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Managed Futures

Managed futures have a long and proven record of performance that is rooted in capturing persistent risk premiums of various markets that manifest themselves in price trends.

What are Managed Futures?

The phrase Managed Futures refers to an industry of professional money managers generally known as Commodity Trading Advisors (CTAs). In the United States, CTAs are required, under the Commodity Exchange Act, to register with the Commodity Futures Trading Commission (CFTC). In Canada, the equivalent designation under the Commodity Futures Act (Ontario) is Commodity Trading Manager (CTM).

Managed futures provide direct exposure to globally traded futures contracts on physical commodities such as grains, livestock, metals, energies and soft commodities (coffee, cotton, sugar, cocoa), and financial assets such as equity market indices, government bonds and currencies.

Through their ability to take both long and short positions on such a vast array of commodities, CTAs offer a means to gain exposure to risk and return patterns not easily obtained with both long-only and hedge fund strategies that are limited to traditional financial assets. In addition, often the same economic and market shocks that negatively impact traditional assets create opportunities in commodity markets, as evidenced by the long history of out-performance by managed futures during periods of stress for equity markets. Managed Futures thus offer the potential for true portfolio diversification.

What are the Nuts and Bolts of Managed Futures?

To truly understand managed futures, it is necessary to understand the economic rationale of futures markets and identify the sources of return to the various asset classes traded by CTAs, namely futures on physical commodities, currencies, fixed income instruments and equity indices.

The futures market initially evolved as a risk-transference market in which commercial hedgers of physical commodities sought to reduce their exposure to price volatility and were willing to pay a premium for offsetting price risk. Standardized exchange-traded futures contracts were created to allow for this risk-transference between hedgers and speculators. Futures contracts are agreements to buy or sell a fixed quantity of a commodity at a predetermined future date and at a predetermined price. As they are future obligations to either buy or sell as opposed to the actual purchase and sale of the underlying commodity, transacting in futures contracts does not involve fully funding the cash value of the contract.



Transacting in futures contracts entails the posting of initial and maintenance margin requirements that serve as ‘good faith’ deposits evidencing the ability of the parties to a trade to fulfill their future obligation. Until the mid 1970s, futures contracts were primarily based on agricultural commodities and, until the mid 80s, still mostly based on physical commodities. Today, the majority of trading volume is in financial futures, though volumes on physical commodity futures have also accelerated recently with the growing interest in physical commodities as an asset class.

In the case of futures contracts on physical commodities, while the underlying spot commodity price is a component of the futures price there are other quantifiable components of the futures price such as cost of capital, cost of storage and transportation cost. These quantifiable components are known as the real basis, or the theoretical difference that should exist between futures prices and the spot price of a commodity. In reality though, the actual basis is rarely equal to the real Basis. The difference between actual and real Basis can be positive or negative, and often negative to the extent that futures prices trade below spot prices. The difference between actual and real Basis reflect risk premiums for holding or not holding physical inventory of a commodity. It is the Basis as opposed to spot commodity price movements that is the source of long-term returns to futures on physical commodities. Spot

commodity prices, though prone to periodic shocks, are generally mean-reverting over time in that the average annual excess return of a buy and hold portfolio of spot commodities over the risk free rate of investment has been close to zero (see Gorton and Rouwenhorst, “Facts and Fantasies about Commodity Futures”, February 2005).

As depicted below in *Chart 1*, when Basis is positive, futures prices are above spot prices and deferred futures prices are above near futures prices. This term structure of prices is referred to as a contangoed market or a market that has negative roll yield (with no change in spot price, futures prices will gradually fall to the spot price as the futures contract nears maturity). Conversely, when Basis is negative, spot prices are above near term future prices which are above deferred futures prices. This term structure is referred to as a backwardated market or a market that has positive roll yield.

For most commodities there exist well developed production and storage facilities, and the normal term structure of prices is one of contango. These markets typically only move into backwardation when there is a supply shock or expectations of tight supply. In these situations, there is said to be a convenience yield associated with having physical possession of a commodity that is in tight

