



Carpenter Analytical Services

Market Models & Metrics

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Hedge Fund Analytix

HFA 4th Friday

July 25, 2008

Current Exposure Summary:

- **Stocks.** “Bull or Bear?” is the central question underlying the equity exposure path. Interpreting in context of the last five years (or six!), current exposure is at its 14th percentile, with plainly (and significantly) positive historical outcomes for the three-month horizon. But one-month forward history is now only neutral.

For bear market context, we've added here a supplemental page (p. 9) showing forward returns from current exposure based on the bear period 3/31/00 to 12/31/02. Surprisingly (somewhat), one-month bear market outcomes for current exposure were positive (+1.63%) and significantly better than outcomes from other exposure quintiles. But average *three*-month outcomes are not only negative from current exposures (-5.03%)...but wildly variant reflecting bear market volatility. See page 9 for distributions graphic and further comment.

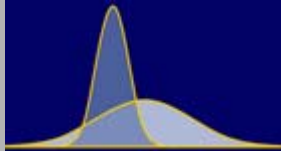
- **Bonds.** Both one-month and three-month forward bond returns from middle quintile are significantly above-average. The “retreat” from exposure highs (of which we expressed concern last month) seems to have abated.
- **Currency.** Still no change. Ongoing modest but definite and confident short exposure continues to indicate dollar weakness. (We also track separate *Euro* and *Yen* exposures among FX traders; email for details.)
- **Commodity.** Exposure remains in 3rd quintile. Three-month outcomes have been positive, but one-month history is silent.

These four assets are elaborated graphically on pages 2-5, with 5-year exposure paths and forward returns distributions. Longer-term exposure paths on pages 7-8. Bear market supplement on page 9. See *End Notes*, page 10, for explanatory context.

Managed Futures hedge funds (CTAs) are aggressive competitors. They go long and short; they use multiple asset classes; they rapidly adapt to emerging market trends. CTA exposure tracking shows tactics and sentiment dynamics in these aggressive funds. Our exposures model has been tracking fund strategies for more than fifteen years.

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U.S. Equity Exposure

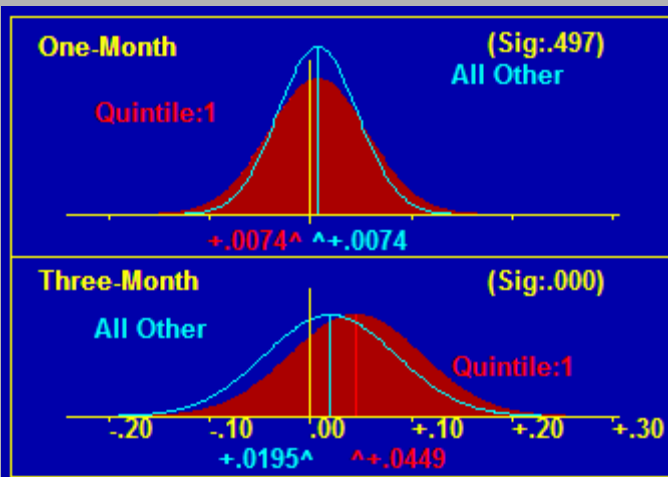
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Five Year Exposure Path



Forward Return Distributions: Quintile #1



Red curves illustrate distribution of past equity returns 21 days (top) and 63 days (bottom) forward from *current* exposure quintile. Blue curves represent returns from "other" quintiles. See end notes page 10.

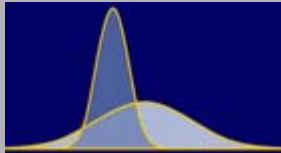
Equity Inference

Red hashmarks above show quintiles and "outside" deciles of last five years exposure. Blue hashmarks above show quintiles from last bear market (2000-02).

Forward returns distributions at left represent experience of last five years. One-month forward has no significant deviation from average, but three-month forward is significantly positive (+4.49% vs +1.95% all other quintiles).

See page 9 for supplemental forward returns distributions under bear market conditions.

Bottom Line: Current equity inference depends totally on bull or bear context. 1-month OK, but 3-month wide divergence.



