

# EDHEC Asset Management Days

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## Workshop B: Revisiting Managed Futures & Commodities

Monday March 12th  
12:00 – 1:15pm

Chaired By:

Valere Costello *CEO, Invesdex*

# Workshop Structure

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- **Presentation:** 20 min
- **Panelist Feedback:** 20 min
- **Audience Q&A Session:** 30 min

# Workshop Panelists:

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- **Valere Costello**  
CEO, Invesdex
- **Richard Spurgin**  
Professor, Clark University
- **Hilary Till**  
Premia Risk Consultancy
- **Miroslav Mitev**  
Managing Director, Siemens, PSE E&I Fin4Cast
- **Nicholas Verwilghen**  
Partner, Head of Quantitative Research, EIM
- **Christophe Khaw**  
Head of Research, Calbria Financial

# Managed Derivatives in Diversified Portfolios: Current Research

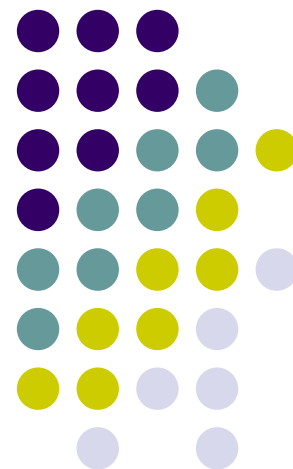
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Richard Spurgin

*Associate Professor of Finance, Clark University*

*Associate Director, Center for International Securities  
and Derivatives Markets*