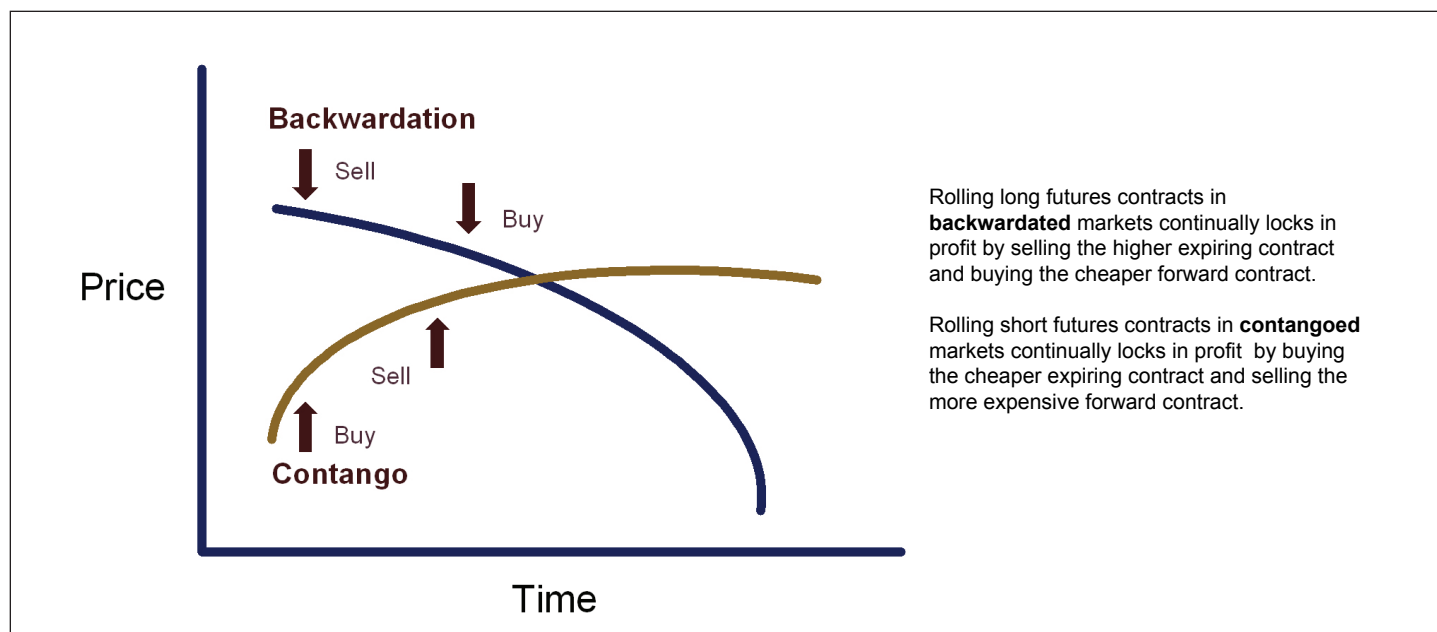


Chart 1: Capturing Roll Yield



supply. A few markets that are either non-storable or difficult to store are in structural backwardation. Physical commodities, especially agricultural and soft commodities, will also often move into backwardation seasonally.

In the case of futures on currencies, according to an equilibrium condition of international financial markets called “covered interest parity” futures prices are based on interest rate differentials between the underlying currencies referenced in the exchange rate. This implies that currencies with a low interest rate are typically at a forward premium to currencies with a higher interest rate, and higher yielding currencies are at forward discount to lower yielding currencies. In other words, futures prices of lower yielding currencies are typically higher than their spot prices and vice-versa. Interest rate differentials can thus be viewed as the risk premium required for investors to hold a given currency relative to another currency.

This pricing structure of exchange rates sets up what is known as the carry trade. Carry trades typically involve the borrowing of lower yielding currencies to invest in higher yielding currencies, or the purchase and rolling of futures contracts on higher yielding currencies. As with futures on physical commodities, investors earn the carry but also bear the risk of potential adverse movements in the exchange rate.

The concept of carry then is the single largest explanatory variable for returns in currency futures (and currency) investing, just as basis or roll yield is the largest determinant of returns from investing in futures on physical commodities. Another common feature of futures on both physical commodities and currencies is that Basis and Carry can be both positive and negative, thereby generating both long and short opportunities to investors. In contrast, futures on equity and fixed income markets tend to generally have a long bias.

Futures prices on fixed income instruments are generally in structural backwardation when the yield curve is upward sloping and, therefore, have positive carry or a long bias. Yield differences of various fixed income investments represent the risk premium required for investors to lend capital to underlying issuers and for given periods of time.

Although the structural backwardation in fixed income futures creates more opportunities on the long side, bond futures will periodically trade in contango when the yield curve is inverted and the short-term cost of capital is greater than the yield on long-term bonds. In these situations, interest rates are generally rising, bond prices are falling, and the concept of carry (in this case, yield differential between maturities) further favors short positions in bond futures. Thus, although there is a long bias in bond futures, short opportunities do occur when rates are rising and yield curves are inverted.

Although equity index futures are generally contangoed due to the fact that dividend yields are generally lower than short term interest rates, the underlying equity indices have a long term positive expected return due to the expectation of earnings growth over time and the assumption of an equity risk premium required by investors to hold equities over fixed income investments. As such, the vast majority of managed futures opportunities on equities tend to be from long positions, as they are with investing in equities generally. Short opportunities in equity markets, whether traditionally or through futures, are less frequent but, when they occur, they also can be tied to shifting risk premiums due to, for example, higher interest rates or lower actual or expected corporate earnings.

The common theme of all the asset classes underlying managed futures, from physical commodities to currencies, fixed income instruments and equities, is that risk premiums are priced into all asset classes; Basis is priced into futures on physical commodities and represent risk premiums for holding or not holding inventory. Carry is priced into currency futures and represents the yield differential or risk premium required to hold one currency relative to another. Fixed income instruments carry positive yields representing the premium required by investors to lend at different maturities, and equities are similarly priced based on an expected equity risk premium over fixed income investments and assumptions about earnings growth.



The source of returns from managed futures thus lies in capturing persistent risk premiums of various assets and the shifts in risk premiums that occur over time. New market information, changes in the macro-economic environment, shifting supply/demand relationships and even changes in investor sentiment tend to cause periodic but significant shifts in required risk premiums over time.

From a statistical point of view, there is overwhelming academic evidence that the existence of and changes in risk premiums results in serial correlation or persistent price trends in time series of futures prices. In simpler terms, without a change in spot prices, futures prices trend towards the spot prices as futures contracts move closer to their settlement date. The objective of managed futures strategies is to isolate and capture the serial correlation that exists in this market data from the shorter-term market noise, in order to capture risk premiums and shifts in risk premiums priced in the futures market.

Different Approaches to Managed Futures

The source of return from managed futures lies in the economic concept of risk premium, a concept that creates the existence of serial correlation in futures market data. And although not the only managed futures strategies, the ones that are predominantly used by CTAs to extract this return are systematic strategies that utilize historical price data and other quantifiable data in order to identify persistent and changing risk premiums or serial correlations in market data.

These so called "trend-following" strategies by definition seek to identify and segregate the underlying trend in futures prices that are caused by the existence of risk premiums from the noise associated with shorter-term spot commodity price fluctuations. In addition to the significant academic evidence supporting these strategies, the efficacy of trend-following is evidenced by the over twenty-five year track record of managed futures returns.

In addition to trend-following strategies, within the category of systematic there are a number of other complementary sub-strategies that seek to capture other persistent anomalies evident in futures price data, including mean-reversion and volatility strategies. Common elements of most systematic strategies include extensive use of statistical analysis to evaluate market data and

design trading systems, and a heavy reliance on computers to both perform this market research and to automate the trading process to ensure a systematic and disciplined approach to investing that is unaffected by human emotion and judgmental biases.

