# Refine your talents at demystifying derivatives

MORE THAN MONEY

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*First of two parts.*

If you are nervous and baffled by all this talk about financial derivatives, there is a good reason for this. Until recently, without much fanfare, derivatives were quietly used by federal government agencies, banks commanding stellar reputation, and scores of highly rated mutual funds. However, all that is changed now. Today, most investors feel that derivatives are a time bomb, waiting for the right set of circumstances to explode and take the financial system with them.

## The recent explosion

As is the case with any financial instrument, in the initial stages, derivatives were used to minimize risk. However, as profits of derivatives users rose, so did their desire to invent and press into action more exotic instruments carrying high degrees of risk. The results were devastating. Here are a couple of incidents to illustrate that point.

The potential probelms with mutual funds using derivatives were brought to the forefront with a closed-end bond fund's experience in 1993. The shares were presented as AAA credit-rating investments. However, the fund's management had taken an aggressive derivatives position in the hope that interest rates would go up. Unfortunately, the rates dropped and the fund's NAV dropped 15 percent.

In February 1994, a U.S. Army welfare and recreation fund invested $15 million in a two-year, AAA-rated, U.S. government agency note yielding 4.75 percent. But in just three months, the note's yield was reset to zero percent under a complex formula and the Army fund took a 7.9 percent paper loss on the note.

## Instrument of risk reduction

Let's suppose John Jones, a bond mutual fund manager, is convinced that the Federal Reserve is about to raise interest rates. However, John cannot be absolutely sure that interest rates will rise, and is, therefore, reluctant to dump the fixed-income securities for his portfolio. Consequently, John settles for another option. He enters into an agreement with the Chicago Board of Trade to sell five-year Treasury *futures contracts.* A futures contract is simply an agreement to buy or sell a security at a set price at some specified date. By agreeing to sell, John is counting on the price of the underlying bonds to decrease. In the process, John has made a quick and relatively inexpensive portfolio adjustment without sacrificing liquidity. If interest rates rise, as John expects, the futures contracts will help offset the losses by the bonds in his portfolio. But if he is wrong and interest rates decline, the bonds will increase in value only to be somewhat offset by the losses from his deal in the futures contract. Incidentally, futures contracts are one of several instruments that fall under the category of derivatives.

A much more common form of *derivatives is the option, which is* also a means of reducing risk. An option gives its buyer the right, but not the obligation, to buy or sell a specified underlying item at some agreed-upon price known as the exercise, or strike price. Assume an investor wants to buy 100 shares of IBM because she believes that IBM stock is poised for a dramatic price increase in the near future. But if she is wrong, she stands to lose a huge sum of money in the process. As an alternative, therefore, she buys a six-month call option to buy 100 shares of IBM at a predetermined price. If the stock price does go up within the next six months, as she expects, she will exercise, or sell, the option and realize a capital gain. If she is wrong, however, she will let the option expire and only lose the premium she paid for the option.

## *Concept of derivatives*

Derivatives are financial instruments that "derive" their value from underlying assets, such as stocks, bonds, mortgages, index funds or foreign currencies. Because a derivative's price is linked to any underlying asset, the derivative's price changes when the price of the underlying asset changes, though not always proportionately, or in the same direction. In fact, frequently changes in the value of the underlying asset are magnified in the price of the derivatives.

To recapitulate, "derivative" is a broad term that covers a wide range of financial instruments. Their common element is that their value is derived from another security, and their general purpose is to transfer risk. One can transfer risk away by hedging, or increase it through speculating. Put differently, by using derivatives an investor can transfer risk away from the portfolio, or transfer risk to the portfolio in the hope of realizing substantial gains through speculation.

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