*Principal, Alternative Investment Analytics LLC*

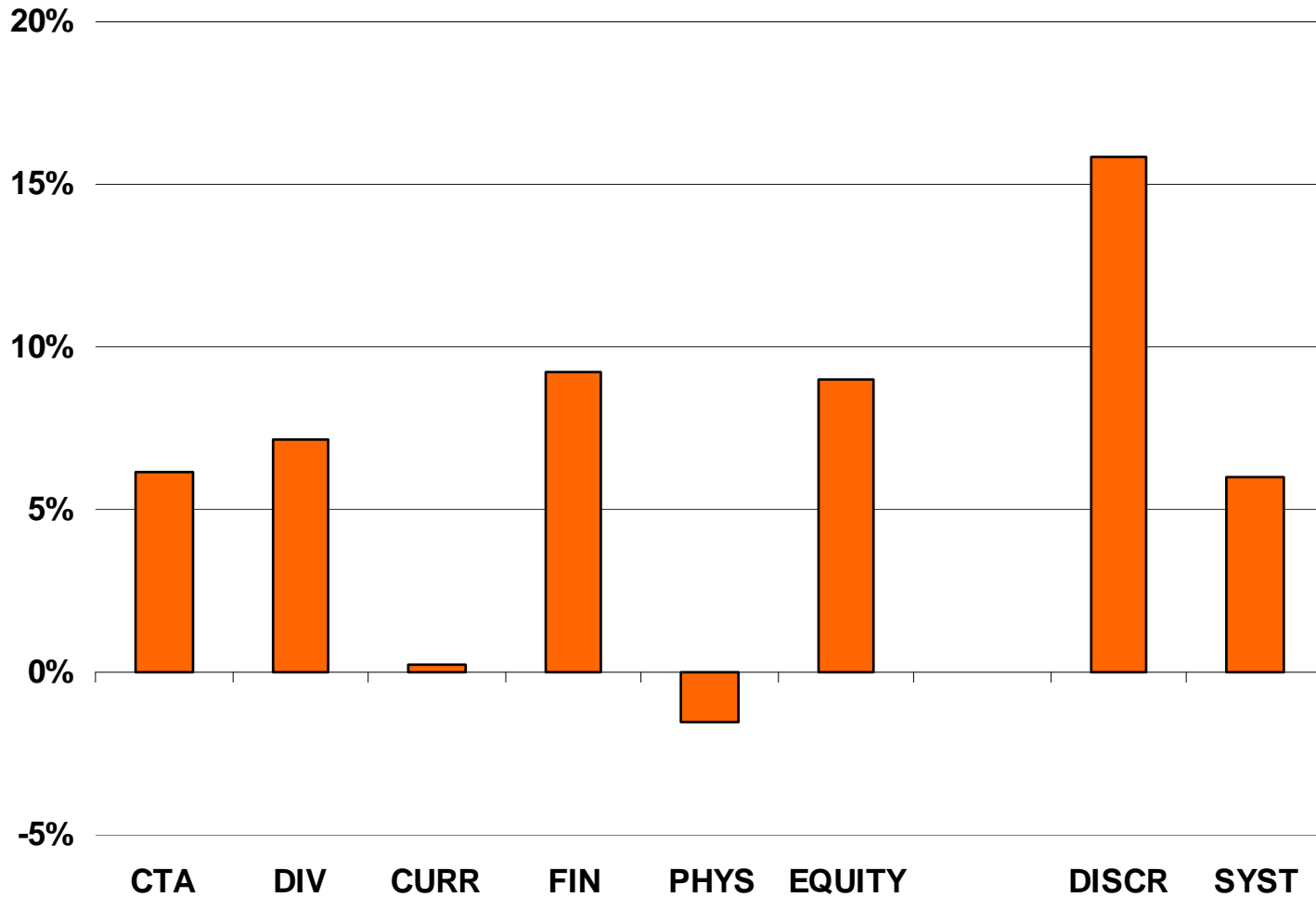




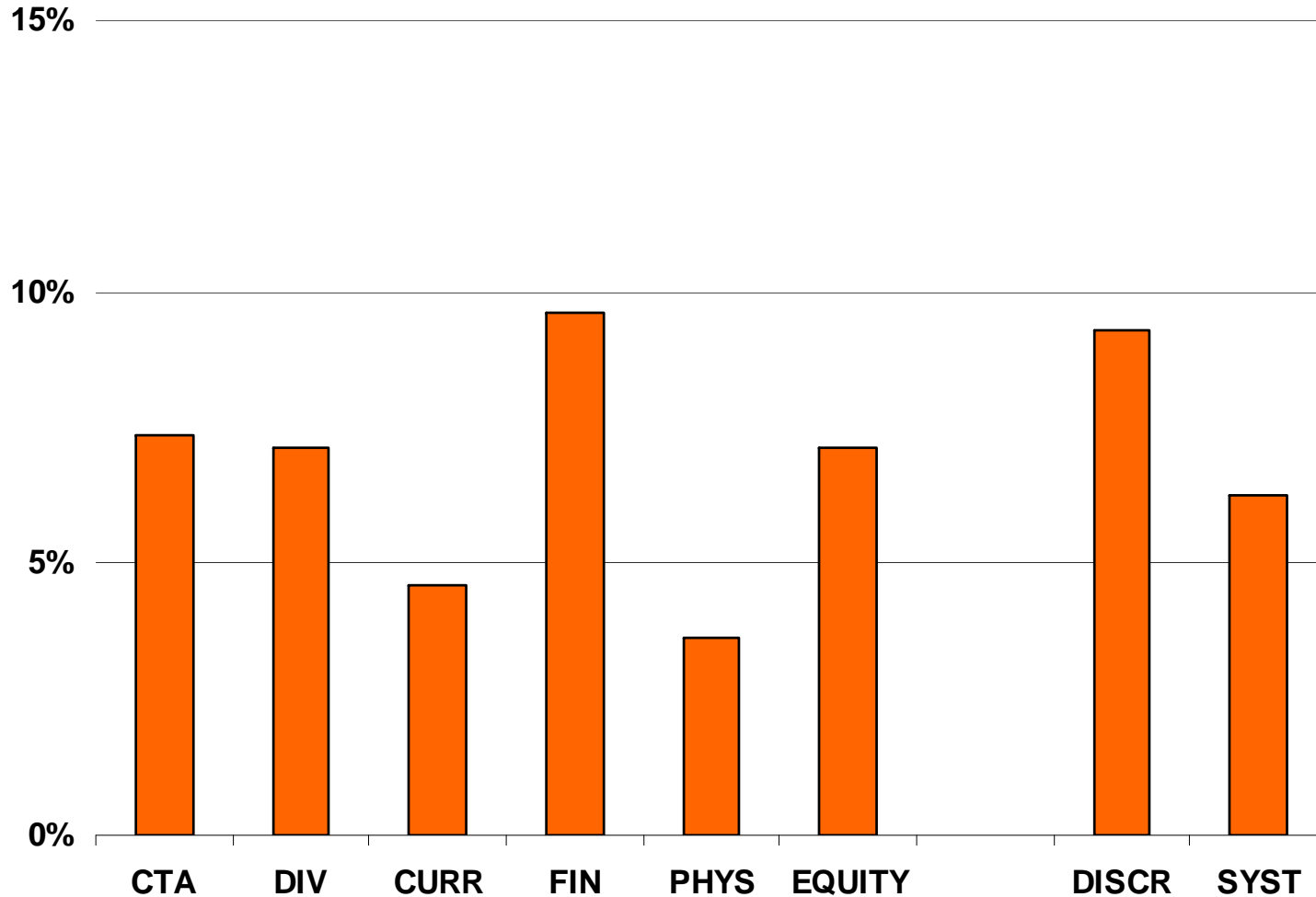
# Overview

- Review of recent performance
- Key issues related to asset allocation and selection
- New research:
  - Alternative betas in managed futures
  - Alternative betas in commodities