In contrast to systematic approaches are strategies that are based on discretionary decision-making rules. Discretionary strategies generally rely on the experience and judgment of specific individuals as opposed to systematic rules derived from statistical analysis. Some of the advantages of discretionary strategies include the ability to exploit very short-term market anomalies and the ability to make decisions based on less quantifiable data. The primary disadvantages though include key man reliance, the inability to trade a large number of markets and timeframes and the influence of human subjectivity.

In addition to the approach to decision-making, there are a number of other categories listed below that lead to a wide variation of possible approaches to managed futures:

- **Timeframe:** short-term, long-term, multiple time frames
- **Volatility:** low, medium, high
- **Market Diversification:** diversified, sector specific
- **Source of Return:** trend-following, mean-reversion, volatility, other

Two critical elements of a traditional systematic managed futures strategy, though not the only elements, are decision-making rules and risk management rules.

Decision making rules determine whether to be long, short or flat a market and can also assign a probability weight or measure of signal strength to a position. Decision-making rules are usually developed using smoothing and other filtering algorithms that separate underlying trend persistence from market noise. CTAs may also utilize serial correlation analysis, which involves the regression of a variable with itself over successive time intervals, in an attempt to uncover periods of statistically significant market trends. Decision making rules may also be based on the identification of shifts in risk premiums or changes in the term structures of futures price curves, the identification of breakouts, shifts in volatility, seasonal or cyclical characteristics of markets, and profit taking algorithms.



The second, and arguably more critical, element of a managed futures strategy is the set of risk management rules utilized by a CTA. Risk management involves first establishing a level of tolerable portfolio risk or volatility. This risk level, often measured by Value-at-Risk (“VaR”) then guides the allocations to positions that are generated by the decision making rules; the recent volatilities and correlations of current positions determine the VaR estimate of the resultant portfolio which can then be calibrated to a desired or acceptable VaR.

In addition to portfolio risk-targeting, it is also important to define acceptable levels of risk per correlated or market sector, and per individual market. Again this is achieved first by examining the volatility of sectors and markets to ensure that adverse events will not result in an unacceptable contribution of risk from any one sector or market. In addition, worst-case or scenario analysis can highlight whether a given market’s trade size should be scaled down due to the existence of more extreme price shocks historically. A history of worst-case outcomes serves an additional utility in that new worst-case outcomes may be an indication of new regimes that are not yet reflected in the market data.

Market volatilities and correlations are basic inputs for all risk management rules. But they are only the start. Often seemingly uncorrelated markets will exhibit high correlations due to certain events. For example, often when equity markets experience stress there is a flight to quality and corresponding increase in bond prices. Therefore, long equity and short bond positions can become very highly correlated during a sudden and dramatic equity market sell-off. Similarly, sudden summer droughts can create strong correlations between grain prices and natural gas as crop yields will decrease and natural gas demand for cooling will increase. Risk-management then must also anticipate major event risks and either have rules or hedging strategies in place to deal with these event risks.

Sources of Return

The primary source of return to managed futures lies in capturing the existence of, and shifts in, risk premiums. In the case of futures on physical commodities, risk premium is tied to roll

yield or Basis, while in currencies it is rooted in yield differentials or carry. In the case of equities and fixed income markets, risk premium is based on interest rates, the shape of the yield curve, and corporate earnings. The success of CTAs in capturing various risk premiums is reflected in realized trading profits and changes in unrealized profits and losses.

CTAs also earn returns on the excess cash collateral utilized to margin futures positions. Typically, managed futures programs target portfolio volatilities between 10-20%, which generally translate into margin requirements between 5-20% of assets under management. The remaining assets will usually be invested in sovereign money market instruments.

Because futures markets involve the posting of margin as “good faith” deposits to satisfy future contractual obligations to either purchase or sell the underlying commodities as opposed to the actual purchase or sale of a dollar amount of underlying commodity, there are no costs of shorting or borrowing costs involved with futures. Accordingly, components of the returns to long/short and other hedge fund strategies, such as cost of borrowing shares, margin and dividend costs on short equity positions or cost of leverage on longs do not apply to managed futures. The only sources of return in managed futures are those from actively trading futures contracts and the yield earned on cash balances in excess of margin requirements.

Key Risk Factors

Structural risks such as counterparty or credit risk, and risks related to transparency and liquidity are quite low in managed futures due to the existence of strong exchange clearing houses that act as counterparty to all exchange settled futures transactions and the fact that the majority of futures transactions are exchange traded and settled. The high degree of regulation of managed futures also limits risks that would apply to unregulated entities. The primary risks involved in managed futures tend to be market or manager specific. Some of these risks are described below:



- 1. Manager Risk:** Most CTAs use a variety of sophisticated, quantitative computer models to manage their programs. The programs are rigorously tested, refined and updated by continuous research. However, there is a small group of managers referred to as *discretionary traders*. These managers rely on their own interpretation of economic, price and market factors to construct and manage portfolios. Because they are dependent upon human skill, intuition, judgment and experience, there is always a risk that such managers will make bad decisions, leading to adverse outcomes. Further, there is always the possibility that a systematic manager will choose to override his models and make discretionary decisions.
- 2. Market Risk:** Many commodity markets exhibit sustained periods of price trend, either up or down, usually in response to macro economic factors. All markets are, however, subject to sharp changes or reversals in direction, often in response to sudden changes in supply and demand or political upheaval. Further, agricultural and energy markets are also subject to seasonal factors. A strategy which is highly concentrated in a small number of markets can be hurt badly by these sudden shifts in markets.
- 3. Volatility:** Commodity markets frequently experience periods of high volatility, typically with a rapid onset. While some strategies are designed to trade volatility, the majority may be hampered by volatility. In a period of high volatility, the speed of price change and direction may outstrip the ability of the managers' model to recognize the change and respond to it. This can lead to a condition known as whipsaw, in which the manager loses money on a series of trades in attempting to catch up to the market. Very low volatility can also be problematic; since many strategies rely upon the trending nature of markets, a market that is range-bound, or drifting in a narrow price band, presents little in the way of profit opportunity for many strategies.
- 4. Model Risk / Curve Fitting:** For managers using quantitative models, the results are obviously reliant on the assumptions and methodologies incorporated in their models. There is, however, another risk largely unique to managed futures. It is possible, (and often very easy) for a manager to curve-fit a model. This means building a model or process that will produce a very attractive result when compared to a historical price series. All that has happened is that parameters have been set to replicate an historical result. Such a model may not be statistically valid, and may not produce the same results going forward. Testing the underlying assumptions and the mechanics of a program on markets or prices other than originally used will detect curve fitting, as will forward looking simulations such as Monte Carlo simulations.
- 5. Leverage:** This is perhaps the greatest single risk in managed futures. The leverage inherent in managed futures is a tremendous asset when used judiciously and a value destroyer when used inappropriately or excessively. Futures offer very large potential leverage, at no cost and without the need to seek credit from banks or prime brokers. Most CTAs operate within well defined ranges of allowable margin to equity ratios, and use dynamic risk management tools to ensure that excessive leverage does not get into the portfolio. Aggressive use of the leverage available, particularly when applied to a concentrated portfolio, has the potential to quickly create losses in excess of the contributed capital.



