

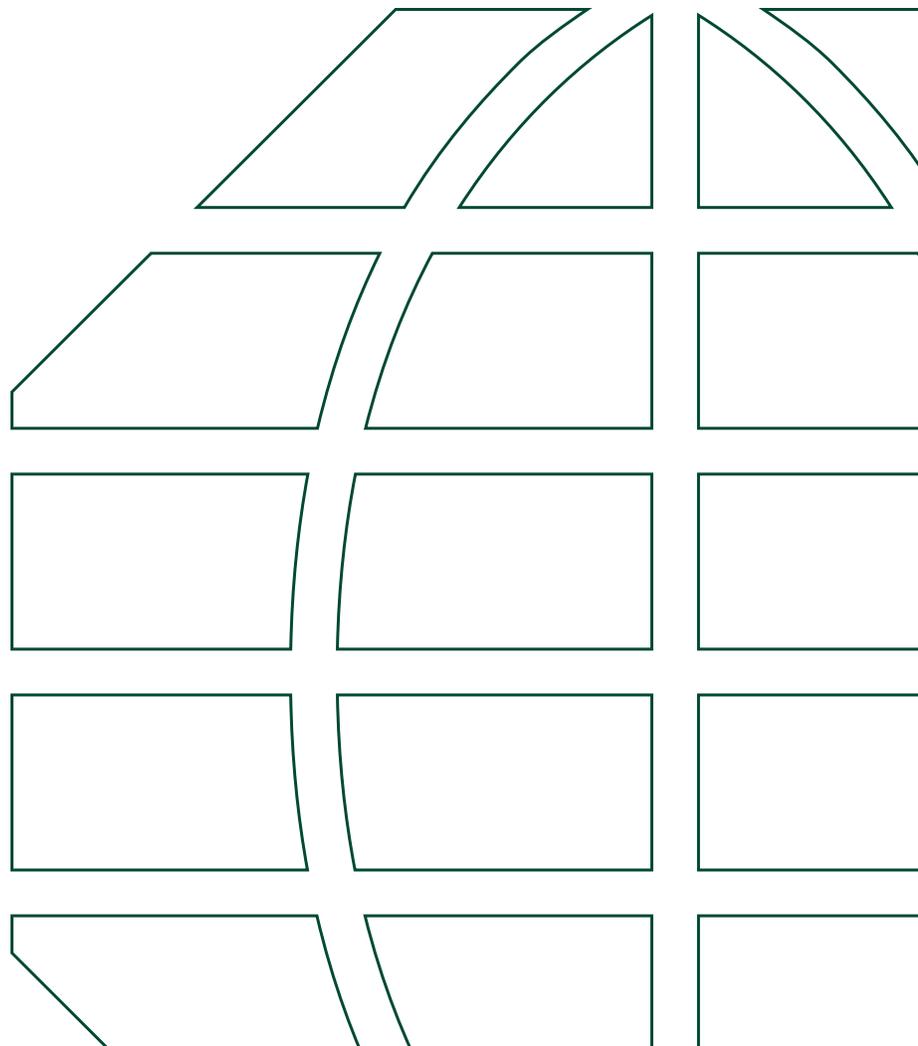
RESEARCH AND PRODUCT DEVELOPMENT

Why Managed Futures?

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To contact CME Group with questions
or comments about Managed Futures

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THE BEST RISK MANAGEMENT STARTS WITH SECURITY

In today's market environment, effective risk management requires an ever-greater emphasis on limiting counterparty credit risk. At CME Group, we believe our financial safeguards system, designed for the benefit and protection of all participants in our markets, is second to none.

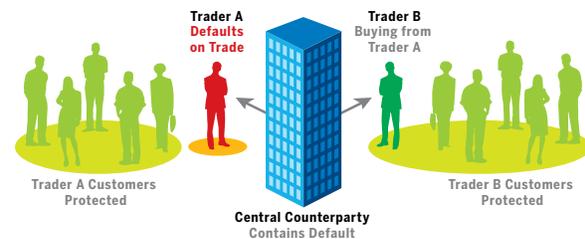
CME Group's benchmark futures and options contracts, backed by our centralized counterparty clearing model and comprehensive set of risk management services, offer powerful solutions for navigating confidently through an uncertain world.