# Performance of CASAM/CISDM CTA Indexes in 2006 (Asset Weighted)



# 10-Year Performance of CASAM/CISDM CTA Indexes (Asset Weighted) 1997-2006





# Downside Risk Management

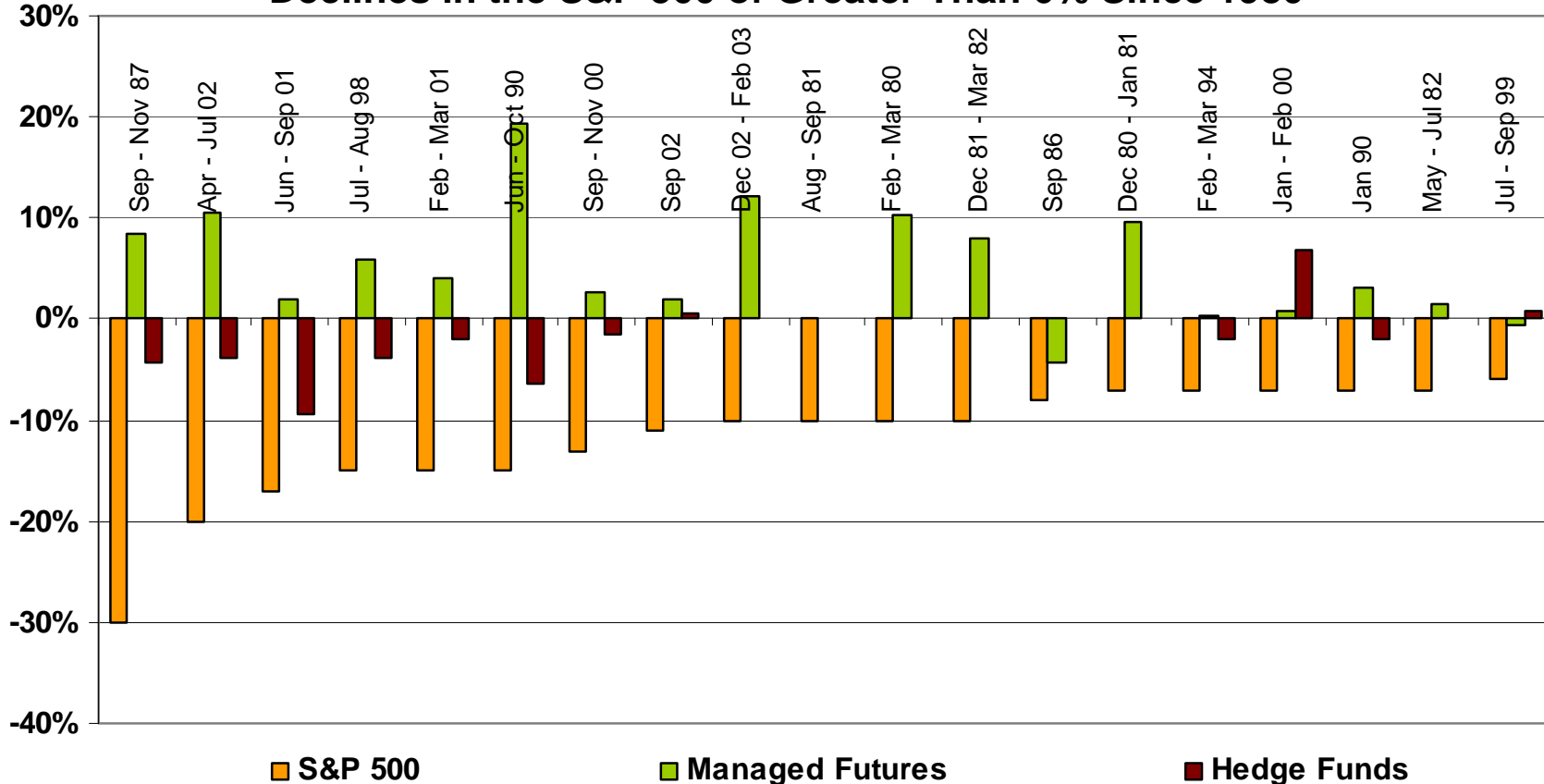
- Downside Risk Reduction: Some assets reduce portfolio losses while preserving possibility of portfolio gains
- Put options:
  - Have a negative correlation with portfolio
  - Reduce risk and reduce return
- CTAs offer downside risk protection for equity portfolios without reducing return