Historical Performance

Managed futures have demonstrated a long history of stable absolute and risk-adjusted returns when compared to those of equities. *Table 1* compares various return statistics of the ITR P40 Managed Futures Index with those of the S&P 500 Total Return Index. One of the key features of this return history is that, unlike equities, managed futures downside volatility is less than overall volatility. The implication of this feature is that more of the volatility in managed futures returns is “good” volatility in

the form of excess positive returns and a resultant distribution of returns that has a positive skew.

In addition to a strong history of returns, as depicted in *Table 2* below, managed futures are also uncorrelated to both traditional equity and fixed income market returns, and to the returns of major hedge fund styles.

Table 1: Managed Futures and Equity Returns (January 1990 to December 2007)

	ITR P40 Managed Futures Index	S&P 500 Total Return Index
Ann. Return	9.84%	10.54%
Ann. Volatility	12.34%	13.74%
Ann. Downside Volatility (below 0%)	10.08%	14.75%
Sharpe Ratio (RF=5%)	0.39	0.40
Sortino Ratio (RF = 0%)	0.98	0.71
Largest Drawdown	-15.00%	-44.73%
Skewness	0.46	-0.46

Table 2: Correlation of managed futures to equities, bonds and hedge fund styles (January 1990 to December 2007)

	Equity Hedge	Event Driven	Global Macro	Relative Value	Lehman Aggregate Bond Index	S&P 500 Total Return Index	Managed Futures
Equity Hedge	1	0.78	0.6	0.55	0.06	0.66	-0.01
Event Driven		1	0.56	0.65	0.05	0.64	-0.1
Global Macro			1	0.41	0.33	0.38	0.37
Relative Value				1	0.05	0.36	-0.13
Lehman Aggregate Bond Index					1	0.13	0.24
S&P 500 Total Return Index						1	-0.12
Managed Futures							1

Source for Tables 1 & 2: IMFC and International Traders Research



The lack of correlation between managed futures and both equities and hedge funds results in a significant diversification benefit from adding managed futures to either an equity or diversified hedge fund portfolio. As evidenced in *Tables 3 & 4* below, the inclusion of managed futures improves returns and risk adjusted

returns, reduces bad volatility and worst historical drawdowns and improves the skewness of returns of both the S&P 500 Total Return Index and the HFRI Composite Hedge Fund of Funds Index.

Table 3: Impact of adding managed futures to equities (January 1990 to December 2007)

	S&P 500 Total Return Index	80% S&P 500 TR 20% ITR P40	Change
Ann. Return	10.54%	10.60%	0.06%
Ann. Volatility	13.74%	10.85%	-2.89%
Ann. Downside Volatility (below 0%)	14.75%	10.76%	-3.99%
Sharpe Ratio (RF =5%)	0.40	0.52	0.11
Sortino Ratio (RF = 0%)	0.71	0.98	0.27
Largest Drawdown	-44.73%	-32.00%	12.73%

Table 4: Impact of adding managed futures to a diversified hedge fund portfolio (January 1990 to December 2007)

	HFRI Fund of Funds Composite Index	80% HFRI FOF 20% ITR P40	Change
Ann. Return	9.93%	10.01%	0.08%
Ann. Volatility	5.46%	5.53%	0.06%
Ann. Downside Volatility (below 0%)	5.41%	3.98%	-1.42%
Sharpe Ratio (RF =5%)	0.90	0.91	0.00
Sortino Ratio (RF = 0%)	1.84	2.51	0.68
Largest Drawdown	-13.08%	-7.61%	5.48%

Source for Tables 3 & 4: IMFC and International Traders Research



Although overall correlation statistics are an important consideration when designing portfolios of complementary asset classes and strategies, it is far more crucial to assess correlations at higher moments to assess the diversification benefit of adding an asset class or strategy when it is most needed. For example, the correlation of managed futures to equities when equity returns are negative is more important than the overall correlation of equities to managed futures. *Chart 2* below is a return regression that illustrate that when equity returns are negative, there is a higher clustering of positive managed futures returns. In other words,

managed futures actually become more negatively correlated to equities when equities under-perform.

The implication of this negative correlation at higher moments is that managed futures have the potential to deliver a significantly enhanced diversification benefit to equities when it is needed most. *Chart 3* below illustrates that historically, managed futures have consistently delivered positive and often excess monthly returns during the worst months for equity markets.