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Fixed Income Exposure

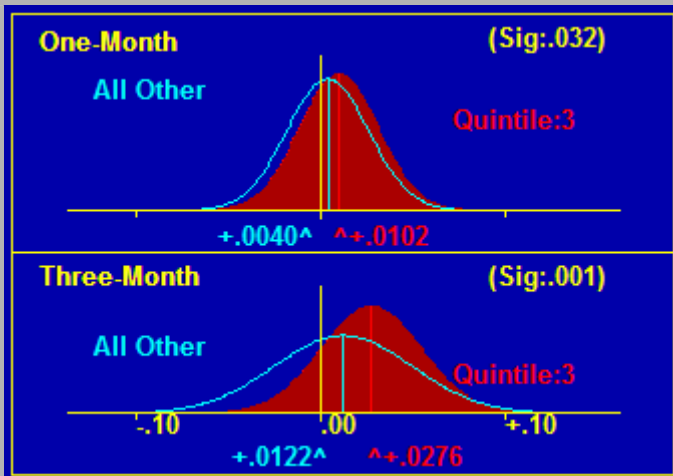
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Five Year Exposure Path



Forward Return Distributions: Quintile #3



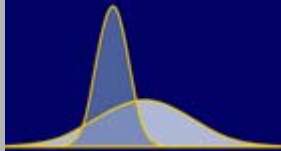
Red curves illustrate distribution of past bond returns 21 days and 63 days forward from *current* exposure quintile. Blue curves show returns from "other" quintiles. See end notes, page 10.

Bond Inference

Bond exposure remains in 3rd quintile as it was at last month's 4th Friday. Nearly at median; 49th percentile of five-year exposure.

One-month forward returns from 3rd quintile have averaged +1.02% (top red distribution), and 3-month returns have averaged +2.76% (bottom red). Both of these averages are significantly higher than outcomes from "all other" exposure quintiles.

Bottom Line: Historical strength from 3rd quintile is encouraging for above-average returns.



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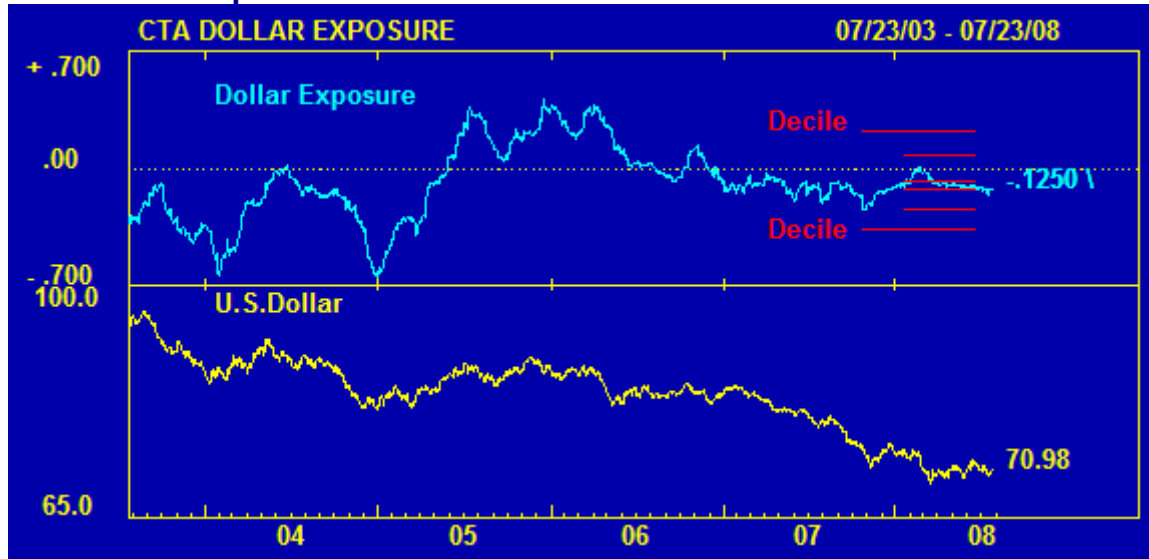
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U.S. Dollar Exposure