# Equity Portfolio Protection

## Declines in the S&P 500 of Greater Than 6% Since 1980

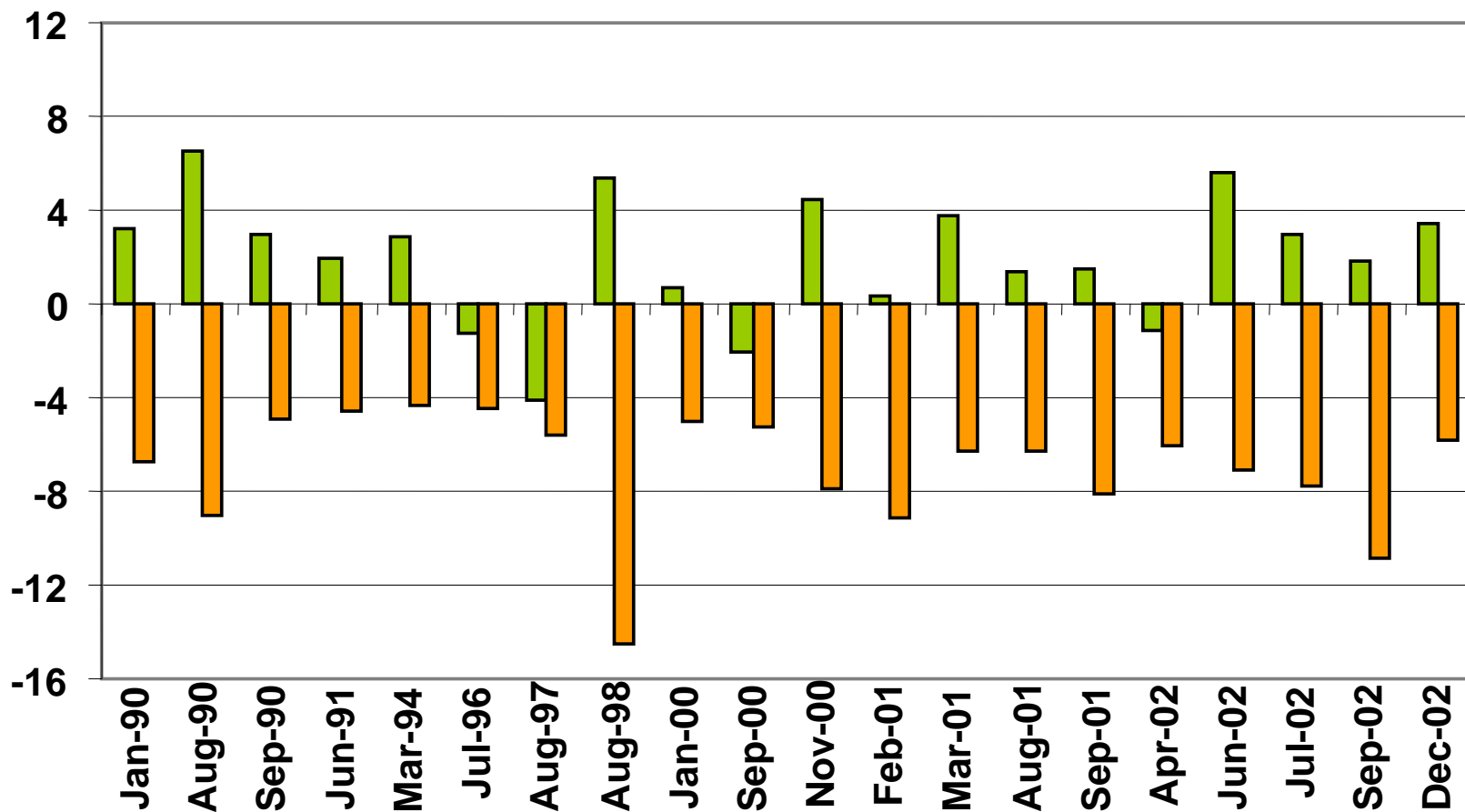


Managed Futures: CISDM (Center for International Securities and Derivatives Markets) Trading Advisor Qualified Index  
 Hedge Funds: HFR (Hedge Fund Research) Fund Weighted Composite Index



# Equity Portfolio Protection

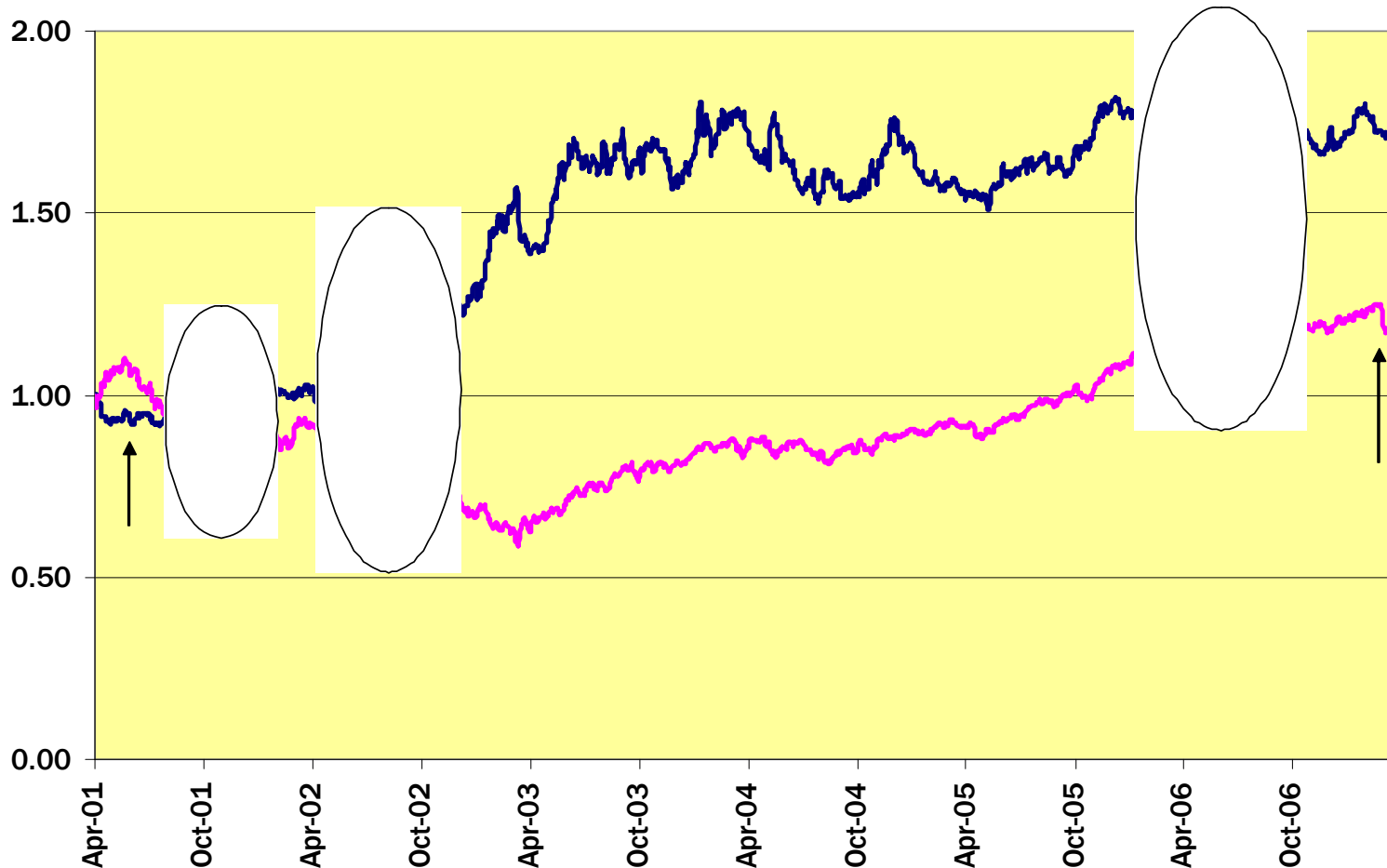
Performance of CISDM CTA Index in 20 Worst SP500 Months  
1990-2006