- Central counterparty guarantee of CME Clearing that ensures the financial integrity of every trade
- Segregation of customer funds and a \$7 billion financial safeguards system
- Twice daily mark-to-market and a zero debt system
- 24-hour monitoring by an experienced risk-management team

Whether you are executing strategies in individual products, or implementing managed futures programs, CME Group provides you with the security, transparency and confidence you need to operate, invest and grow.

How Clearing Models Manage Risk

With a central counterparty model, the clearing house is the buyer to every seller and the seller to every buyer. So, if Trader A defaults, the default is contained between Trader A and the clearing house, protecting everyone in the green circles below.



The over-the-counter market's bilateral model works differently. If Trader A defaults, neither Trader A, Trader B, nor the others they transact business with are protected from the default, leaving everyone in the orange circles at risk.



For more information about CME Clearing visit www.cmegroup.com/company/risk.

Futures have become increasingly popular as risk management and speculative trading tools. But they are not necessarily for amateurs. Some investors have turned to the managed futures industry for trading services offered by skilled professionals.

THE MANAGED FUTURES INDUSTRY

The futures markets trace their origins back hundreds of years and are generally rooted in agricultural and other physical or tangible commodity markets including grains, livestock, precious metals and energy products. The late 1970s and early 1980s witnessed dramatic developments, however, as the concept of futures was extended to financial markets including equities, fixed income securities, currencies and other exotic derivative items. The futures industry expanded rapidly as institutions, both in the United States and abroad, embraced the power and utility of the futures markets.

Futures may be used to manage the risk of volatile investments and to capitalize on speculative opportunities associated with that volatility. But the fast-paced and increasingly sophisticated nature of futures markets renders it difficult for all but the most adept institutional and retail investors to take full advantage of these markets.

As a result, many prospective investors have turned to managed futures as a means by which to harness the best professional trading talent in the pursuit of profitable futures trading opportunities. The managed futures industry flourished in the 1980s through the current day as a logical outlet for such speculative demand. It is our intent to describe that growth and the substantial reasons driving that growth.

Investors have accessed managed futures for almost 60 years. The first managed futures account is attributed to the noted technician Dick Donchian dating back to 1948. Much of the early interest came from retail investors who would open up separately managed accounts with particular professional commodity traders, commonly referred to as Commodity Trading Advisors (CTAs).

In more recent years, however, institutional investors such as corporate and public pension funds, endowments, trusts, and even banks have driven the expansion of the managed futures industry, recognizing that managed futures represent an important component of a well-diversified portfolio.

In recent years, institutional investors such as corporate and public pension funds, endowments, trusts, and even banks, have driven the expansion of the managed futures industry.

Commodity Pools – While one may still access CTAs by opening separately managed accounts, it has become more commonplace to participate in a fund or limited partnership designed to facilitate speculative futures investments and managed by single or multiple CTAs under the direction of a Commodity Pool Operator (CPO).

Today, there are a wide variety of active Commodity Trading Advisors (CTAs) managing funds using many diverse trading styles.

Managed futures funds, commodity funds or commodity pools (these various terms are synonymous) aggregate the monies of multiple investors for the purpose of speculating in futures and options markets.

These funds or pools are organized and managed by CPOs. CTAs may be employed by the CPO to direct the day-to-day trading of the fund or a portion thereof. This leaves the CPO free to concentrate on other significant activities including fund raising, accounting, evaluation and on-going monitoring of CTA performance – relying upon the professionalism and experience of CTAs devoted to trading activities.

One may invest in a diversified commodity fund or pool that employs the services of multiple CTAs. These pools may be operated by registered Commodity Pool Operators (CPOs).

A CTA may be thought of as performing the same function as a stock manager or mutual fund manager. The investor effectively employs, or assigns power of attorney over his funds to the CTA to manage his investment on a discretionary basis. CTAs typically utilize the global futures markets as their primary investment or trading vehicles in the pursuit of profitable opportunities.

Managed futures investments may also be referred to as commodity funds, futures funds or commodity pools. The terms “CTA,” “CPO” and “commodity pool” originate with the United States Commodity Futures Trading Commission (CFTC) – and may generally be applied to describe these specialized endeavors. However, other regulatory jurisdictions may apply somewhat different nomenclature to describe these activities.

Perhaps the most articulate argument in favor of a managed futures investment was put forward by Harvard Professor John Lintner who found that managed futures “reduces volatility while enhancing return.”

