

# “Skewing Your Diversification”

## *Hedge Fund Attributions*

International Association of Financial Engineers (IAFE)

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Hosted by Goldman Sachs

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# Mark Shore's Background

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- MBA with concentrations in Finance, Behavioral Science & Econometrics from the University of Chicago 1998
- BS in Finance from DePaul University 1987
- 20 Years experience in the Alternative Investment industry
- COO of VK Capital Inc (wholly owned CTA subsidiary of Morgan Stanley) 1997 to 2006
- Started career on the floor of the CBOT for E.F. Hutton, witnessed stock market crash of 1987 in the bond room, grain rally from the drought of 1988, assistant to grain analyst
  - Independent futures trader
  - Senior Research analyst / Product manager CRSP
  - Former President & President Emeritus and current board member of the Chicago GSB NY Alumni Club
  - Co-founded “Hedgies on Wheels”, a cycling group for the hedge fund community

# Outline of the Chapter

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- **Keep the study simple**
- **In finding assets to be asymmetrical we asked:**
- Will the Sharpe ratio overstate (understate) the risk-adjusted returns by de-emphasizing the downside volatility (penalizing upside volatility) of assets with negative (positive) skewness?
- Are you missing something by using the standard deviation?
- Will low correlations and asymmetrical returns = a need to utilize co-skewness and downside risk of portfolio effects?
- How do hedge funds and managed futures perform individually and simultaneously as diversifiers in a traditional portfolio (stocks and bonds) with regard to positive & negative vol and skewness?
- Tested 5 portfolios
  - expanded Prof Kat's 2002 seven-year study of hedge funds and managed futures with longer duration of 14-years and different benchmarks with similar results proving temporal and benchmark robustness

# Main Points of the Chapter

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- 1) Assets tend to be asymmetrical: Understand if the volatility originates more from upside or downside returns
  - Volatility is similar to cholesterol ( good and bad volatility)
  - Kahneman & Tversky (1979) Prospect Theory
  - Sharpe ratio becomes less relative, Sortino ratio more relative
  - S-ratio = upside deviation / downside deviation >1 or <1
  
- 2) Co-skewness of the portfolio components does matter
  - Utilizing skewness and the S-ratio with alternatives demonstrates we can reduce some of the tail risk or “volatility shocks” of a traditional portfolio
  - Negative (positive) skewness = short (long) optionality
  
- 3) We found managed futures offered more downside protection than hedge funds due to positive skewness & greater non-correlation
  - Hedge funds may offer higher returns, but with the risk of negative skewness, higher correlation & greater downside vol
  - When managed futures & hedge funds are combined they may offer justification for allocation – less downside volatility and greater upside

# Take Away of the Chapter

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1) Low standard deviation could mean:

- low leverage, smooth returns due to stale pricing, S-ratio  $< 1$ , negative skewness

2) Does higher standard deviation = more risk?

- Not necessarily, due to greater potential for upside returns
- S-ratio  $> 1$ , positive skewness, less consistent returns

- **Know where the volatility originates from**

3) Think of a portfolio for the “sum of its parts”

- How does each component compliment the net results of the portfolio?
- Sharpe (1994): a smaller correlation to a portfolio & smaller Sharpe ratio may add greater value
- Schneeweis & Spurgin (2000): Alternative investments are additions to a portfolio, returns are not as important as the overall benefit

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