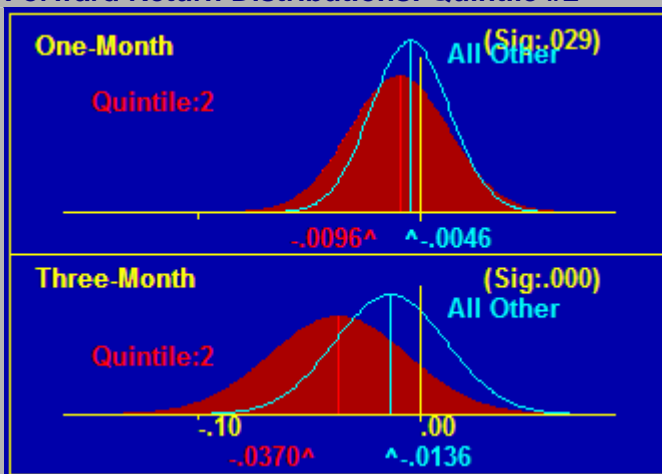
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Five Year Exposure Path



Forward Return Distributions: Quintile #2



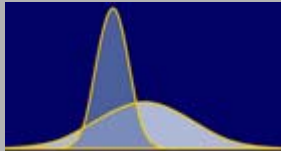
Red curves illustrate distribution of past dollar returns 21 days and 63 days forward from *current* exposure quintile. Blue curves show returns from "other" quintiles. Significance tests difference in red and blue means. See end notes, page 10.

Dollar Inference

Dollar exposure remains insistently short, now at 37th percentile, and down again from month ago. It continues to slide deeper short, while avoiding extreme pessimism like '04 and '05. Both 1-month and 3-month forward returns (red distributions at left) show significant negative outcomes.

The modest but confident short position has worked out very well over the past 1½ years, with no reason not to expect it will continue.

Bottom Line: Historical stats still say continue expecting substantial dollar weakness.



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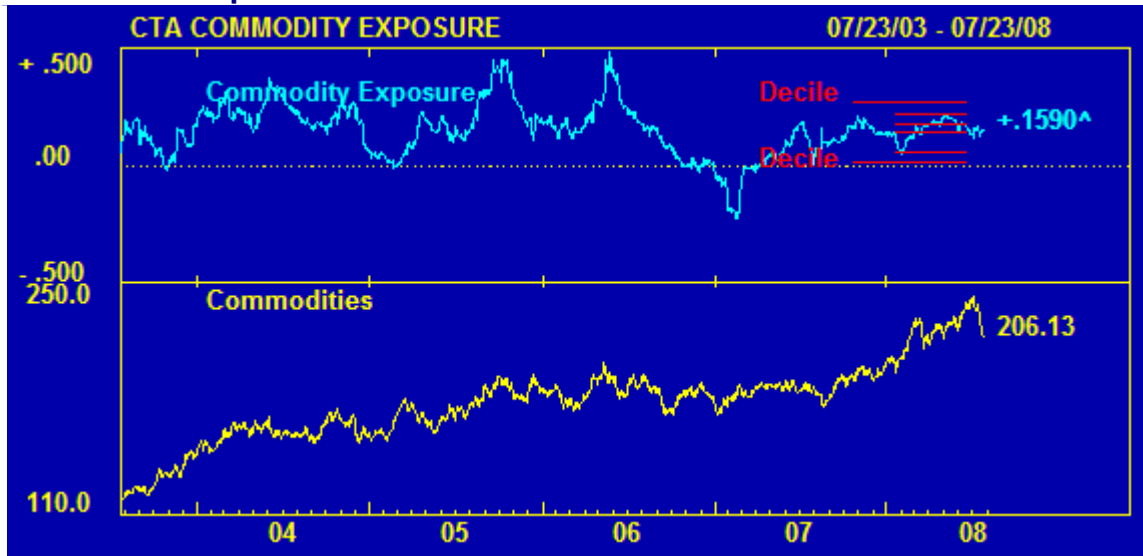
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Commodity Exposure

