



# Managed Futures

THE TRUTH ABOUT MANAGED FUTURES

A PRESENTATION BY THE CAPITAL TRADING GROUP

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# Key Themes

- CTG Background
- The Managed Futures Universe
  - State of the Industry; CTAs and CPOs; Styles of Trading; Regulatory Framework
- Crisis Alpha and Positive Expected Returns
  - Historical performance; Correlations; Risk Premia
- CTA Portfolio Construction
  - Emerging vs. Mature Managers, Quantitative vs. Qualitative analysis; Operational analysis
- Glossary

# Capital Trading Group (CTG)

- **Capital Trading Group, LP ("CTG")** is an investment firm specialized in execution and account management for today's leading Commodity Trading Advisors. CTG's operations coordinate all aspects of a professionally managed fund or trading program.
- At CTG, our personalized services include global trade execution; risk analysis; account allocations; trade reconciliation; fee invoicing; complete customer service.
- We believe CTG's unique position is able to provide the most complete and thorough investment and management tools. Our company strives to provide CTAs and their investors with the best opportunities available today in professionally managed trading programs and self-directed trading environments.



# State of The Industry

- Managed Futures have \$330 billion in assets under management
- The size of the CTA industry has grown at an estimated 12% per annum in the last decade ( Winton, 2014)
- In spite of growth, capacity should not be an issue when we compare the \$330 billions in AUM versus the approximately \$3 trillions in AUM in the Hedge Fund industry
- 150 global futures markets available for trading
- Over 1000 registered CTAs

# CTAs and CPOs

- Managed Futures managers are generally structured in one of the following two ways:
  - CTA (Commodity Trading Advisor) - in this structure, professional managers trade a unique strategy via multiple single managed accounts. This way full transparency is maintained and lower administrative costs are achieved.
  - CPO (Commodity Pool Operator) – in this case, the money manager can trade the same strategy as above but in a fund structure. A CPO product can also allow for a multi-strategy/multi-CTA solution at a cheaper cost and usually at a lower investing minimum than a direct investment

*In spite of their name, CTAs and CPOs do not necessarily trade just commodities. Indeed, their strategies are usually structured around futures and options on equity indexes, interest rates, currencies and commodities*



# Styles of Trading

- Trend Following
- Mean Reverting
- Quantitative
- Discretionary
- Options Strategies

# Trend Following

- Trend following capitalizes on long enough price series – up or down
- Trend following strategies usually follow a quantitative approach based on pre-set algorithms
- Often diversified among many markets
- Can have different time frames
- Has a “long call option” profile: negative win/loss ratio but average win much greater than average loss



# Mean Reverting

- Quant based approach designed to spot moves statistically beyond normal boundaries when compared against a pre-set mean
- Mean reverting strategies will short or buy respectively up or down moves deemed to be outside expected parameters
- Can have different time frames but generally shorter term than trend following
- Often trades multiple markets

# Quantitative

- A systematic approach based on mathematical relationships
- Rule based – it removes emotional biases
- Can be back-tested easily

# Discretionary

- Based on manager's skills
- Generally fundamentally driven
- Flexible and generally quicker to react to changes in fundamentals or in the structure of the underlying markets

# Options Strategies

- Usually net short volatility
- Attempt to capitalize on the delta between implied volatility and realized volatility
- Can utilize naked positions, spreads, straddles and combos
- Additional option strategies include: covered calls and tail risk hedging which carry different risk profiles and pay-offs than short volatility approaches

# Regulatory Framework

- Managed Futures are regulated by two main entities:
  - Commodity Futures Trade Commission (CFTC)
  - National Futures Association (NFA)
- Managed Futures programs for the most part deal in derivatives listed on exchanges which act as clearing houses mitigating counterparty risk

# Why Managed Futures

- Managed Futures are generally non correlated to equity markets and many hedge fund strategies
  - Barclay CTA Index correlation to the S&P500 is 0.01; correlation to US Bonds is 0.13 and to World Bonds is 0.00 (1/1980 to 8/2015);
- Managed Futures have an expected positive annualized rate of return
  - Barclay CTA Index shows a compound annual return of 10.07% (1/1980 to 8/2015)



# Academic Support

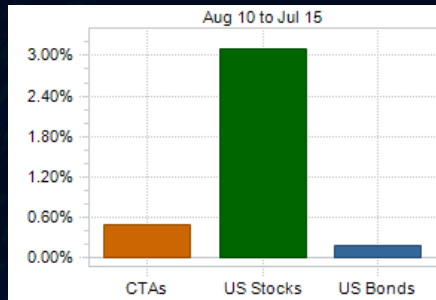
- Academic research on Managed Futures indicates how traditional allocation can benefit from inclusion of this asset class
  - John Lintner, 1983 “The Potential Role of Managed Commodity-Financial Futures Accounts (and/or Funds) in Portfolios of Stocks and Bonds.”
    - Dr. Lintner’s work (including revisions by him and by the CME) highlights how managed futures may significantly improve the efficient frontier from a mean-variance perspective