Chart 2: Return Regression: ITR P40 versus S&P 500 TR Index

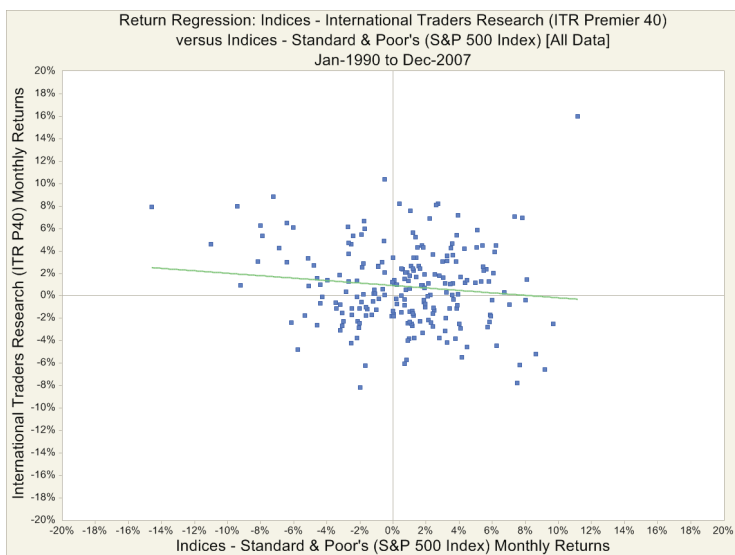
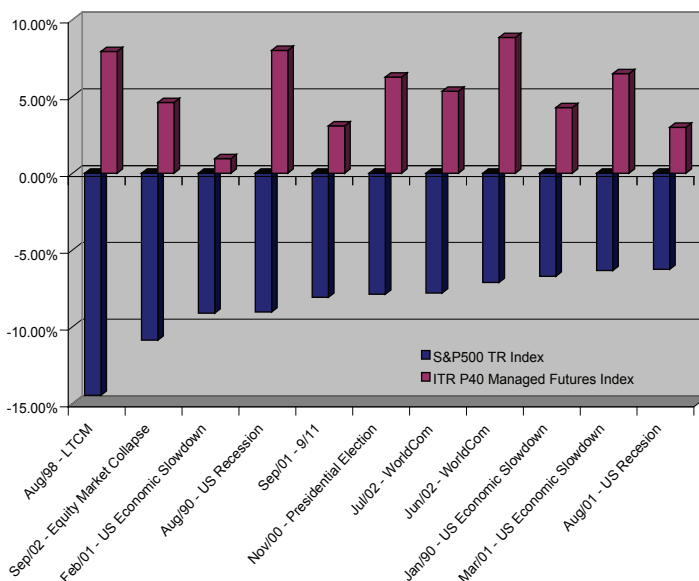


Chart 3 : Managed Futures returns in worst months (below 5th percentile rank) for U.S. equities (January 1990 to December 2007)



Source for Charts 2 & 3: IMFC and International Traders Research



Conclusion

Managed futures have a long and proven record of performance that is rooted in capturing persistent risk premiums that manifest themselves in the price trends of various markets. As such, managed futures should not be viewed as an asset class, but rather as an industry of registered Commodity Trading Advisors that predominantly utilize strategies for systematically capturing risk premiums priced into various asset classes and managing risk or volatility.

The performance history of managed futures, combined with structural features of the industry such as high levels of liquidity and transparency, strong regulation and low or no counterparty risk, result in a very appealing investment strategy on a standalone basis.

More importantly, managed futures add significant value as a portfolio diversifier. Generally uncorrelated to equity market returns, managed futures tend to become negatively correlated to equity markets during periods of equity market stress. This feature of managed futures significantly enhances its' diversification benefit, as evidenced by the history of managed futures performance during the periods of worst equity market returns.

**Written by Roland P. Austrup, President & CEO,
Integrated Managed Futures Corp.**

Glossary of Terms

Actuals *See Cash Commodity.*

Aggregation The policy under which all futures positions owned or controlled by one trader or a group of traders are combined to determine reportable positions and speculative limits.

Arbitrage The simultaneous purchase and sale of similar commodities in different markets to take advantage of a price discrepancy.

Arbitration The process of resolving disputes between parties by a person or persons (arbitrators) chosen or agreed to by them. NFA's arbitration program provides a forum for resolving futures-related disputes between NFA Members or between Members and customers.

Associated Person (AP) An individual who solicits orders, customers or customer funds on behalf of a Futures Commission Merchant, an Introducing Broker, a Commodity Trading Advisor or a Commodity Pool Operator and who is registered with the Commodity Futures Trading Commission.

At-the-Money Option An option whose strike price is equal—or approximately equal—to the current market price of the underlying futures contract.

Basis The difference between the current cash price of a commodity and the futures price of the same commodity.

Bear Market (Bear/Bearish) A market in which prices are declining. A market participant who believes prices will move lower is called a "bear." A news item is considered bearish if it is expected to result in lower prices.

Bid An expression of willingness to buy a commodity at a given price; the opposite of Offer.

Board of Trade *See Contract Market.*



Broker A company or individual that executes futures and options orders on behalf of financial and commercial institutions and/or the general public.

Bull Market (Bull/Bullish) A market in which prices are rising. A market participant who believes prices will move higher is called a “bull.” A news item is considered bullish if it is expected to result in higher prices.

Call Option (American Style) An option which gives the buyer the right, but not the obligation, to purchase (“go long”) the underlying futures contract at the strike price on or before the expiration date.

Carrying Broker A member of a futures exchange, usually a clearinghouse member, through which another firm, broker or customer chooses to clear all or some trades.

Cash Commodity The actual physical commodity as distinguished from the futures contract based on the physical commodity. Also referred to as Actuals.

Cash Market A place where people buy and sell the actual commodities (i.e., grain elevator, bank, etc.). *See also Forward (Cash) Contract and Spot.*

Cash Settlement A method of settling certain futures or options contracts whereby the market participants settle in cash (payment of money rather than delivery of the commodity).

Charting The use of graphs and charts in the technical analysis of futures markets to plot price movements, volume, open interest or other statistical indicators of price movement. *See also Technical Analysis.*

Churning Excessive trading that results in the broker deriving a profit from commissions while disregarding the best interests of the customers. *Glossary Opportunity and Risk: An Educational Guide 78 79*

Circuit Breaker A system of trading halts and price limits on equities and derivatives markets designed to provide a cooling-off period during large, intraday market declines or rises.