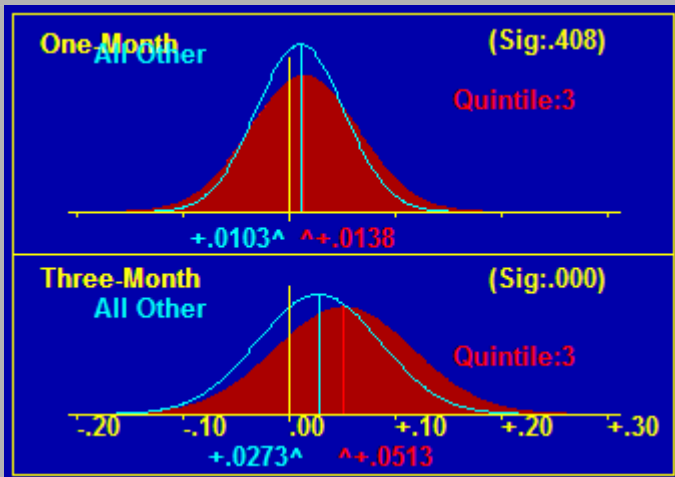
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Five Year Exposure Path



Forward Return Distributions: Quintile #3



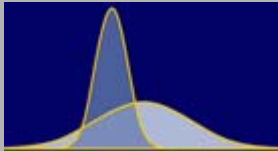
Red curves illustrate distribution of past commodity index returns 21 days and 63 days forward from *current* exposure quintile. Blue curves show returns from "other" quintiles. See end notes, page 10.

Commodities Inference

Commodity exposure has fluctuated without direction for the past month, including the recent price drop as energy retreated. One-month forward returns non-significant; three-month forward has averaged +5.13%

Last month we noted declining exposure posed some danger for prices. That declining exposure remains somewhat countervailing, but 3-month inference (+5.13%) is notyable.

Bottom Line: Exposure level is constructive for 3 months, but very near-term is ambiguous.



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Exposures Summary

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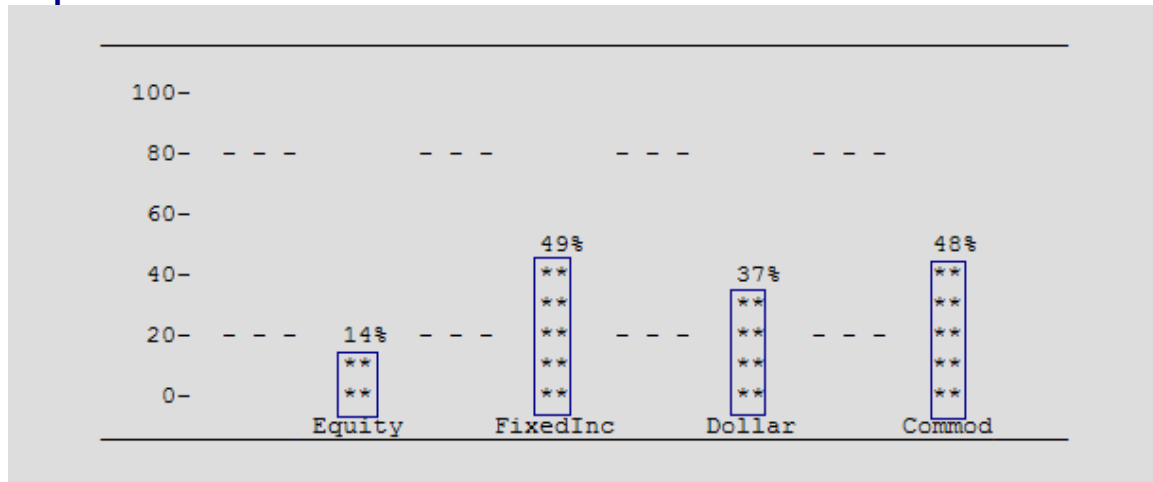
Exposures Data Summary July 25, 2008

Exposure Ranges

OVERALL FROM 2000				
	Equity	FixedInc	Dollar	Commod
High	.33	.45	.42	.49
Low	-.59	-.44	-.66	-.23
Last	-.04	.02	-.13	.16
Percentile	40	35	36	61
LAST FIVE YEARS				
	Equity	FixedInc	Dollar	Commod
High	.33	.26	.42	.49
Low	-.16	-.44	-.66	-.23
Last	-.04	.02	-.13	.16
Percentile	14	49	37	48
5 Days Ago	15	45	36	35

Red rectangle indicates top or bottom quintiles.