Growth of Industry – Concomitant with the growth of the futures industry in general, investment in managed futures has skyrocketed since the early 1980s. Managed Accounts Reports (MAR) is a publication that covers the industry and estimates that investment in managed futures grew from less than \$310 million in 1980 to an estimated \$234.1 billion as of the 2nd quarter 2008.¹

The trading activity of CTAs is often guided by technical trading systems. These systems are based on historical price patterns, and may include moving average, price channel, and momentum systems.

Generally speaking, these systems may be thought of as trend following in nature – the ability to detect reversals in market momentum, i.e., to successfully apply contrarian systems, being rather rare and extraordinary.

WHY MANAGED FUTURES MAY BE A GOOD INVESTMENT

The argument in favor of managed futures as an investment vehicle was perhaps best and most succinctly stated by Professor John E. Lintner of Harvard who found that inclusion of futures in an investment portfolio “reduces volatility while enhancing return.” Further, that such portfolios “have substantially less risk at every possible level of return than portfolios of stocks, or stocks and bonds.”

Potential for Enhanced Portfolio Returns – Professor Franklin Edwards of Columbia investigated the performance of managed futures in order to assess their utility as an asset class. His conclusion was that managed futures “make both attractive stand-alone investments and portfolio assets.”

In order to test that proposition, we examined the returns associated with investments in stocks, bonds and commodities during the 20+ year period from January 1987 through August 2008. Specifically, we used the following indexes as measures of returns in the U.S. equity, fixed income and managed futures markets, respectively.

The managed futures industry has grown from virtually nothing in the late 1970s to a \$234.1 billion industry today.

- The Standard & Poor’s 500 is widely recognized as the leading benchmark for measurement of domestic equity investments. We utilize a version of the S&P 500 that is inclusive of both price fluctuations and accrued dividends as a proxy for equity returns.
- The Lehman Brothers U.S. Aggregate Bond Index represents a composite index aggregating the total returns associated with U.S. Treasuries, agency obligations, corporate bonds and notes, mortgage instruments and other investment grade U.S. dollar-denominated fixed income securities. The Lehman Index represents the leading benchmark by which to measure the returns associated with domestic fixed income investments.
- We reference the Barclay CTA Index as a leading industry benchmark of representative performance of commodity trading advisors. There are currently 491 programs included in the calculation of the Barclay CTA Index for the year 2008, which is unweighted and rebalanced at the beginning of each year. To qualify for inclusion in the CTA Index, an advisor must have four years of prior performance history. Additional programs introduced by qualified advisors are not added to the Index until after their second year. These restrictions, which offset the high turnover rates of trading advisors as well as their artificially high short-term performance records, ensure the accuracy and reliability of the Barclay CTA Index.

Monthly Return Summary (January 1987 – August 2008)

	Managed Futures	Bonds	Stocks
Average	0.76%	0.59%	0.93%
Standard Deviation	3.52%	1.15%	4.25%
Maximum Return	27.40%	3.87%	13.47%
Minimum Return	-8.23%	-3.36%	-21.54%

We decided to test Lintner's proposition by comparing returns in stocks (measured by the S&P 500), bonds (measured by the Lehman Bond Index) and managed futures (measured by the Barclay CTA Index).

The table above summarizes the monthly returns associated with these three investments over a 20+ year period from January 1987 – August 2008. As we can see, the average monthly return associated with the Barclay CTA Index was 0.76 percent which is superior to the 0.59 percent associated with a bond investment albeit not as attractive as the 0.93 percent associated with stock returns. As might be expected, however, the volatility of managed futures investments — as represented by the standard deviation of monthly returns — likewise exceeds the volatility associated with a bond investment but is somewhat less than the standard deviation of stock returns.

Over the 20+ year period from January 1987 – August 2008, stocks turned in the best return but exhibited the most volatility. Bonds turned in the least returns but with the lowest volatility.

Managed futures exhibited returns and volatility between that of stocks and bonds.

Managed futures may generate returns in any kind of economic environment — bull or bear.

Profit in any Economic Environment – CTAs have the capacity to go long or short on any particular commodity traded in the form of a futures contract. As such, CTAs may profit in either a bullish or bearish economic environment. During periods of high inflation, for example, hard or tangible or physical commodities including items such as gold, silver, crude oil may rally significantly. During periods of deflation or recession, one may very well take short positions in the same markets to profit from anticipated price declines. Finally, it is very possible to utilize options on these and other commodities to seek profit opportunities in flat or non-trending markets.

