

CLIFFWATER<sup>LLC</sup>

INVESTMENT ADVISORY SERVICES

Los Angeles • New York

## ***Update on Alternative Investments***

Rhode Island Investment Commission Meeting

May 22, 2013

## Questions addressed --

1. Have hedge funds helped or hurt Rhode Island performance?
2. Are Rhode Island hedge funds more risky than other hedge funds?
3. How many hedge funds should be in the portfolio?
4. Can we trust hedge fund values?
5. What is the right performance benchmark for hedge funds?

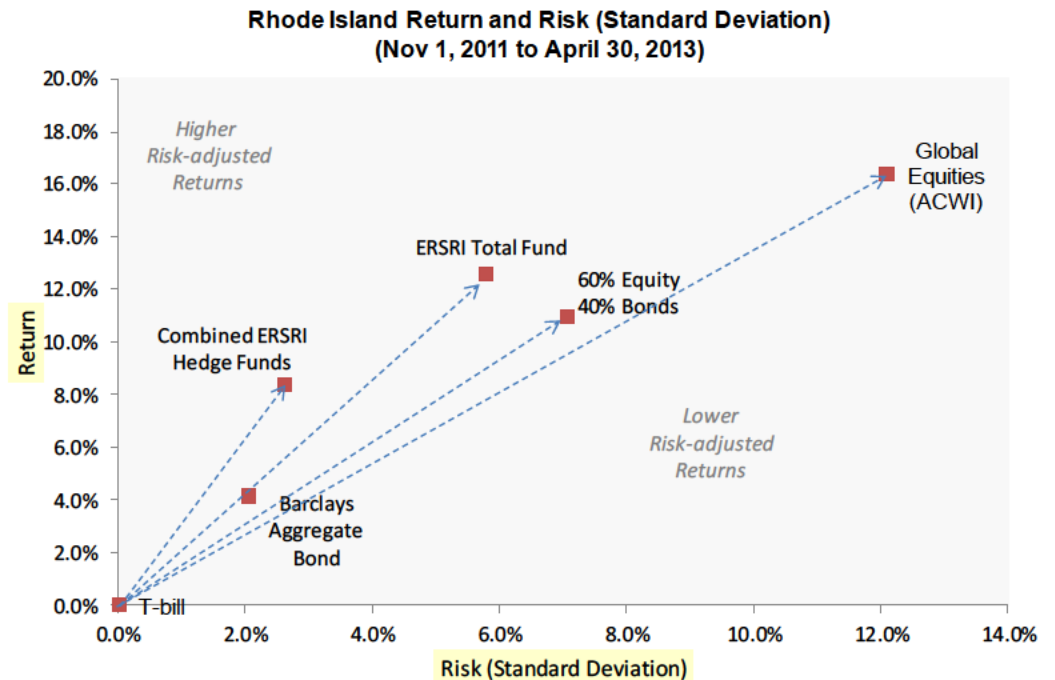
# Have Hedge Funds Helped (Hurt) Rhode Island Performance?

Time period covers 18 months, overlapping Rhode Island's experience with hedge funds

Measure performance by risk-adjusted return, equal to total net-of-fee return divided by total risk

Key takeaways:

- RI combined hedge fund portfolio has had higher risk adjusted returns than global equities (the best total return asset class over this period), the RI total portfolio, and a hypothetical 60% stock (ACWI)/40% bond (Barc Aggregate) asset mix
- Hedge fund portfolio behaving as intended

