# Case Study: Why Portfolio Protection for an Endowment

Mike Edleson

Chief Risk Officer

The University of Chicago


Volatility Investing

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# Wrong-Way Risk & Investing

[It's a Conspiracy against Linearity]

Markets

Products

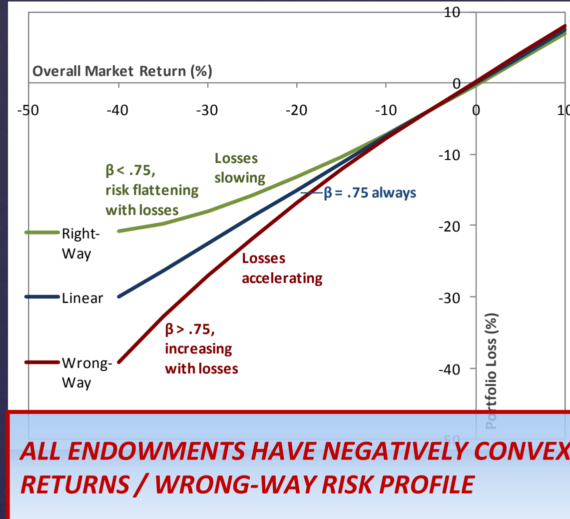
Strategies

Structural (Brittle)

Agency issues

*Your Beta / Exposure isn't what you think it is, when it matters most*

Wrong-Way Risk-Return Profile

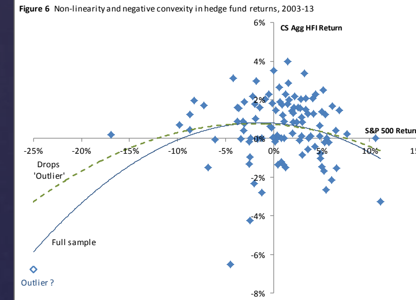



**ALL ENDOWMENTS HAVE NEGATIVELY CONVEX RETURNS / WRONG-WAY RISK PROFILE**

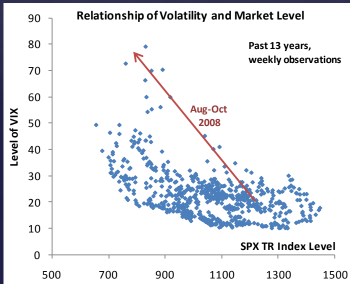
Our beta for up markets is 175% of our beta for down markets

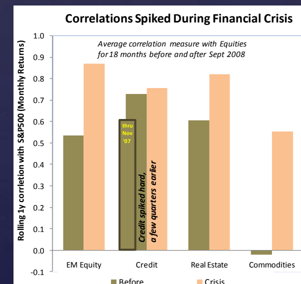
AND
Rebalancing as a Short Put
Illiquidity & Leverage
Push for Returns

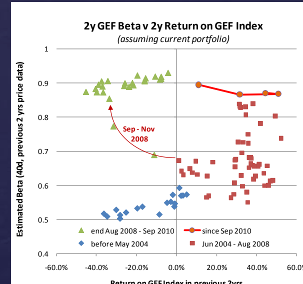
Negative Convexity in HF Returns

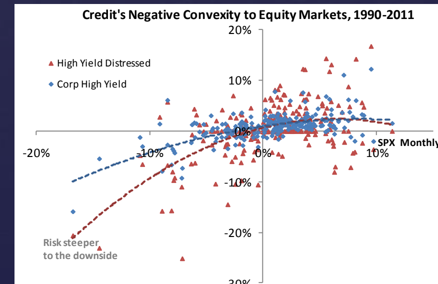



Vols Spike → Correlations Spike → Betas Spike → Carry in Products → Non-Linear Fees

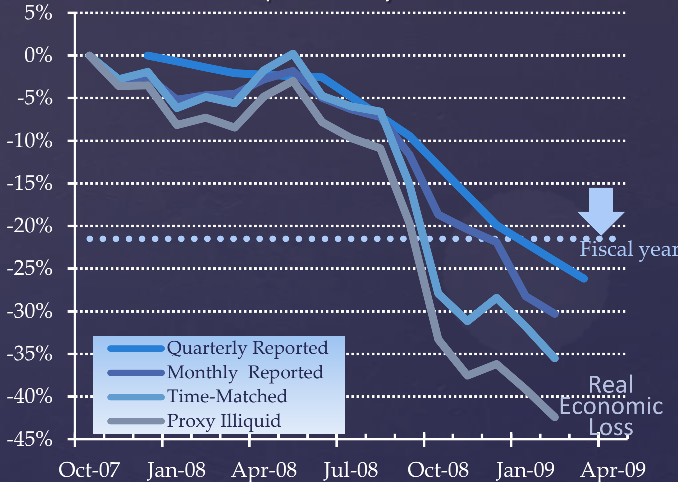


# Meeting the Needs of the University
# Tail Risk vs. The Higher Purpose




5% Spending Rule (5.5% here)

–40% Scenario ▼

9.2% payout

70-75% Privates

for a few years

Is a 9-10% payout with 25-30% in "liquid(?)" assets sustainable?

Liquidity Needs: $1.2 – 1.4B in replay of crisis (while $7 →$4.7B)

*Predictable Cash Flow to meet Important LT Strategic Operations*

Does our "long term" investment horizon really excuse all sins?

