

EPFIF

Hedge Funds and Other Absolute Return Strategies for Pension Funds

An Attempt of an Overview of the Issues

PPCmetrics AG
Dr. Franz Schumacher, Partner

Zurich, June 17th, 2004

www.fmbase.com
www.ppcmetrics.ch

Overview

- Where do we come from? – Some legal background
- Should we include hedge funds in the strategic asset allocation? – Some criteria would help!
- Do hedge funds meet these criteria? – Some thoughts about risk premia, alphas, betas, greeks and charities
- Where and how can we use hedge funds in our portfolios?

- *Legal requirements*

- *„The pension plan has to carefully select, manage and monitor it's investments.“*

Additional aspects are:

- *Security*
- *Financial status*
- *Structure and changes of liabilities*

with a clear emphasis on meeting liabilities.

Challenges

- As an investor you have to decide whether the „new“ strategies will help you to achieve these goals.
- Blindly implementing hedge funds and other strategies without considering the facts can be costly.
- Giving up possible positive contributions from such strategies can be costly as well.

Attack Plan

- Why not try to apply some economic reasoning?!
- Chances are that we might be able to improve our portfolios!
- Let us start with the issue of strategic asset allocation: As you will see the results have implications for the implementation of hedge funds as well.

Hedge Funds and Strategic Asset Allocation

- Should hedge funds be included in the strategic asset allocation (SAA)?
 - What categories are in the SAA?
 - What categories are not in the SAA?
 - What are the criteria for inclusion/exclusion as a category?
 - Why is alpha not there today?

What Categories Are in/not in the SAA?

In

- Domestic and foreign bonds (with various subcategories)
- Domestic and foreign equities (with various refinements)
- Property/Real estate
- Commodities

NOT In:

- Forex
 - Derivatives
 - Convertibles
-

What Are the Criteria for Inclusion/Exclusion as a Category?

1. Systematic risk based on an independent asset category
 - Independent means that it adds an investment dimension in an Arrow-Debreu-world: An asset that cannot be constructed from the other asset categories.
 - Systematic means that you cannot eliminate the risk through diversification.

AND

2. Investors are compensated for bearing the risk.

AND

3. It should be repeatable.

Consequences

- From a strategic point of view, there is no point of including derivatives (combinations of other asset categories) or forex (unrewarded risk).
- Should alpha be part of the SAA?
 - No, because the risk is non-systematic and can be diversified away. (Do not worry: We will talk about persistent alpha later on!)

How about hedge funds?

Do Hedge Funds Meet the Stated Criteria?

- Are there *additional systematic* risk categories that enhance the existing investable universe?
- If there are new risk categories:
 - Are we compensated for bearing the risk?
 - Will the risk premium remain?

And can there be a reliable structural or skill-based alpha?

→ Answering these questions will tell us a lot about how we have to deal with hedge fund investments!

Analysis of Financial Evidence

- These questions boil down to:
 - What risk and return components make up the risk and excess return of a hedge fund?
 - What are the characteristics of these components?
 - What are their contributions to risk and return?

Hedge Fund Sources of Risk and Return

- We see the following components as contributors to either/or risk and return:
 - Skill based alpha
 - Structural alpha
 - Traditional beta
 - Alternative beta
 - Operational/Investment category risk

Characteristics of Hedge Fund Risk Return Components



Source	Return	Risk	Systematic	Repeatable	Comment
Skill-Alpha	Exploit market inefficiency	Being wrong	No	?	
Structural-Alpha	Return from additional toolset (leverage, go short)	See operational	Not in the longer term	No	Alphas tend to eliminate themselves in success
Traditional Market Exposure	Risk premium for bearing market risk	That markets tumble!	Yes	Yes	
Alternative Market Exposures	Risk premia for liquidity risk, volatility risk	That markets move against you.	May be yes	May be yes	Further analysis necessary
Operational Risk	None	Operational, model, style, fraud	No	Hope not!	Adds some non-linearity!

What Factors Make up the Hedge Fund Excess Return?

- It is a combination of the components! The exact combination depends on the hedge fund type and finally on the individual hedge fund. It is hard to quantify properly!
- Studies hint that skill does not dominate the return of hedge funds at all. Some analyst attribute not more than 20%-30% of total excess return to skill, leaving 70%-80% to other sources, mostly systematic market risk.
- But this is an open debate at the moment. Let us assume some extremes: 100% persistent skill alpha and 100% beta risk.

100% Persistent Alpha

- Even though alpha has the inherent property of eliminating itself, let us assume for the moment that the hedge fund is able to produce persistent alpha.
- Persistent alpha is like a gold mine: You do not give it away for free!
- So either we assume that hedge funds are
 - a) charities or
 - b) their alpha is not really persistent or
 - c) there is alpha and it is efficient to sell it!

100% Risk Premium

- Let us assume for a moment that the excess return is derived from risk premiums and there is no skill involved.
- If it is traditional beta return, you are not really happy. You want to eliminate it, because there are more efficient ways of bearing this risk.
- If it is non-traditional beta it might be worthwhile (see below).

Alternative Beta Risk

- If there are such alternative beta risks that meet the stated criteria of
 - independence
 - systematic
 - earning a risk premium

they should definitively be included into the SAA process.

- How about the other components?

- The rules for risk management are basically simple:
 1. Select and keep the alpha! (If you can get it!)
 2. Eliminate market risk completely.
 3. Bear alternative market risks if you are compensated.
 4. Diversify away any operational risk.

There is an inherent conflict between 1 and 4! If you go for 1, you cannot have too many managers because you will diversify alpha away! If you go for 4, you tend not to get 1! 1 requires a different skill-set!

Implementation Consequences

- Separate alpha from beta to calculate performance and management fees - otherwise you risk giving up part of the risk premium!
- Capture alternative market risks in diversified portfolios!
- Do not overpay for traditional market premiums!

Overview of Current Issues

- Should hedge funds be included in the SAA?
- Should hedge funds be used to take on active risk?
- Does alpha really arrive in your portfolio or is it absorbed by fees (reduces risk premium)?
- What share of excess return is skill? What is risk premium?
- How do you best implement hedge funds?

The Answers to These Questions

- Depend on
 - your assumptions regarding the composition of excess return.
 - your assumptions regarding **your** skill in selecting, managing and monitoring hedge fund managers.
 - your goals: Would you like to capture alpha or non-traditional beta?

THANK YOU VERY MUCH!