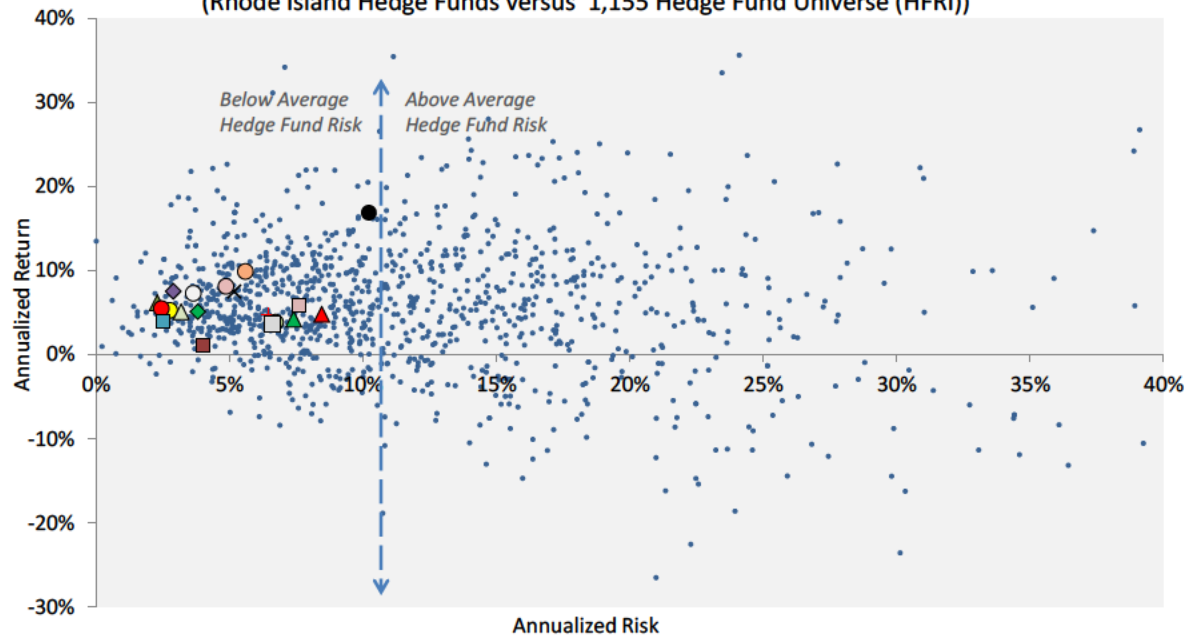


# Are Rhode Island Hedge Funds More Risky than other Hedge Funds?

The hedge funds in the Rhode Island all have lower risk than the universe of hedge funds (measured over the last three years)

The average Rhode Island hedge fund has approximately one-half the risk as the average hedge fund

Three Year Hedge Fund Return and Risk Comparison ending March 2013  
(Rhode Island Hedge Funds versus 1,155 Hedge Fund Universe (HFRI))



- HFR Universe
- ▲ BlueCrest Capital LP
- Brigade Leveraged Capital Structures Fund
- ◆ Claren Road Credit Master Fund
- DE Shaw Composite International Fund
- Graham Discretionary-6V Portfolio
- + Mason Capital, Ltd.
- PFM Diversified Fund, LP
- Third Point Partners L.P.
- Wexford Spectrum Fund, L.P.
- Ascend Partners Fund II LP
- × Brevan Howard L.P.
- Capula Global Relative Value Fund Limited
- △ Davidson Kempner Institutional Partners, LP
- ◆ Elliott Associates, L.P. (HFR98)
- ▲ Indus Asia Pacific Fund
- OZ Domestic Partners II, L.P./Overseas Fund II, Ltd.
- ▲ Samlyn Capital - Composite
- Viking Global Equities
- Winton Futures Fund - USD Class B

# What is the “Right” Number of Hedge Funds in a Portfolio?

## Risk

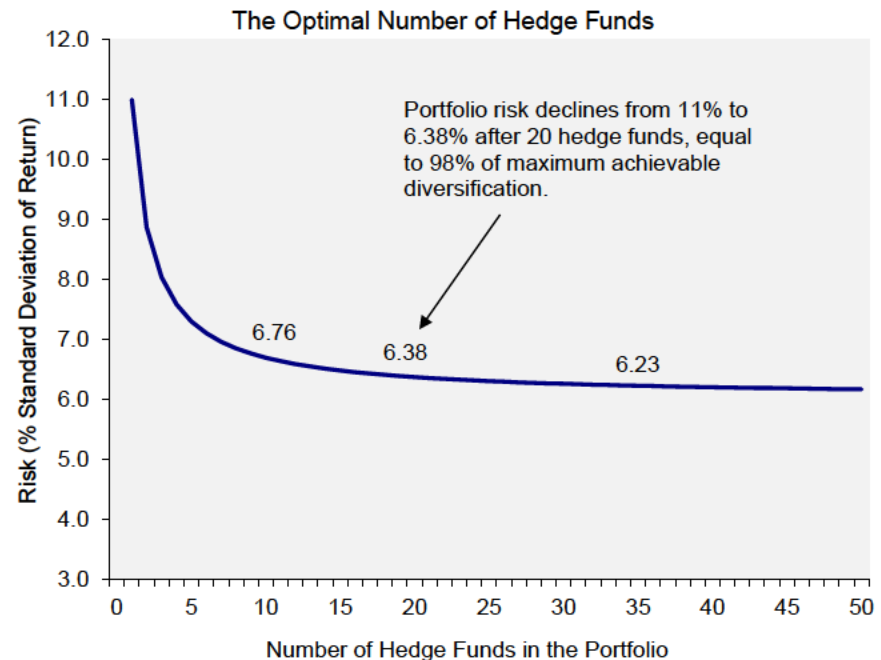
- Adding hedge funds reduces overall portfolio risk (diversification)
- The average correlation across hedge funds is 0.30, so the amount of risk reduction is quite large from adding hedge funds together
- However, the benefit of adding hedge funds flattens out (see exhibit) after 15 hedge funds and 98% of the maximum achievable diversification occurs at a 20 hedge fund portfolio