<u>Enterprise Risk Perspective</u>

Gifts not only smaller, but not given (high β)

Debt shoots up, Enterprise more levered

Hospital & Grants revenue potentially collapses

*At this exact point, our liquidity disappears, and our investment risk skyrockets. Is this OK?*

**Tail Protection**

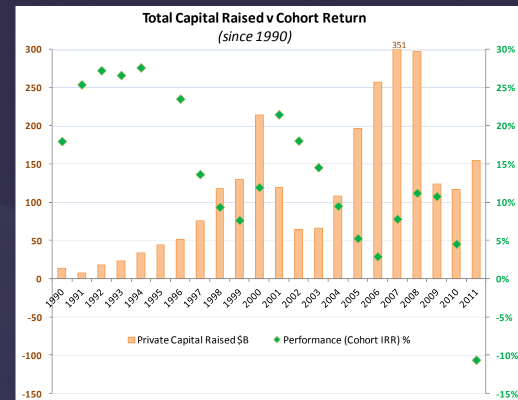
- Not just returns +%
- Reduces crisis beta
- Cash in a Crisis
- Reduces leverage
- Buys time, prevents disaster
- Survival of the "Enterprise"

# Behavioral & Cultural Issues

- Committee Behavior & Governance Breakdown
- “Buy High, Sell Low”
- Is Staff confident enough to invest when returns are the highest (but markets are scariest)?

We Planned & Positioned for this

We have the cash, the risk capacity, and the confidence to take advantage of the opportunities being offered by the market

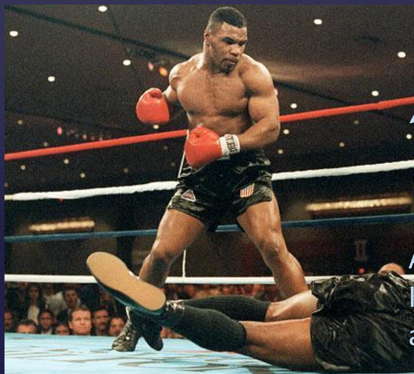



In a world of similar track records, the response to a crisis can make-or-break an endowment

Tail protection, economically and behaviorally, helps work against our most destructive human tendencies.

Expected returns generally highest after a crisis

- Publics (but we must sell then)
- Privates (but we stop investing then)
- Most E&F simply stopped private investments and didn’t restart until 2011 / later..



“Everybody’s got plans…until they get hit.”
– Mike Tyson

A Tail Hedge program is like a mouth guard. Keeps the brain from getting too rattled during a crisis so we can keep our head in the game.

BONUS

In practice, strategic hedging of our negative convexity risk-return profile makes us *keenly* aware of “fake alpha” carry returns in our investments…this leads us to focus on the best, highest “true alpha” among them.

Risk Culture extends to convexity as well.

# Implementing a Protection Program

What Risk Drivers

What portion of tail? …true “crisis”?

Governance Support / Fatigue

Sizing A Protection Program

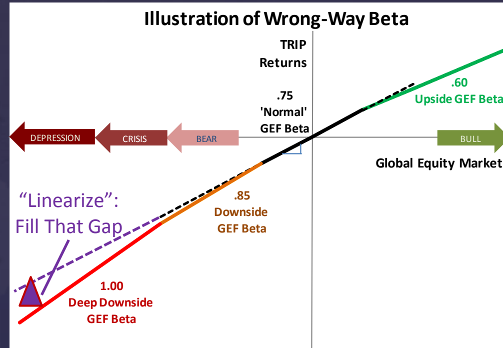
- Capital/Budget/Bleed/Cost
- To Linearize return profile
- To truncate most painful losses
- To outperform peers in crisis
- To provide $X of needed liquidity
- To support %C of portfolio in carry/illiquid strats
- To not impair long-run performance

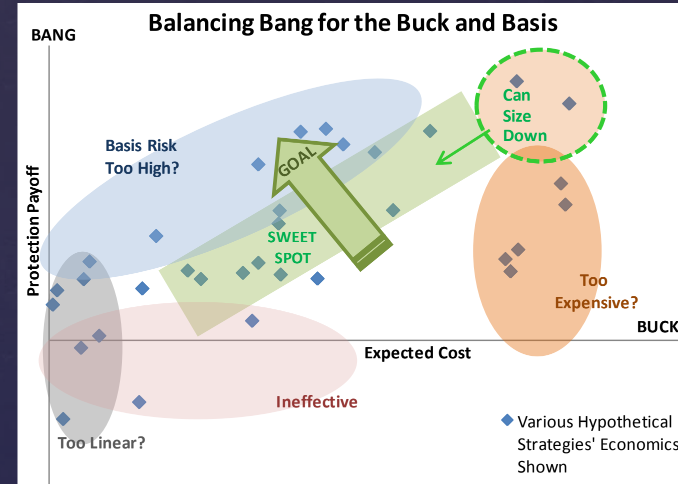
Who does it (managers?)

Strategic or Tactical?

Monetization

Robustness




## NOTE on COST

A small strategic portfolio protection program costs far less than most think. Nearly everyone gets the math wrong on this.

Our actual experience, implemented over 4+ years, has been a (very) small gain.

## Our Protection Program

Focus on Enterprise economic crisis, & linearize endowment beta (governance control)

2% Capital Allocation

65 bps budget, “bleed” limit

Expected LR standalone cost, 15-20 bps

Expected LR portfolio return drag ~10 bps