Clear The process by which a clearinghouse maintains records of all trades and settles margin flow on a daily mark-to-market basis for its clearing members.

Clearinghouse A corporation or separate division of a futures exchange that is responsible for settling trading accounts, collecting and maintaining margin monies, regulating delivery and reporting trade data. The clearinghouse becomes the buyer to each seller (and the seller to each buyer) and assumes responsibility for protecting buyers and sellers from financial loss by assuring performance on each contract.

Clearing Member A member of an exchange clearinghouse responsible for the financial commitments of its customers. All trades of a non-clearing member must be registered and eventually settled through a clearing member.

Closing Price *See Settlement Price.*

Closing Range A range of prices at which futures transactions took place during the close of the market.

Commission A fee charged by a broker to a customer for executing a transaction.

Commission House *See Futures Commission Merchant.*

Commodity Exchange Act (CEA) The federal act that provides for federal regulation of futures trading.

Commodity Futures Trading Commission (CFTC) The federal regulatory agency established in 1974 that administers the Commodity Exchange Act. The CFTC monitors the futures and options on futures markets in the United States.

Commodity Pool An enterprise in which funds contributed by a number of persons are combined for the purpose of trading futures or options contracts. The concept is similar to a mutual fund in the securities industry. Also referred to as a Pool.

Commodity Pool Operator (CPO) An individual or organization which operates or solicits funds for a commodity pool. A CPO may be required to be registered with the CFTC.



Commodity Trading Advisor (CTA) A person who, for compensation or profit, directly or indirectly advises others as to the advisability of buying or selling futures or commodity options. Providing advice includes exercising trading authority over a customer's account. A CTA may be required to be registered with the CFTC.

Confirmation Statement A statement sent by a Futures Commission Merchant to a customer when a futures or options position has been initiated. The statement shows the price and the number of contracts bought or sold. Sometimes combined with a Purchase and Sale Statement.

Contract Market A board of trade designated by the CFTC to trade futures or options contracts on a particular commodity. Commonly used to mean any exchange on which futures are traded. Also referred to as an Exchange.

Contract Month The month in which delivery is to be made in accordance with the terms of the futures contract. Also referred to as Delivery Month.

Convergence The tendency for prices of physical commodities and futures to approach one another, usually during the delivery month.

Covered Option A short call or put option position which is covered by the sale or purchase of the underlying futures contract or physical commodity. *Glossary Opportunity and Risk: An Educational Guide* 80 81

Cross-Hedging Hedging a cash commodity using a different but related futures contract when there is no futures contract for the cash commodity being hedged and the cash and futures market follow similar price trends (e.g., using soybean meal futures to hedge fish meal).

Customer Segregated Funds *See Segregated Account.*

Day Order An order that if not executed expires automatically at the end of the trading session on the day it was entered.

Day Trader A speculator who will normally initiate and offset a position within a single trading session.

Default The failure to perform on a futures contract as required by exchange rules, such as a failure to meet a margin call or to make or take delivery.

Deferred Delivery Month The distant delivery months in which futures trading is taking place, as distinguished from the nearby futures delivery month.

Delivery The transfer of the cash commodity from the seller of a futures contract to the buyer of a futures contract. Each futures exchange has specific procedures for delivery of a cash commodity. Some futures contracts, such as stock index contracts, are cash settled.

Delivery Month *See Contract Month.*

Derivative A financial instrument, traded on or off an exchange, the price of which is directly dependent upon the value of one or more underlying securities, equity indices, debt instruments, commodities, other derivative instruments, or any agreed upon pricing index or arrangement. Derivatives involve the trading of rights or obligations based on the underlying product but do not directly transfer that product. They are generally used to hedge risk.

Designated Self-Regulatory Organization (DSRO) When a Futures Commission Merchant (FCM) is a member of more than one Self-Regulatory Organization (SRO), the SROs may decide among themselves which of them will be primarily responsible for enforcing minimum financial and sales practice requirements. The SRO will be appointed DSRO for that particular FCM. NFA is the DSRO for all non-exchange member FCMs. *See also Self-Regulatory Organization.*

Disclosure Document The statement that some CPOs must provide to customers. It describes trading strategy, fees, performance, etc.

Discount (1) The amount a price would be reduced to purchase a commodity of lesser grade; (2) sometimes used to refer to the price differences between futures of different delivery months, as in the phrase “July is trading at a discount to May,” indicating that the price of the July future is lower than that of May; (3) applied to cash grain prices that are below the futures price.

Discretionary Account An arrangement by which the owner of the account gives written power of attorney to someone else, usually the broker or a Commodity Trading Advisor, to buy and sell without prior approval of the account owner. Also referred to as a Managed Account.

Electronic Order An order placed electronically (without the use of a broker) either via the Internet or an electronic trading system.

Electronic Trading Systems Systems that allow participating exchanges to list their products for trading electronically. These systems may replace, supplement or run along side of the open outcry trading.

Equity 1) The value of a futures trading account if all open positions were offset at the current market price; 2) an ownership interest in a company, such as stock. *Glossary Opportunity and Risk: An Educational Guide* 82 83

Exchange See *Contract Market*.

Exercise The action taken by the holder of a call option if he wishes to purchase the underlying futures contract or by the holder of a put option if he wishes to sell the underlying futures contract.

Exercise Price See *Strike Price*.

Expiration Date Generally the last date on which an option may be exercised. It is not uncommon for an option to expire on a specified date during the month prior to the delivery month for the underlying futures contracts.

Extrinsic Value See *Time Value*.

First Notice Day The first day on which notice of intent to deliver a commodity in fulfillment of an expiring futures contract can be given to the clearinghouse by a seller and assigned by the clearinghouse to a buyer. Varies from contract to contract. 1) The value of a futures trading account if all open positions were offset at the current market price; 2) an ownership interest in a company, such as stock.

Floor Broker An individual who executes orders on the trading floor of an exchange for any other person.