# Managed Futures vs. Long Equity April 2001 to March 6, 2007



Value of \$1 Invested in CISDM "35/35/20/10" Passive Trendfollowing Portfolio and CISDM Global Long Equity Futures Portfolio April 2001 to March 7 2007



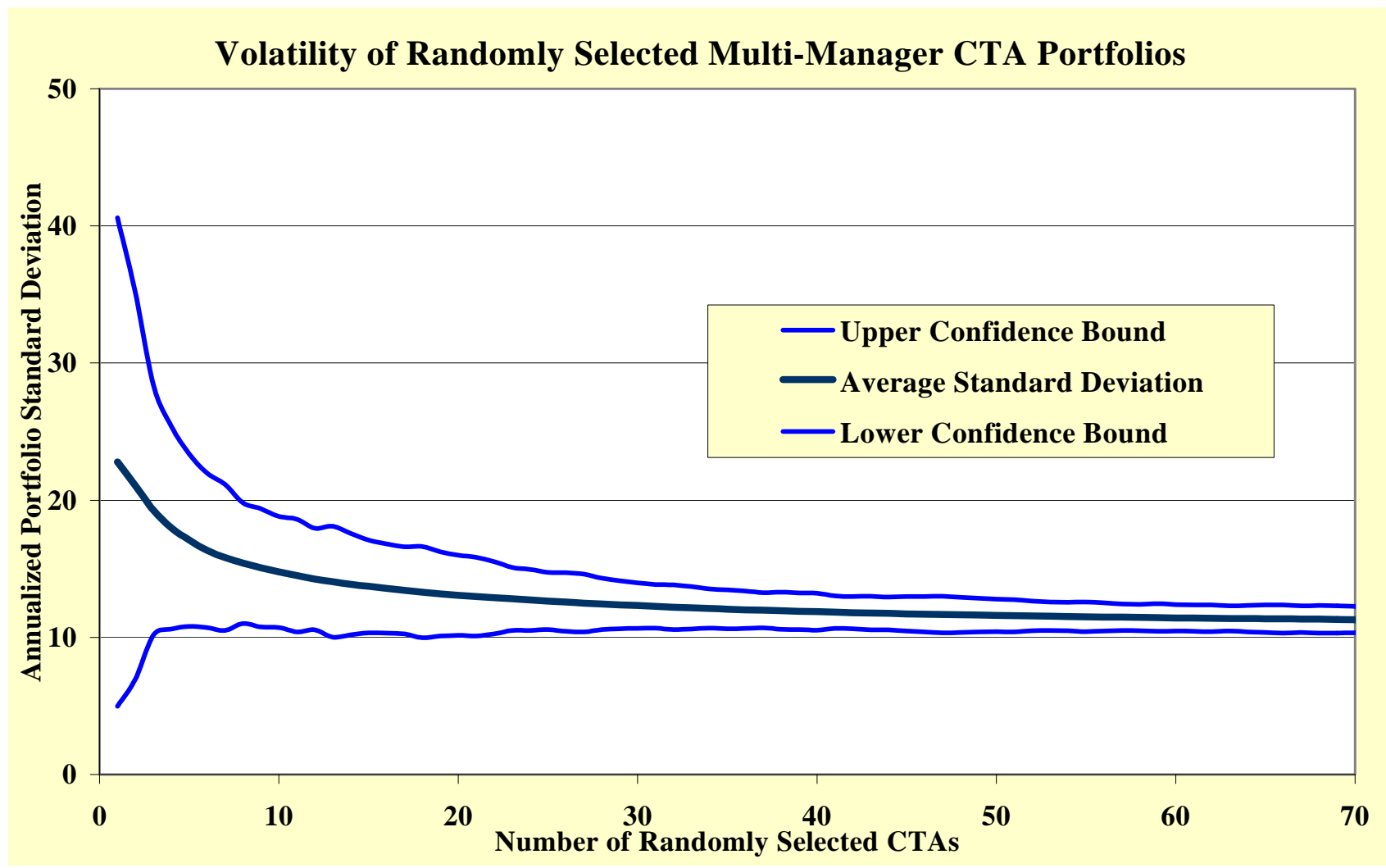


# Style Persistence

- Pro forma performance has some uses
  - CTA style persists through time
    - Volatility
      - Standard deviation of CTA returns is predictable
    - Beta
      - Correlation with other CTAs is predictable
  - Portfolios constructed from CTAs with low historical betas perform better than portfolios constructed based on high recent returns
  - *Monthly rebalancing* adds as much as 1% per year