Exposure Percentiles



Thresholds of over-extension (with contrarian inference) are defined at 20th and 80th percentiles.

HFA Weekly gives summary data and charts. Once a month, **HFA Fourth Friday** adds forward returns distributions, significance stats, and summary inference.



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Longer-Term: Stock & Bond

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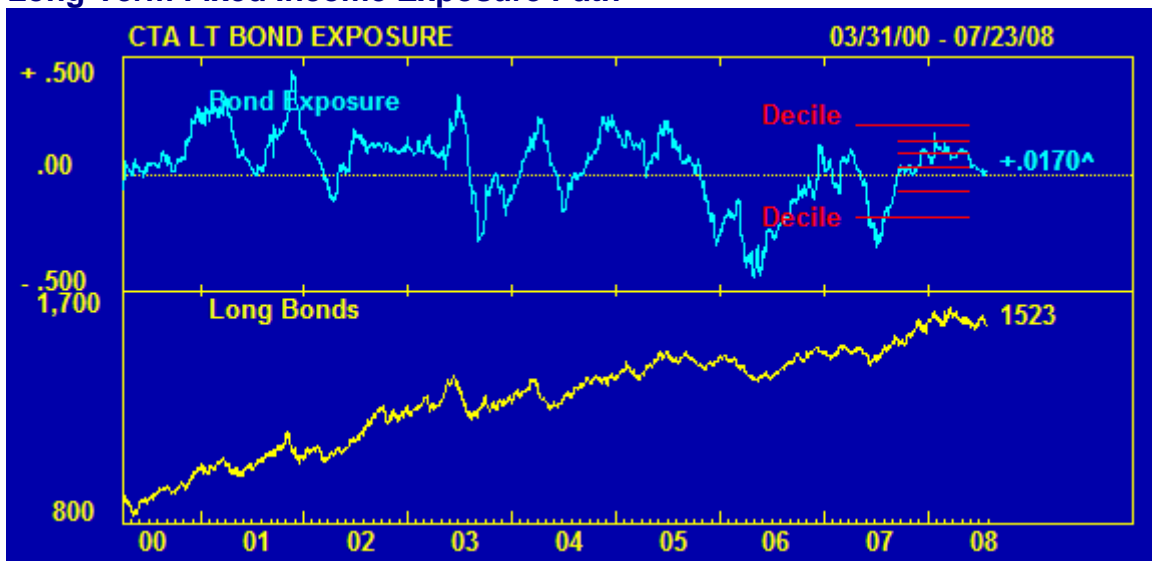
July 25, 2008

Long-Term Equity Exposure Path

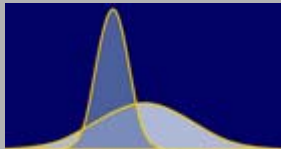


CTA equity exposure was negative throughout the bear market of 2000 into 2003. Exposure turned predominantly positive in the bull market. The range of “extreme” bullish or bearish sentiment must be considered relative to the era. Red decile and quintile boundaries above are based on entire 8+ years. Blue hashmarks show bear market quintiles (see p. 9).

Long-Term Fixed Income Exposure Path



The LT bond exposure path turns sharply from extremes, usually with market turn coinciding. Net bond exposure range is notably lower in past few years, suggesting boundaries of “extreme” sentiment best gauged focusing on nearby years (as on page 3). Red decile and quintile boundaries above are based on entire 8+ years.