Reduced Portfolio Volatility – A key benefit of utilizing a managed futures investment as a component of a well-diversified portfolio is found in the form of reduced portfolio volatility. This phenomenon is attributable to the fact that managed futures tend to carry a very low or slightly negative correlation with traditional stock and bond investments.

Note that the monthly returns of the Barclay CTA Index were essentially not correlated at all with returns associated with the S&P 500 during the period January 1987 – August 2008 as shown below. The Barclay CTA Index displayed slight and insignificantly positive correlation with the Lehman U.S. Aggregate Bond Index during the same period.

Correlation Matrix of Monthly Returns (January 1987 – August 2008)			
	Managed Futures	Bonds	Stocks
Managed Futures	-		
Bonds	0.1277	-	
Stocks	0.0183	0.1126	-

Of great interest may be the fact that managed futures investments have historically been uncorrelated with returns in stock and bond markets.

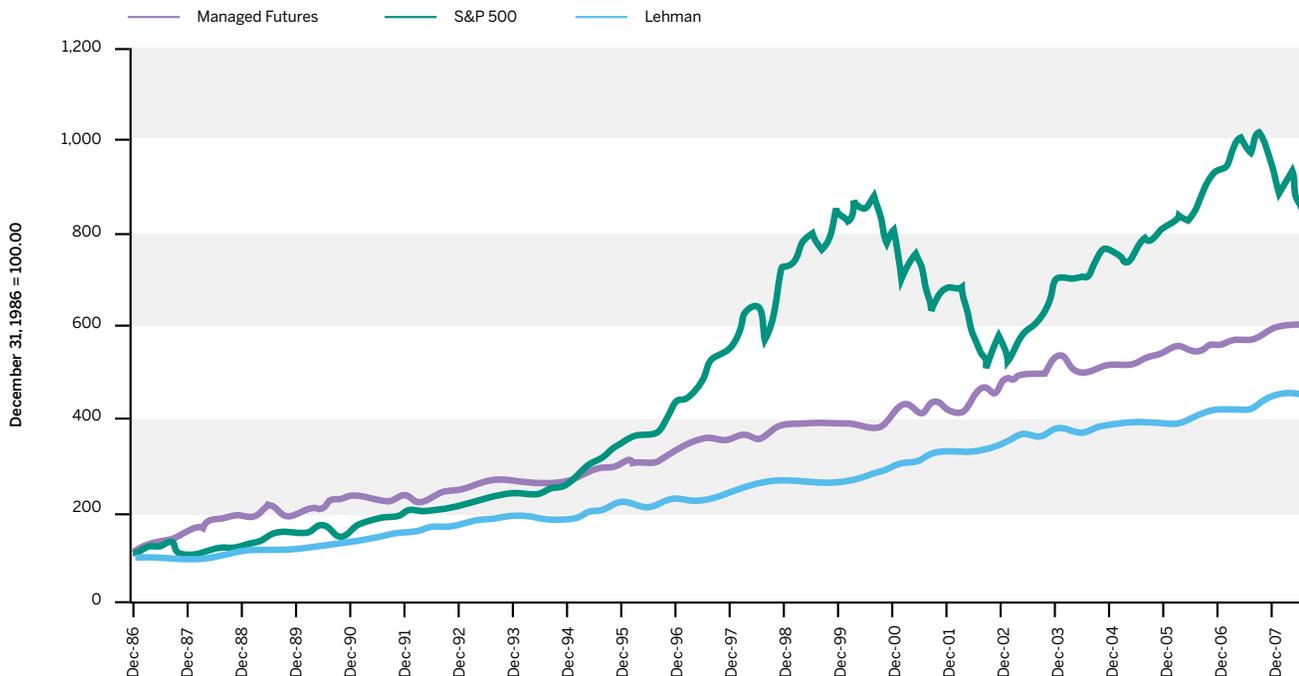
Managed futures may be a key component in a diversified portfolio in an attempt to balance risks and returns.

We simulated the returns associated with portfolios comprised of equal parts stocks and bonds and, equal parts of stocks, bonds and managed futures. While returns in the latter portfolio were slightly less than that of the former, the large decline in portfolio volatility seemed to offset the slight decline in returns.

