

## FINANCIAL FIX: CUMULUS WEATHER FUND



Fund's gross notional allocations between strategies, since inception  
Source: PCE Investors

### Focus:

Portfolio focuses on weather events - seeking to assess the effects of short-term weather on underlying asset prices - and trading only when fundamentals and weather signals are aligned

Default allocations of 40% each to the commodity and equity portfolios and 20% to weather derivatives

Equities universe: 500 international large and mid caps

Commodity universe: energy and environmental commodities

Weather derivatives: a diversified portfolio - excluding catastrophe bonds and similar "fat tail" structures

**Strengths:** ability to detect and profit from events missed by the broader market

**Weaknesses:** not always possible to eliminate all non-weather risks

**Opportunities:** under-informed markets provide very high risk-adjusted returns

Opportunities are identified using a quantitative model with a discretionary overlay to filter, structure and execute trades. Trades are structured according to the expected impact of the weather event and may be through the underlying asset or through derivatives. The weather effect is isolated using a variety of hedging techniques, including index futures, sector baskets, pair's trades, cross-asset trades and calendar spreads. Risk is reduced by systematic purchase of options.

**Threats:** non-weather factors can sometimes outweigh weather factors

### Risk

□ = low   □ = low/moderate   □ = moderate   □ = moderate to high   □ = high

Weather risk: □□□□ **this is the primary risk**

Ability to identify and exploit weather related trading ideas: □□□□

Geographical risk: □□□□ **broad based with occasional conc. in one specific region**

Market risk: □□□□

Correlation among asset classes in portfolio: □□□□

Correlations within an asset class:

Stocks: □□□□

Commodities: □□□□

Weather events: □□□□

**the primary goal of the weather derivative portfolio is to generate returns without directional or correlation risk and the fund structures its portfolio accordingly, with a variety of positions in different seasons across many locations in Europe, North America and Asia**

**Leverage used: average 1.28, highest since inception approx 3**

Liquidity risk: □□□□

**the fund could unwind all positions in one business day without material loss – in particular the weather derivatives market trades USD100 bn per year and our entire exposure to those assets is less than USD20 mn, i.e. 5% of an average day's volume**

**weather derivatives are almost unique in financial markets in having prices that are not influenced by market sentiment because the temperature will not be impacted by rises in interest rates or market crashes]**

**weather derivatives have maximum payouts ensuring losses are contractually limited even in the theoretical situation that weather risk and liquidity risk occurred together**

Key man risk: □□□□

### Performance Parameters

□ = insufficient   □ = adequate   □ = satisfactory   □ = good   □ = outstanding

Avg. no. of positions held in the portfolio: **around 25 but quite variable depending on prevailing opportunities**

Annualised volatility since inception is: **13.42%**

Fund tends to outperform:

**Low volatility markets with unusual weather**

Fund tends to underperform:

**In periods of very high market volatility with no exceptional weather events**

## FINANCIAL FIX: CUMULUS WEATHER FUND - II

Based on your stress tests, probability of fund experiencing a sigma 5 events and anticipated loss:

The Fund actively minimises its tail risk and invests several % of AUM each year in options to protect against adverse events (for example, oil call options and equity index put options)

The Fund considers a large number of scenarios and quantifies the "worst case" loss of less than 5% with all positions losing money simultaneously (including spreads blowing apart)

Suitability of inclusion in:

A conservative portfolio: ☒ ☐ ☐ ☐ ☐






A balanced portfolio: ☒ ☒ ☒ ☒ ☐

An opportunistic portfolio: ☒ ☒ ☒ ☒ ☐

Capacity that can be managed: USD:400 mn

Annual expense ratio: the fund spends approx 3-4% per year on options to minimise tail risks

### Outlook

 upside potential 
  upside to range bound 
  range bound 
  range bound to down 
  downside potential

Barriers to entry: High

Performance hinges on possession and ability to apply weather expertise

Edge is very persistent due to the high barriers to entry and the increasing importance of weather as a factor in financial markets

Scope for a weather fund: 

The fund does not focus on extreme conditions (like hurricanes) but on equally important but more subtle conditions like warmer than normal weather which, for example, moved the oil price by USD10 this winter

Ability to the fund to deliver uncorrelated returns to:


CSFB Hedge Fund Index: 0.411, r2 0.17

GSCI Total Return Index: 0.203, r2 0.04

Brent Crude: 0.071, r2 0.01

S&P: 0.168, r2 0.03

Ability to deliver targeted returns over:

The next 12 months:  very high

Over the next 3-5 years: high

### Investment Insights

Targeted annual net returns: 20% (21% net for 2006 and 11% net 2007 YTD)

Target audience: institutional investors, HNWI - minimum subscription price is USD1m

Level of complexity: moderate to high

To optimise returns, recommended avg. holding period: 1 year

because the fund is systematically long volatility and can have out-sized returns in some periods, and because weather patterns can conspire against the fund for a few months

Available to investors: globally

Base currency: USD

Other currencies the fund is available in: GBP, EUR

Liquidity: monthly with 90 days redemption notice; no lock ups

Transparency: fairly high

PCE Investors is authorised by the Financial Service Authority

Fee structure: 2% management; 20% performance