# Portfolios of CTAs Reduces Volatility





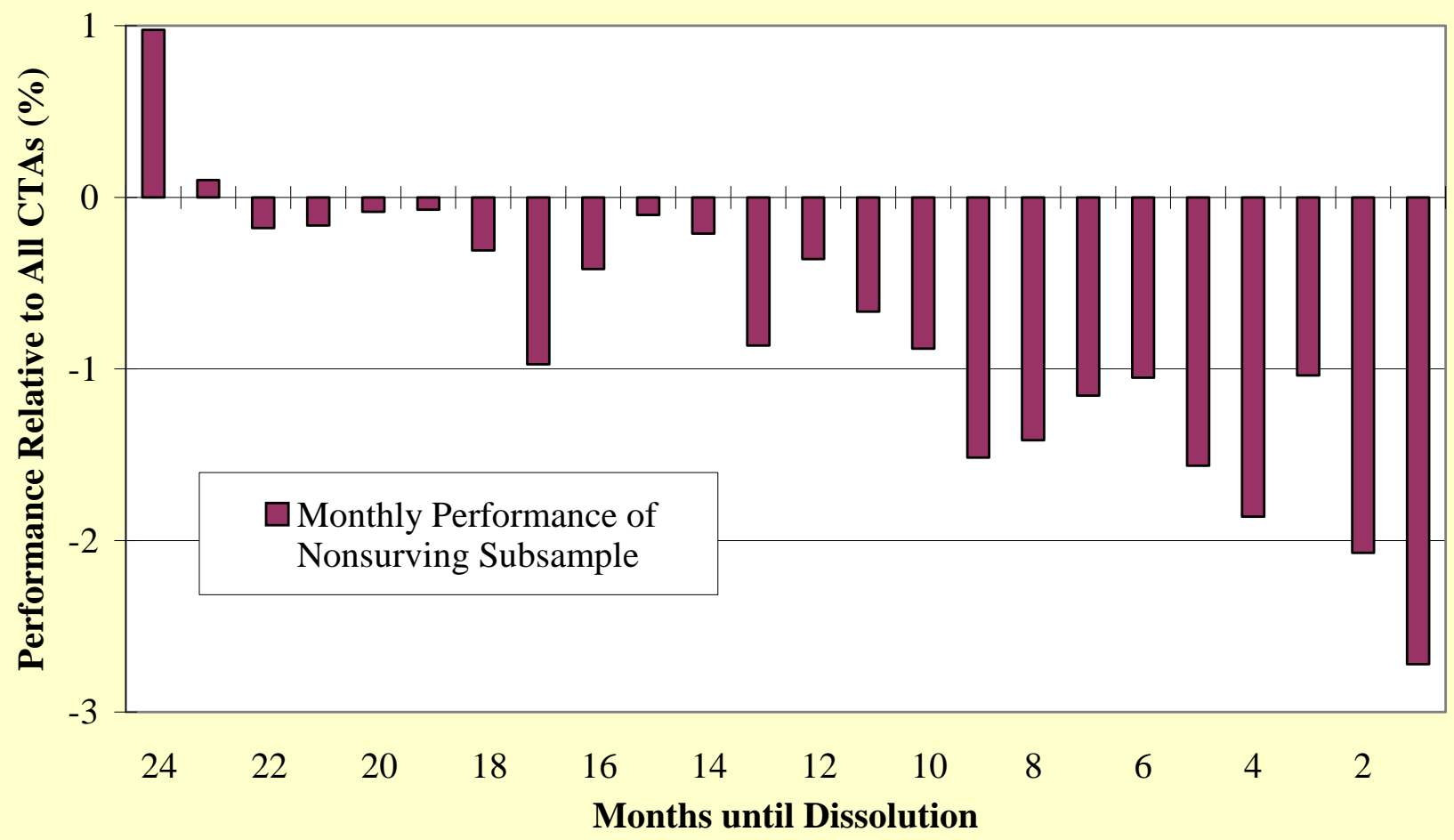
## Accounting for Survival Bias

- On average, 16% of CTA programs cease trading each year (sample period 1988-1996)
- These CTAs underperform surviving CTAs by 17% in the final 12 months of trading
- Survivor bias may result in pro forma returns overstating actual CTA returns by about 2.7% per year



# Performance Prior to Dissolution

## Relative Performance in 24 Months prior to Dissolution





## New Research on Passive Benchmarks

- MSFB indexes (**M**anaged **F**utures **S**ecurity-**B**ased) is a mechanical trendfollowing model that holds a diversified portfolio of short, medium, and long term signals across 25 futures markets).
  - Has been running since 1998, modified in 2001 and 2003.