The central premise of Modern Portfolio Theory, as articulated by the Nobel Prize winning economist Dr. Harry M. Markowitz, is that efficient investment portfolios may be created through the process of diversification amongst asset classes with low or negative correlations. In order to test that proposition, we created pro-forma portfolios comprised of equal initial investments in stocks and bonds. Or, of equal initial investments in stocks, bonds and managed futures. Note that the inclusion of managed futures in the portfolio has the effect of increasing the average monthly return while diminishing the volatility of monthly returns as measured by standard deviation.

It is noteworthy that while managed futures investments did not quite keep pace with equity investments over the past 20 years — a period of unusually dramatic advances in stock prices — they did of course exhibit correspondingly less volatility.

Managed Futures, Bonds and Stock Performance



Monthly Return Summary (January 1987 – August 2008)

	Managed Futures	Bonds	Stocks	Stock and Bonds	Stocks, Bonds and Managed Futures
Average	0.76%	0.59%	0.93%	0.77%	0.74%
Standard Deviation	3.52%	1.15%	4.25%	2.77%	2.28%
Maximum Return	27.40%	3.87%	13.47%	7.65%	13.51%
Minimum Return	-8.23%	-3.36%	-21.54%	-11.07%	-6.83%

Of greater import may be the fact that managed futures were essentially not correlated with stocks. In particular, note that the dramatic decline in equities in the very early 2000s, as the high-tech bubble burst, was accompanied by a nice advance in the value of managed futures investments. Thus, a prudent investor who included managed futures as a component of his investment portfolio would have been at least partially insulated from the bearish stock market in the early 2000s.

Lintner reinforces these notions "... combined portfolios of stocks (or stocks and bonds) after including judicious investments ... in leveraged managed futures accounts show substantially less risk at every possible level of expected return than portfolios of stocks (or stocks and bonds) alone."

Global Diversification – Globalization is a term that applies readily to today's futures markets. International futures exchanges invite diversification on the part of CTAs amongst a wide variety of products and currencies. A typical managed futures portfolio may hold positions in upwards to 50 different markets worldwide, covering stock indexes, interest rates, currencies, agricultural products, energy products, precious and base metals, and others. Thus, CTAs have much opportunity to partake of the risk reducing benefits and profit potential associated with diversification as a stand-alone investment.

Managed futures allow one readily to gain exposure to global markets, further diversifying one's investment portfolio.

Fund of Funds – It is not uncommon for a commodity pool or fund to be structured in such a way as to utilize the services of multiple CTAs. As such, the CPO may seek to include CTAs who represent a variety of trading styles or who specialize in particular markets.

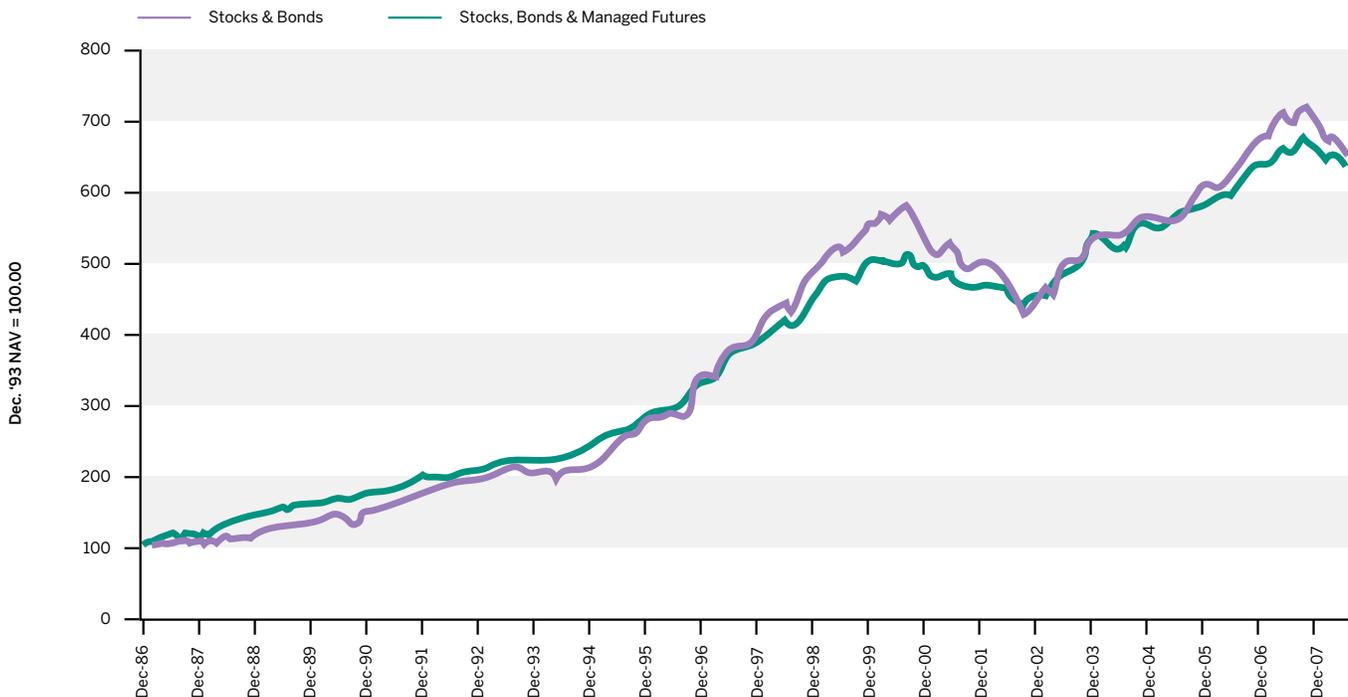
While trend-following is a common theme amongst CTAs, it would behoove the CPO to retain the services of CTAs who utilize both long and shorter-term trend following techniques. It might likewise be wise to retain the services of CTAs who may specialize in agricultural, equity or interest rate markets; often these market specialists utilize fundamental analysis of the commodity in question to augment technical trading methodologies. In other words, many commodity pools are structured as “fund of funds” in order to provide further diversification to its clientele.

