions were liquidated as coffee prices rose on the confidence generated by the retention scheme. The increase in large speculators' net position in 1994 followed declines in the U.S. bond market in February. As prices rose, speculators took profits on their positions, and by the June–July frosts their net positions were halved.

Looking at the same period for the cocoa market shows that large speculators' position increased in July 1993, declined, and then built up again in February 1994 (figure 2). Investment in cocoa totaled about 30,000 contracts (\$300 million).

The increase in large speculators' net position in both coffee and cocoa was almost entirely at the expense of hedgers, with the position of small speculators roughly constant over time. It follows, then, that any changes in price levels or volatility during this period were due to the activity of large speculators. Large speculators cannot move in and out of the market quickly, and they tend to take longer-term positions based on market fundamentals. Small speculators are more likely to apply technical or trend-following methods, which casts doubt on the influence of these techniques on commodity

prices. In practice, the large number of different trading systems probably cancel each other out with offsetting positions.

An examination of figures 1 and 2 helps explain the mechanism by which speculators affect commodity prices. As large speculators build up a long position, they bid up futures prices. A long futures position by one group must be offset by a net short position by another group. In the case of coffee and cocoa, it was the hedgers who obliged. The same situation is likely to occur in other commodities. The increased net short hedging position requires either that producers sell more of their output forward or that consumers purchase less of their requirements forward. In coffee and cocoa the second effect dominated, so that large speculators established their long positions at the expense of coffee roasters and cocoa grinders. By bidding up futures prices, large speculators encouraged consumers to shorten their cover. But these higher futures prices translated into higher cash markets.

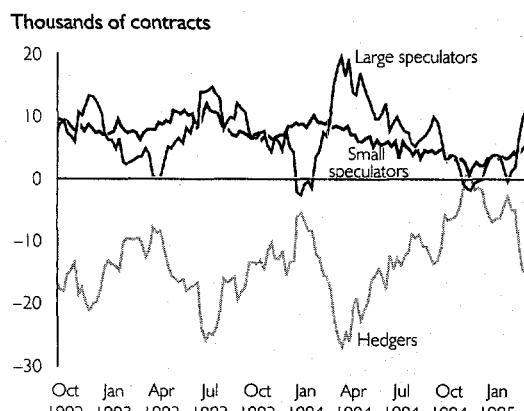
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... but their size  
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## The impact on prices is probably slight

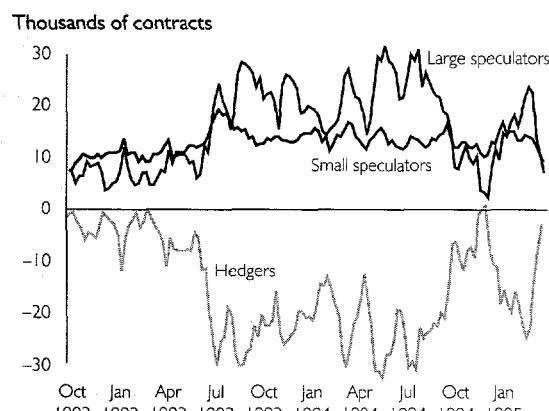
Hedge funds and commodity funds have increased in size over the past decade, and they can move markets. But their size requires them to take positions that are consistent with market fundamentals. They are unlikely to profit from positions that are technically motivated or that

**Figure 1. Net coffee position on the New York Coffee, Sugar, and Cocoa Exchange, October 1992–March 1995**



Source: Gilbert 1995.

**Figure 2. Net cocoa position on the New York Coffee, Sugar, and Cocoa Exchange, October 1992–March 1995**



Source: Gilbert 1995.

run counter to trend—precisely because of their size—but they will profit if they correctly anticipate price movements induced by fundamentals (as they did in coffee but not in cocoa). It appears, though, that these funds may enhance the price discovery process and accelerate price movements. They are accommodated by traditional hedgers who take offsetting positions.

Although it may be premature to conclude that hedge funds and commodity funds have not affected commodity prices, their impact probably has been less than is commonly believed.

—Donald O. Mitchell  
and Christopher L. Gilbert

## Further reading

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This *DECnote* was prepared by Donald O. Mitchell and Christopher L. Gilbert (consultant) in the International Economics Department of the World Bank. *DECnotes* transmit key research findings to Bank Group managers and staff. They are drawn from the work of individual Bank researchers and do not necessarily represent the views of the World Bank and its member countries—and therefore should not be attributed to the World Bank or its affiliates. *DECnotes* are produced by the Research Advisory Staff. We welcome your questions and comments; please e-mail them to the authors or to Evelyn Alfaro, RAD.