# Academic Support continued

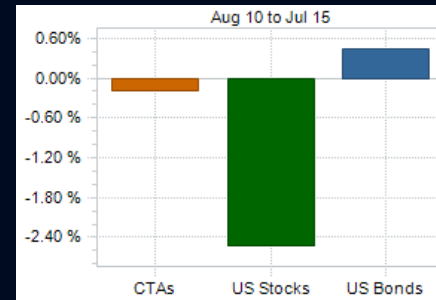
- Peng Chen et al., 2005 “Managed Futures and Asset Allocation.”
  - Dr. Chen highlights how managed futures can improve the risk-return trade off in long term asset allocations. His scenario analysis shows that managed futures exhibit superior performance during difficult times for traditional asset classes.
  - This study also suggests that managed futures funds benefit long term investors especially during periods of rising interest rates
  - Dr. Chen’s results show the potential for managed futures to improve absolute AND risk adjusted returns while concurrently reducing risk (measured by standard deviation) in long term asset allocation. This risk reduction can occur at different investor risk levels

# Relative CTA Performance

AVERAGE RATES OF RETURN: US  
STOCKS UP MONTHS (LAST 60 MONTHS, SOURCE:  
ALTEGRIS)



AVERAGE RATES OF RETURN: US  
STOCKS DOWN MONTHS (LAST 60 MONTHS,  
SOURCE: ALTEGRIS)



# Optimal Holding Period of a Managed Futures Portfolio

- A 3 to 5 years holding period dramatically improves the odds of a successful allocation to a diversified portfolio of CTAs
  - A 2010 study by Abrams, Bhaduri and Flores analyzed the maximum, minimum and mean rolling returns for the BTOP 50 Index over many holding periods from January 1987 to March 2014
  - They found that past the 36 month of exposure, the probability of a negative rolling return was significantly lower while maximum returns varied from 80% to 140%. Mean returns varied from just above 20% to 40%.
- Abrams, Badhuri, Flores, "A Quantitative Analysis of Managed Futures Strategies," 2010, CME Group

# Crisis Alpha

- Why asset class correlations increase during a financial crisis?
  - Structural limits to arbitrage
  - Forced liquidations of leveraged positions
  - Inefficient de-leveraging by selling what is liquid
  - Technical glitches
  - Credit issues often at the center of the crisis – they may engulf many other healthy parts of a financial ecosystem
  - Behavioral biases

# Crisis Alpha continued

- Why Managed Futures seem to have a better track record during crises?
  - Their structural leverage is not held hostage to credit crises
  - Underlying instruments (futures and options) are generally very liquid
  - Ability to reverse positions very quickly
  - Diversification across multiple markets and time frames



# CTA Index BTOP 50 Performance During Financial Crises

Time Period	Crisis	S&P 500 Index (%)	BTOP 50 Index (%)	Difference (%)
4th Quarter 1987	Stock market crash	-23.23	16.88	40.11
3rd Quarter 2002	WorldCom bankruptcy	-17.63	9.41	27.05
3rd Quarter 2001	9/11 terrorist attack	-14.99	4.12	19.10
3rd Quarter 1990	Iraqi invasion of Kuwait	-14.52	11.22	25.74
2nd Quarter 2002	Aftermath of technology bubble burst	-13.73	8.52	22.26
1st Quarter 2001	Bear market in U.S. equities	-12.11	5.97	18.01
3rd Quarter 1998	Russia default, Long-Term Capital Management Failure	-10.30	10.54	20.84
1st Quarter 2008	Credit crisis	-9.92	5.92	15.84
3rd Quarter 2008	Credit crisis	-8.88	-3.40	5.48
4th Quarter 2000	Dot-com bubble	-8.09	19.78	27.87
3rd Quarter 1999	Y2K worries	-6.56	-0.67	5.89
1st Quarter 1994	Increase in interest rates	-4.43	-2.10	2.33
4th Quarter 2007	Subprime crisis	-3.82	3.02	6.84
1st Quarter 1990	U.S. recession, oil spike	-3.81	1.76	5.57
1st Quarter 2003	Second Gulf War	-3.60	4.68	8.28
Table compiled by Abrams, Badhuri and Flores for the CME Group				