Floor Trader An individual who is a member of an exchange and trades for his own account on the floor of the exchange.

Forward (Cash) Contract A contract which requires a seller to agree to deliver a specified cash commodity to a buyer sometime in the future, where the parties expect delivery to occur. All terms of the contract may be customized, in contrast to futures contracts whose terms are standardized.

Fully Disclosed An account carried by a Futures Commission Merchant in the name of an individual customer; the opposite of an Omnibus Account.

Fundamental Analysis A method of anticipating future price movement using supply and demand information.

Futures Commission Merchant (FCM) An individual or organization which solicits or accepts orders to buy or sell futures contracts or commodity options and accepts money or other assets from customers in connection with such orders. An FCM must be registered with the CFTC.

Futures Contract A legally binding agreement to buy or sell a commodity or financial instrument at a later date. Futures contracts are normally standardized according to the quality, quantity, delivery time and location for each commodity, with price as the only variable.

Grantor See *Writer*.



Guaranteed Introducing Broker A Guaranteed Introducing Broker is an IB that has a written agreement with a Futures Commission Merchant that obligates the FCM to assume financial and disciplinary responsibility for the performance of the Guaranteed Introducing Broker in connection with futures and options customers. A Guaranteed Introducing Broker is not subject to minimum financial requirements.

Hedging The practice of offsetting the price risk inherent in any cash market position by taking an opposite position in the futures market. A long hedge involves buying futures contracts to protect against possible increasing prices of commodities. A short hedge involves selling futures contracts to protect against possible declining prices of commodities.

High The highest price of the day for a particular futures or options on futures contract.

Holder The opposite of a Grantor. *See also Option Buyer. Glossary Opportunity and Risk: An Educational Guide 84 85*

In-the-Money Option An option that has intrinsic value. A call option is in-the-money if its strike price is below the current price of the underlying futures contract. A put option is in-the-money if its strike price is above the current price of the underlying futures contract.

Independent Introducing Broker An Independent Introducing Broker is an IB subject to minimum capital requirements.

Initial Margin The amount a futures market participant must deposit into a margin account at the time an order is placed to buy or sell a futures contract. *See also Margin.*

Intrinsic Value The amount by which an option is in-the-money.

Introducing Broker (IB) A firm or individual that solicits and accepts commodity futures orders from customers but does not accept money, securities or property from the customer. All Introducing Brokers must be registered with the CFTC.

Last Trading Day The last day on which trading may occur in a given futures or option.

Leverage The ability to control large dollar amounts of a commodity with a comparatively small amount of capital.

Limit *See Position Limit, Price Limit, Variable Limit.*

Liquidate To sell a previously purchased futures or options contract or to buy back a previously sold futures or options position. Also referred to as Offset.

Liquidity (Liquid Market) A characteristic of a security or commodity market with enough units outstanding and enough buyers and sellers to allow large transactions without a substantial change in price.

Local A member of an exchange who trades for his own account.

Long One who has bought futures contracts or options on futures contracts or owns a cash commodity.

Low The lowest price of the day for a particular futures or options on futures contract.

Maintenance Margin A set minimum amount (per outstanding futures contract) that a customer must maintain in his margin account to retain the futures position. *See also Margin.*

Managed Account *See Discretionary Account.*

Margin An amount of money deposited by both buyers and sellers of futures contracts and by sellers of options contracts to ensure performance of the terms of the contract (the making or taking delivery of the commodity or the cancellation of the position by a subsequent offsetting trade). Margin in commodities is not a down payment, as in securities, but rather a performance bond. *See also Initial Margin, Maintenance Margin and Variation Margin.*

Margin Call A call from a clearinghouse to a clearing member, or from a broker or firm to a customer, to bring margin deposits up to a required minimum level.



Mark-to-Market To debit or credit on a daily basis a margin account based on the close of that day's trading session. In this way, buyers and sellers are protected against the possibility of contract default.

Market Order An order to buy or sell a futures or options contract at whatever price is obtainable when the order reaches the trading floor.

Maximum Price Fluctuation See *Price Limit, Glossary Opportunity and Risk: An Educational Guide* 86 87

Minimum Price Fluctuation See *Tick*.

Naked Option See *Uncovered Option*.

National Futures Association (NFA) Authorized by Congress in 1974 and designated by the CFTC in 1982 as a "registered futures association," NFA is the industrywide self-regulatory organization of the futures industry.

Nearby Delivery Month The futures contract month closest to expiration. Also referred to as the Spot Month.

Net Asset Value The value of each unit of participation in a commodity pool. Basically a calculation of assets minus liabilities plus or minus the value of open positions when marked to the market, divided by the total number of outstanding units.

Net Performance An increase or decrease in net asset value exclusive of additions, withdrawals and redemptions.

Offer An indication of willingness to sell a futures contract at a given price; the opposite of Bid.

Offset See *Liquidate*.

Omnibus Account An account carried by one Futures Commission Merchant (FCM) with another FCM in which the transactions of two or more persons are combined and carried in the name of the originating FCM rather than of the individual customers; the opposite of Fully Disclosed.

Open The period at the beginning of the trading session officially designated by the exchange during which all transactions are considered made "at the open."

Open Interest The total number of futures or options contracts of a given commodity that have not yet been offset by an opposite futures or option transaction nor fulfilled by delivery of the commodity or option exercise. Each open transaction has a buyer and a seller, but for calculation of open interest, only one side of the contract is counted.

Open Outcry A method of public auction for making bids and offers in the trading pits of futures exchanges.

Open Trade Equity The unrealized gain or loss on open positions.

Opening Range The range of prices at which buy and sell transactions took place during the opening of the market.

Option Buyer The purchaser of either a call or put option. Option buyers receive the right, but not the obligation, to assume a futures position. Also referred to as a Holder.

Option Contract A contract which gives the buyer the right, but not the obligation, to buy or sell a specified quantity of a commodity or a futures contract at a specific price within a specified period of time. The seller of the option has the obligation to sell the commodity or futures contract or to buy it from the option buyer at the exercise price if the option is exercised. See also *Call Option and Put Option*.