Further diversification may be achieved by investing in a “fund of fund” structure.

Guaranteed Fund Structures – Over the years, the managed futures industry has been characterized by the increasing acceptance of guaranteed fund structures. A guaranteed fund is one that assures the investor that, under the worst of possible circumstances, he is guaranteed the return of the original principal investment.

This guarantee may be provided by a number of mechanisms, the simplest of which is a fund that contemplates the initial purchase of a zero-coupon security. Let us assume that a zero-coupon security that matures five years hence may be available at a price of 78 percent of par which implies a yield in the vicinity of 5 percent. Thus, you (1) buy that five-year zero coupon security at 78 percent of par; and, (2) use the residual 22 percent to fund managed futures accounts. This guarantees, at a minimum, the return of the original principal investment plus the value of the managed futures investment in five years. As long as the CPO monitors trading activity and stands ready to terminate trade if the managed futures assets fall significantly, the return of the original investment is assured, creating a guaranteed fund structure.

Portfolio Performance



Possible Guarantee Structures				
	Initial Guarantee Pool	Guarantee Pool In 5 Yrs	Futures Pool ('Residual')	"Down and Out" Level
Fully Funded	78%	100%	22%	0%
Partially Funded	70%	89.3%	30%	10.7%
Partially Funded	60%	76.6%	40%	23.4%
Partially Funded	50%	63.8%	50%	36.2%

Other fund structures are commonplace that may contemplate the use of a bit more residual for the purposes of managed futures trading. Assume one uses 70 percent or 60 percent or 50 percent of the original investment to buy those zeros. This increases the residual available for investment in managed futures. But it may compromise the guarantee. If, for example, the managed futures investment declines to zero (an unlikely probability), the under-funded guarantee portion will advance to a level which falls short of 100 percent of par. This leaves the investor with something less than the original principal at the conclusion of N years. But if the CPO applies a "down and out" provision to cease the managed futures trading activity in the event of a decline to a prespecified level, one may preserve the guarantee.

Instead of utilizing a zero-coupon security, it is also possible to use other guarantee structures. A bank letter of credit (LC) guarantee is a very common possibility. Several highly rated banks have been active in this market for some years. Finally, it is also possible to guarantee the return of capital denominated in most major currencies including the U.S. dollar, the Euro or the Japanese yen. This can be accomplished through a currency swap transaction or more simply by holding the guarantee and trading pools denominated in the currency of choice. To the extent the commodity pool may be doing business in several currencies, some degree of currency managed expertise is required of the CPO.

The managed futures industry has been creative in developing fund structures that may guarantee the return of principal after a specified period of time.

For more information on Managed Futures visit www.cmegroup.com.

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1. Estimate by The BarclayHedge, see Web site at www.barclayhedge.com.



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