# The Importance of Volatility Reduction

- The key to healthy long term portfolio returns is the ability of the investor to insulate as much as possible the assets from extreme volatility. Portfolios that are especially vulnerable to shocks will inevitably underperform as the compounding advantage will lose effectiveness. The table below shows the difference in actual returns between two hypothetical portfolios whose arithmetic average annualized rate of return is the same, 10%, but the realized return of portfolio B – the most volatile - is almost 10% lower:

Portfolio A	Portfolio B
Return Year 1: +10%	Return Year B: +20%
Return Year 2: +10%	Return Year 2: -20%
Return Year 3: +10%	Return Year 3: +30%
Arithmetic Yearly Average = 10%	Arithmetic Yearly Average = 10%
Actual Realized Return = <b>33%</b>	Actual Realized Return = <b>24.8%</b>

# Managed Futures and Rising Rates

- Managed Futures as an asset class have shown historically a positive correlation to rising rates
  - Inflation hedging
  - Commodity proxy
  - Crisis alpha

# Managed Futures and Rising Rates continued

- A 2012 study by Welton researched annualized returns during periods of rising rates for the following asset classes:
  - S&P 500, MSCI World Index, 10 year Treasury, AAA Corporate bonds, Welton multi-asset futures proprietary model
- The study identified six periods of sustained rate increase in the period from 1970 to 2012: 1973-1974, 1977-1981, 1983-1984, 1987, 1993-1994, 1999-2000
- By a wide margin, the best returns in this hypothetical analysis came from the multi-asset futures model
  - Welton, "Going Up? Where to Find Returns if Rates Begin to Rise," 2012.

# Structural Advantage of Managed Futures

- Investors have the ability of funding their strategies notionally
- Because of the generally low margin requirements only a fraction of the nominal value of the investment needs to be deposited.
- The balance can sit in cash equivalent instruments earning an interest

# Beyond Index Analysis

- Most of the studies on Managed Futures performance and their complementary qualities in progressive portfolio construction are based on broad index analysis.

- The biggest hurdle for investors is to turn theory into practice

*“In theory there is no difference between theory and practice; in practice there is.” Yogi Berra*

- How does one choose a successful CTA and how does one build a strong portfolio of managers?



# Emerging vs. Mature Managers

- Mature Managers offer longer track records which allow for more detailed analysis and provide much reduced operational risk
- Emerging Managers are usually defined as having less than a 3 year track record and less than \$10 million AUM
  - Emerging Managers generally produce higher returns. Many studies, including hedge funds managers, reveal an outperformance which may range from 200 to 400 basis points
  - Lower AUM allow for more arbitrage opportunities
  - From an investor's perspective, there is the possibility to negotiate better terms

# Quantitative vs. Qualitative Analysis

- The process of selection often starts with a quantitative screening
  - Leverage: Margin to Equity ratio
  - Classic Statistics: max drawdown, peak-to-valley returns, recovery time, VAMI
  - Serial correlations (or lack thereof...)
  - Risk Adjusted Returns:
    - Sharpe Ratio – this is a relative ratio that allows to rank and compare different programs
    - Sortino Ratio – similar to the Sharpe Ratio, it allows to set minimum acceptable targets and discern good volatility from bad
    - Omega Ratio – weighted gain/loss ratio relative to any given target return level

# Quantitative vs. Qualitative Analysis continued

- Background Check
- Alignment of interest: is the manager personally invested in the strategy and to what extent of his/her net worth
- Direct conversation with the manager
  - Explain in simple terms the reason for the expected risk premium

# Operational Analysis

- Analysis of the operational framework of a CTA is of utmost importance yet often overlooked
  - CTA's succession and replacement plan (Key Man policy procedure)
  - Liquidity concerns
  - Business development plan
  - Systems redundancy
  - R&D budget

# Glossary

- **Futures Commission Merchant (FCM):** broker involved in solicitation and acceptance of futures and options on futures contracts
- **Introducing Broker (IB):** futures broker holding the relationship with the client but who delegates the work of the floor operation and execution to an FCM
- **Initial Margin:** minimum amount of funds required to initiate a certain position in the futures market
- **Maintenance Margin (also known as Variation Margin):** the amount of funds required in the account to continue to hold a position in futures (this margin is lower than the Initial Margin)
- **Mean Reversion:** strategies based on fading short term moves away from longer term averages

# Contact Information

## Capital Trading Group

One Financial Place  
440 S LaSalle Street  
Suite 2301  
Chicago, IL 60605

Ph: 800-238-2610

[nsloane@ctgtrading.com](mailto:nsloane@ctgtrading.com)