Option Premium The price a buyer pays (and a seller receives) for an option. Premiums are arrived at through the market process. There are two components in determining this price—extrinsic (or time) value and intrinsic value.

Option Seller See *Writer*.



Out-of-the-Money Option A call option with a strike price higher or a put option with a strike price lower than the current market value of the underlying asset (i.e., an option that does not have any intrinsic value). *Glossary Opportunity and Risk: An Educational Guide* 88 89

Over-the-Counter Market (OTC) A market where products such as stocks, foreign currencies and other cash items are bought and sold by telephone, Internet and other electronic means of communication rather than on a designated futures exchange.

Pit The area on the trading floor where trading in futures or options contracts is conducted by open outcry. Also referred to as a ring.

Pool See *Commodity Pool*.

Position A commitment, either long or short, in the market.

Position Limit The maximum number of speculative futures contracts one can hold as determined by the CFTC and/or the exchange where the contract is traded. See also *Price Limit, Variation Limit*.

Position Trader A trader who either buys or sells contracts and holds them for an extended period of time, as distinguished from a day trader.

Premium Refers to (1) the price paid by the buyer of an option; (2) the price received by the seller of an option; (3) cash prices that are above the futures price; (4) the amount a price would be increased to purchase a better quality commodity; or (5) a futures delivery month selling at a higher price than another.

Price Discovery The determination of the price of a commodity by the market process.

Price Limit The maximum advance or decline, from the previous day's settlement price, permitted for a futures contract in one trading session. Also referred to as Maximum Price Fluctuation. See also *Position Limit, Variation Limit*.

Purchase and Sale Statement (P&S) A statement sent by a Futures Commission Merchant to a customer when a futures or options position has been liquidated or offset. The statement shows the number of contracts bought or sold, the prices at which the contracts were bought or sold, the gross profit or loss, the commission charges and the net profit or loss on the transaction. Sometimes combined with a Confirmation Statement.

Put Option An option which gives the buyer the right, but not the obligation, to sell the underlying futures contract at a particular price (strike or exercise price) on or before a particular date.

Quotation The actual price or the bid or ask price of either cash commodities or futures or options contracts at a particular time.

Range The difference between the high and low price of a commodity during a given trading session, week, month, year, etc.

Regulations (CFTC) The regulations adopted and enforced by the CFTC in order to administer the Commodity Exchange Act.

Reparations The term is used in conjunction with the CFTC's customer claims procedure to recover civil damages.

Reportable Positions The number of open contracts specified by the CFTC when a firm or individual must begin reporting total positions by delivery month to the authorized exchange and/or the CFTC.

Round Turn A completed futures transaction involving both a purchase and a liquidating sale, or a sale followed by a covering purchase.

Rules (NFA) The standards and requirements to which participants who are required to be Members of National Futures Association must subscribe and conform. *Glossary Opportunity and Risk: An Educational Guide* 90 91

Scalper A trader who trades for small, short-term profits during the course of a trading session, rarely carrying a position overnight.



Segregated Account A special account used to hold and separate customers' assets for trading on futures exchanges from those of the broker or firm. Also referred to as Customer Segregated Funds.

Self-Regulatory Organization (SRO) Self-regulatory organizations (i.e., the futures exchanges and National Futures Association) enforce minimum financial and sales practice requirements for their members. *See also Designated Self-Regulatory Organization.*

Settlement Price The last price paid for a futures contract on any trading day. Settlement prices are used to determine open trade equity, margin calls and invoice prices for deliveries. Also referred to as Closing Price.

Short One who has sold futures contracts or plans to purchase a cash commodity.

Speculator A market participant who tries to profit from buying and selling futures and options contracts by anticipating future price movements. Speculators assume market price risk and add liquidity and capital to the futures markets.

Spot Usually refers to a cash market for a physical commodity where the parties generally expect immediate delivery of the actual commodity.

Spot Month *See Nearby Delivery Month.*

Spreading The buying and selling of two different delivery months or related commodities in the expectation that a profit will be made when the position is offset.

Stop Order An order that becomes a market order when the futures contract reaches a particular price level. A sell stop is placed below the market, a buy stop is placed above the market.

Strike Price The price at which the buyer of a call (put) option may choose to exercise his right to purchase (sell) the underlying futures contract. Also called Exercise Price.

Technical Analysis An approach to analysis of futures markets which examines patterns of price change, rates of change, and changes in volume of trading, open interest and other statistical indicators. *See also Charting.*

Tick The smallest increment of price movement for a futures contract. Also referred to as Minimum Price Fluctuation.

Time Value The amount of money options buyers are willing to pay for an option in anticipation that over time a change in the underlying futures price will cause the option to increase in value. In general, an option premium is the sum of time value and intrinsic value. Any amount by which an option premium exceeds the option's intrinsic value can be considered time value. Also referred to as Extrinsic Value.

Uncovered Option A short call or put option position which is not covered by the purchase or sale of the underlying futures contract or physical commodity. Also referred to as a Naked Option.

Underlying Futures Contract The specific futures contract that the option conveys the right to buy (in case of a call) or sell (in the case of a put).

Variable Limit A price system that allows for larger than normal allowable price movements under certain conditions. In periods of extreme volatility, some exchanges permit trading at price levels that exceed regular daily price limits. *See also Position Limit, Price Limit. Glossary Opportunity and Risk: An Educational Guide 92 93*

Variation Margin Additional margin required to be deposited by a clearing member firm to the clearinghouse during periods of great market volatility or in the case of high-risk accounts.

Volatility A measurement of the change in price over a given time period.

Volume The number of purchases and sales of futures contracts made during a specified period of time, often the total transactions for one trading day.

Writer A person who sells an option and assumes the potential obligation to sell (in the case of a call) or buy (in the case of a put) the underlying futures contract at the exercise price. Also referred to as an Option Grantor.

Yield A measure of the annual return on an investment.