## Return

- If the addition of another manager is expected to lower return, this may offset the benefits of risk reduction and argue for a fewer number of hedge funds

## The “right” number of hedge funds

- When expected risk-adjusted return is maximized, which Cliffwater believes is between 15 and 25 for larger investors



# Can We Trust Hedge Fund Values?

How hedge fund partnership interests are valued monthly is an important part (25% weighting) of our operations due diligence rating and monitoring

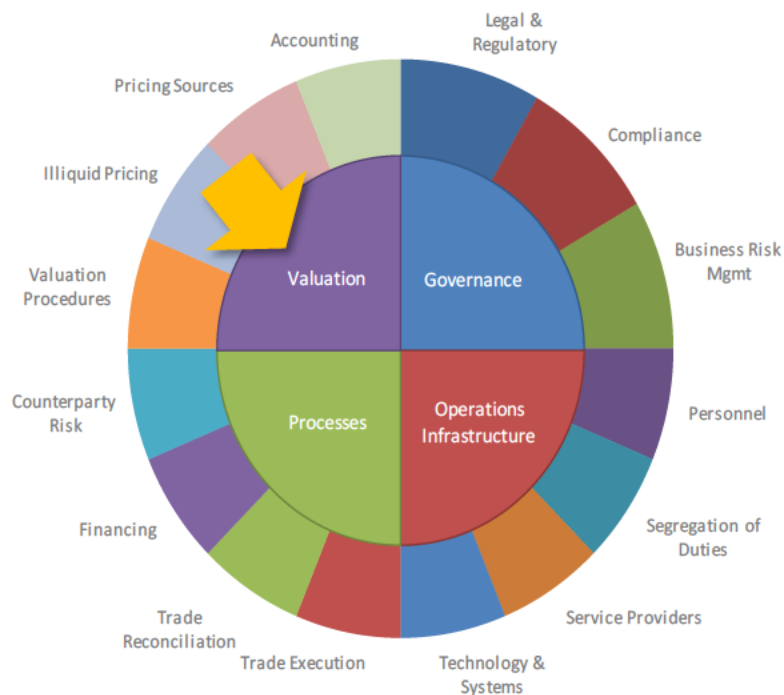
Key items we look for are:

- Liquidity of underlying assets (Levels 1, 2 and 3)
- A formal valuation process by the hedge fund firm
- Independent pricing services
- A pricing committee that is completely independent of the portfolio manager(s)
- Last price or, for bonds, bid price for longs, ask price for shorts

Side pockets

- Illiquid securities should be segregated in “side pockets” and stay with investor until sold

## Cliffwater Operations Due Diligence



## What is the Right Performance Benchmark for Hedge Funds?

	HFRI Fund Weighted Index*	HFRI Fund-of-Funds Index	Dow Jones/Credit Suisse Hedge Fund Index
Description	Monthly index of all individual hedge funds that submit data to HFRI	Monthly index of all individual fund-of-funds that submit data to HFRI	Monthly index of a more limited number of larger, institutional hedge funds selected by DJ/CS
Index inception	1990	1990	1994
Weighting	Equal weighted	Equal weighted	Asset weighted
# Funds (approximate)	2,000 individual funds	800 fund-of-funds	600 individual funds
Positives	Good transparency and inclusive	Most popular institutional benchmark, good transparency, inclusive, and theoretically investable	Not transparent; don't provide constituents; dominated by largest hedge funds
Negatives	The large number of funds and equal weighting make it non-investable and dominated by smaller, non-institutional hedge funds	Dominated by smaller fund-of-funds and includes two layers of fees which may make it an easier benchmark for direct investors	Includes hedge funds that are closed to new investors, over-weights the largest hedge funds, and not transparent
Strategy indices	yes	no	yes

\* Hedge Fund Research Inc. (HFRI)