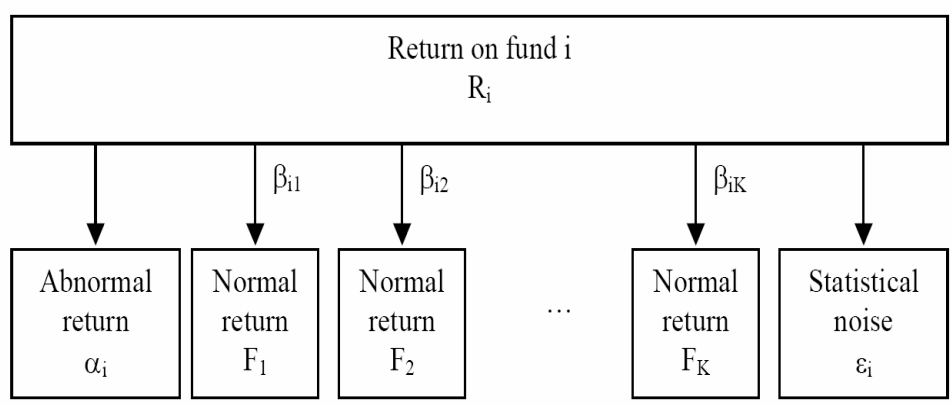


# Multi-Factor Model

$$R_i = \alpha_i + \beta_{i,1} F_1 + \dots + \beta_{i,K} F_K + e_i$$

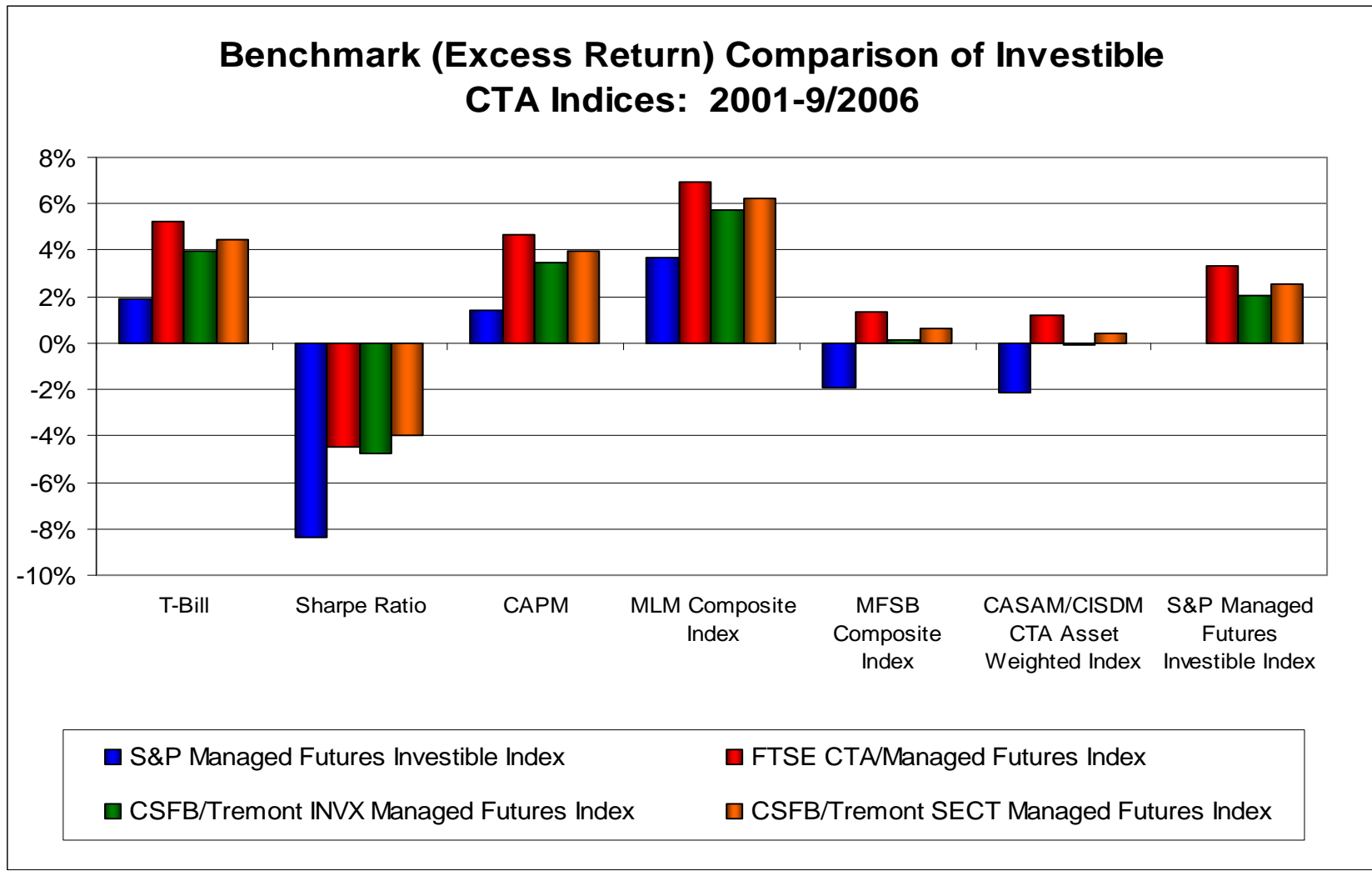
Where:

- $R_i$  = Return on fund  $i$
- $\alpha_i$  = Abnormal Return (or Alpha) for portfolio  $i$
- $\beta_{i,1}$  = Beta Coefficient of fund  $i$  for Market Factor  $K$  or Trading Factor  $K$
- $F_K$  = Return on Market Factor  $K$
- $e_i$  = Statistical Noise of fund  $i$





# Alpha of Selected CTA Benchmarks





## Summary of Results

- The trend-following component of a managed futures portfolio is an *alternative beta* that is easily benchmarked, though may be difficult to replicate.
  - *Notes:*
    - CTA returns are based on manager-reported fee levels, do not include fund-of-fund fees, etc.
    - No fees/transactions costs deducted from the MSFB or MLM returns.