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Longer-Term: Dollar & Commodity

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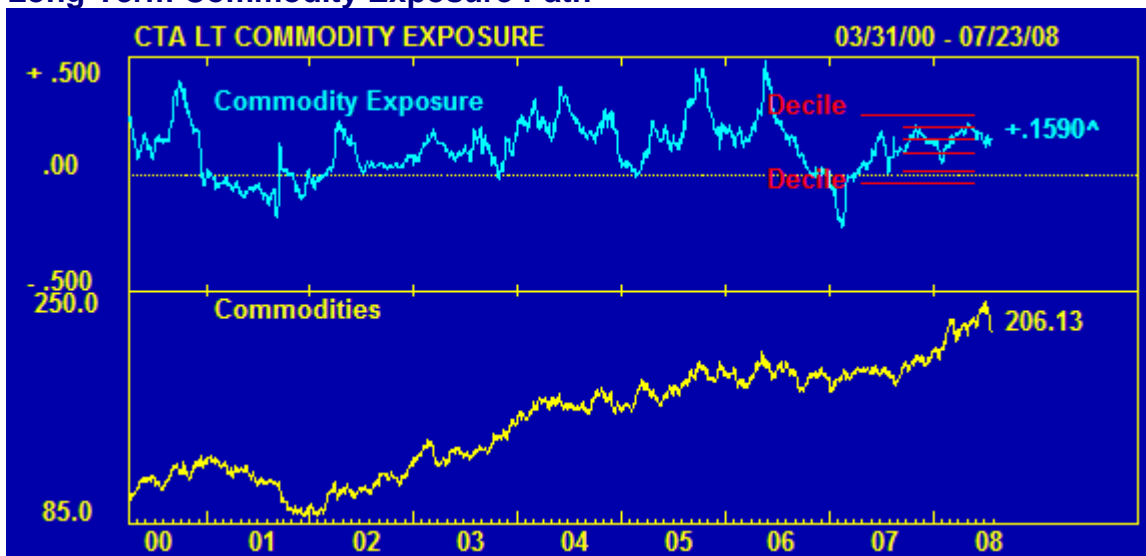
July 25, 2008

Long-Term Dollar Exposure Path

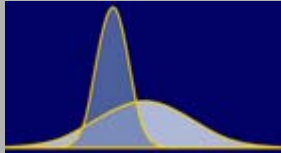


Exposure range shifted downward as the dollar approached its top in 2001, then finally short and holding short in 2002-03-04. Periods of modest short did well; over-bearish shorts indicated intermediate bottoms. Recent negative exposure months are nowhere near those over-wrought extremes. Red decile and quintile boundaries above are based on entire 8+ years.

Long-Term Commodity Exposure Path



Commodity exposure remains net long most of the time. Gauging short-side exposure extremes is difficult due to limited negative sample. Long-side extremes often reverse sharply (as with fixed-income), initiating commodity price retreat. Decile and quintile boundaries above are based on entire 8+ years.



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Bear Market Inference

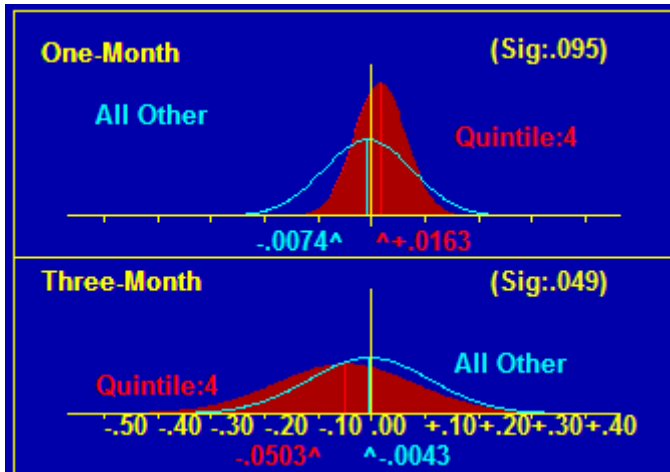
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Equity exposures remained negative through the bear market of 2000-2002. Within this lower register, the general contrarian principal remained: when exposures reached into the bottom of the relevant range, prices were due for advance, and when at the top of the relevant range, prices were due for renewed decline.