# Alternative Betas in Long-Only Commodity Investment

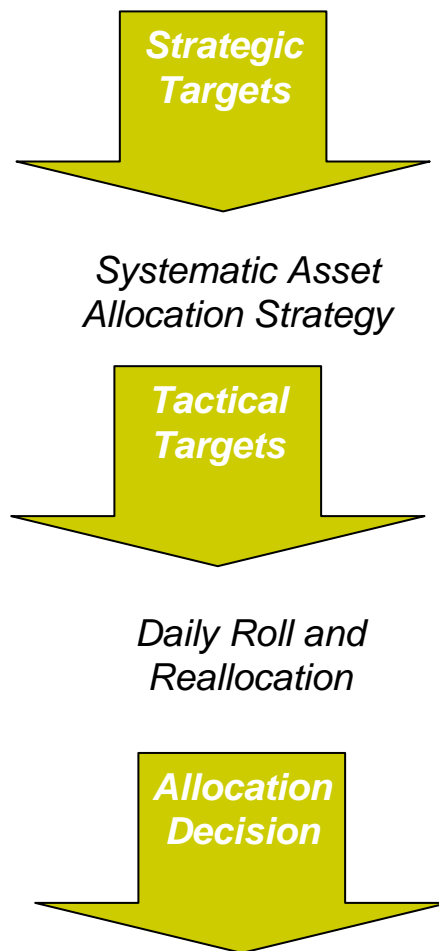


- New research
  - Introduces the cash allocation as a means of reducing risk.
  - Value-weighted: Rebalances each day to maintain target exposure and weight.
  - Dynamic asset allocation strategy overweights certain commodities based on recent momentum.
- Application of traditional Managed Futures strategies to the long commodity sector.



# Index Allocation Strategy

*A three- step process designed to enable dynamic exposure to commodities while providing downside protection.*

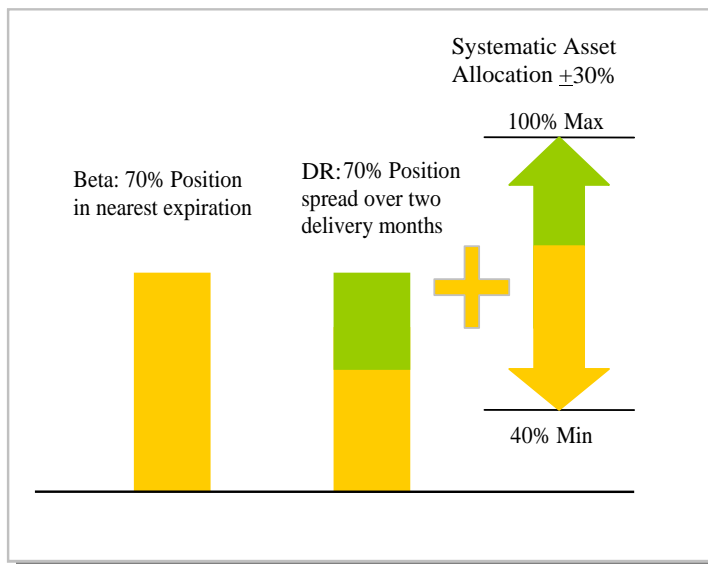


- Determine commodities to be included
- Define maximum allocation to each commodity
- Key price trend signals dictate exposure targets
- Expressed as a percentage of the maximum strategic allocation
- Net allocation targets with daily roll requirements
- Minimize turnover while implementing dynamic allocation

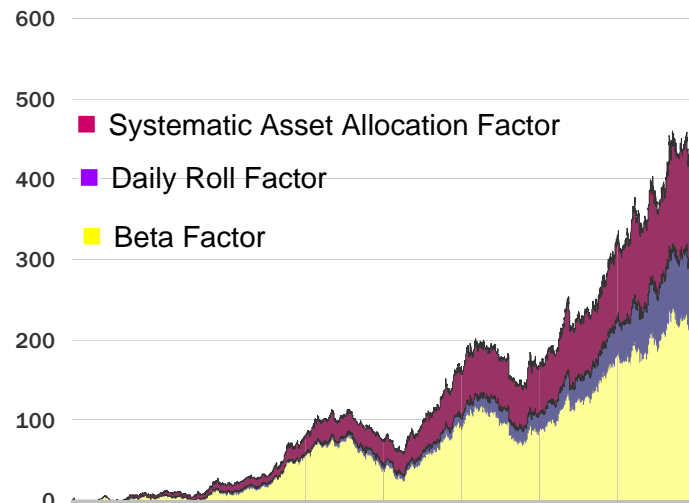


# Performance Attribution

**While existing commodity indexes offer a single source of return of commodity beta, the sources of return come from 1) commodity beta, 2) daily roll and 3) systematic asset allocation factors.**



Cumulative Factor Returns for BCI



Beta Factor: The return from holding the active contract until the contract roll date.

Daily Roll Factor: The return from the forward delivery curve for commodities.

Systematic Asset Allocation Factor:

Utilizes a momentum-based trading rule to hold more or less of a given commodity depending on recent price movement.



## About CISDM

- Non-profit academic research center affiliated with the Isenberg School of Management at the University of Massachusetts
- Editorial center for The Journal of Alternative Investments (an Institutional Investor journal)
- Supports research in alternative investments and asset allocation strategies
- For more information and copies of selected articles, go to

[www.cisdms.org](http://www.cisdms.org)



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