Daily exposures are re-calibrated for quintiles in the bear market (3/31/00 – 12/31/02), and forward returns (Value Line) are calculated for one-month and three-months forward from each day.

Forward Returns: Bear Market



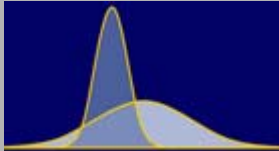
The forward returns from each quintile are compiled into distributions. Then today's (2008) exposure (-.038) is located within that 2000-2002 quintile structure (which turns out to be 4th quintile from bottom; 2nd quintile from top). Thus the solid red distributions at left show forward returns from 4th quintile, back in the bear era. The blue line distributions show forward returns from quintiles 3,2,1.

At the one-month horizon (top curves), 4th quintile returns averaged +1.63%, compared with -0.74% from the other quintiles. This difference is marginally significant (.095) given the magnitudes, variances, and sample size.

At the three-month horizon (bottom curves), 4th quintile averaged -5.03%, compared with +0.43% from the other quintiles. This difference is definitely significant (.049) given the magnitudes, variances and sample sizes. Note the three-month variances (spread of the curves) in this bear market context are far larger than any other distributions shown in this HFA report. Outcomes as negative as -20% are not rare.

Although the hedge fund exposures analysis does not specifically answer whether the bull or bear context is current, note that the recent exposure lows of April-May arose in a local price bulge, not as a downside price-chasing pessimism (see line graph, page 2). Because the April-May shorting was *successful* rather than over-wrought, we draw some inference the negative (short) exposure was likely high-end of negative exposure range, rather than low-end of positive range. Other (unrelated) metrics here also support bear context; call or email for particulars.

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****End Notes****

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Hedge Fund Analytix gauges strategy and sentiment in *Managed Futures* hedge funds. High and rising exposures reflect bullish position; low and falling exposures reflect bearish position. Extreme high or low exposures can imply over/under-confidence. Overextension thresholds are set at 1st and 5th quintiles. Following are key *HFA* foundation structures and concepts.

HFA 4th Friday presents monthly exposures analysis; *HFA Weekly* updates exposures other Fridays.

Managed Futures (CTA) Funds. *Managed Futures* funds represent a key element of the hedge fund universe. They use long, short and hedged strategies; they shift freely among asset classes; they adapt quickly to market conditions. They are tactically agile and market-sensitive. Tracking CTA fund exposures provides insight into highly proactive professional sentiment.

The XPO Exposures Model. Exposures series are derived statistically in a kind of “reverse engineering” from daily return streams. The analyses track aggregate hedge fund indexes relative to aggregate asset indexes; they do not represent individual funds or specific portfolio positions. Exposures paths are non-scalar sensitivity factors, each interpreted in context of its own history. Ebb and flow of exposure paths indicate direction of “index equivalent” positions and trends.

Sentiment Metrics. Exposures analysis speaks to “sentiment” mostly at extremes. Extreme positions usually imply extreme sentiment, and extreme sentiment often precedes market change. We use top and bottom quintiles (5th and 1st) as thresholds of “extreme” position, and also identify specific percentiles (0-100) of daily historical exposures. The XPO model can also reveal trend-chasing behavior (raising exposure as prices advance, or selling-off as prices fall), which can reflect unbalanced sentiment even when simple exposure *levels* may not be extreme.

Forward Returns Distributions. Market outcomes are inherently stochastic. *Hedge Fund Analytix* embraces the uncertainty, giving implied market outlook as a *distribution* of returns, based on mean and dispersion of historical outcomes from a given state. Dispersion of outcomes affects forward confidence. Absolute outcomes are era-specific, so are less important than outcome *differentials* across exposure states.

Statistical Significance. Significance estimates here are based on difference-of-means tests between quintile outcomes and non-quintile outcomes on “longer” side of exposures distribution. Significance gives estimated probability that an observed difference could arise merely due to chance variation (under given set of findings). Smaller values mean higher significance. Thresholds of .10, .05, .01 are common for confident inference.

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Past returns give no assurance of future performance.

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