AN ALTERNATIVE FUTURE:
AN EXPLORATION OF THE ROLE OF HEDGE FUNDS

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Background

Today’s presentation is based on two recent articles


A Cynic’s View and My View

A Cynic, From the Introduction to Part II of “An Alternative Future”

- “One definition of hedge funds may resonate with many investors: Hedge funds are investment pools that are relatively unconstrained in what they do. They are relatively unregulated (for now), charge very high fees, will not necessarily give you your money back when you want it, and will generally not tell you what they do. They are supposed to make money all the time, and when they fail at this, their investors redeem and go to someone else who has recently been making money. Every three or four years they deliver a one-in-a-hundred year flood. They are generally run for rich people in Geneva, Switzerland, by rich people in Greenwich, Connecticut.”

My View

- Hedge funds represent the future of active management in general. In the, perhaps distant, future the investing world might look like hedge funds plus index funds.

- There are a lot of dark sides to hedge fund investing that really have to change for this to happen, and more mild evolutionary changes that really should occur. We are not there yet, probably not very close.
What Are Investors Looking For in Hedge Funds?

- What are investors looking for in hedge funds?, some combination of,
  1) Positive expected returns (make money)
  2) Low to zero correlation to traditional assets (diversification)
- The effect of adding such an asset to one’s opportunity set can be a large increase in risk-adjusted return (i.e., improving the efficient frontier).
  1) More expected return with same or less risk, and/or
  2) Less risk with same or more expected return
- In particular, given stock and bond market valuations, risk-adjusted returns can use some help going forward...
A Motivation For At Least Considering Hedge Funds Now

S&P 500 P/E (price divided by 10-year real earnings)

<table>
<thead>
<tr>
<th>P/E Range</th>
<th>Real Stock Market Return in the Next 10 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Median (Annual)</td>
</tr>
<tr>
<td>High</td>
<td>Worst (Total)</td>
</tr>
<tr>
<td>5.2 to 10.1</td>
<td>10.9%</td>
</tr>
<tr>
<td>10.1 to 11.9</td>
<td>10.7%</td>
</tr>
<tr>
<td>11.9 to 14.6</td>
<td>10.0%</td>
</tr>
<tr>
<td>14.6 to 17.2</td>
<td>7.6%</td>
</tr>
<tr>
<td>17.2 to 19.9</td>
<td>5.3%</td>
</tr>
<tr>
<td>19.9 to 31.7</td>
<td>-0.1%</td>
</tr>
<tr>
<td>31.7 to 46.1</td>
<td>..........Here Be Dragons............</td>
</tr>
</tbody>
</table>

* P/E’s are for the S&P 500 and are based on current price divided by the average of the last 10-years earnings adjusted for inflation. Table covers 1/1927-2/2004.
How Do Hedge Funds Make Their Money?

- We think of hedge funds as falling into two broad categories of strategies that try to provide diversifying positive expected return
  - Investment “skill” or “alpha” turned into an investable diversifying asset.
  - A set of definable non-traditional “arbitrage” strategies that provide liquidity, or take a risk for which they are paid a premium. We call these “hedge fund betas.”
- One commonality is that to do either or both of the above, hedge funds require the tools of leverage, derivatives, and short selling.
- Of course hedge funds don’t break down neatly into the above two types, most are mixtures, with some traditional market beta sometimes thrown in.
Example of a skill-based strategy: An “equity market neutral” hedge fund

- Traditional active management can be defined (as a tautology) as:
  \[ \text{Active} = \text{Index} + [\text{Active} - \text{Index}] \]

- One simple “hedge fund” is:
  \[ \text{Hedge fund} = \text{Cash} + [\text{Active} - \text{Index}] \]

- Now, a hedge fund manager could lever (or de-lever) the difference:
  \[ \text{Hedge fund} = \text{Cash} + L \times [\text{Active} - \text{Index}] \]

  If skill exists and is identifiable (a big “if”), and \( L > 1 \), the hedge fund should charge fees larger than the corresponding active manager.

- Our construct of [Active – Index] imposes an arbitrary constraint on shorting which if lifted, can improve things further (if there is skill)
Arbitrage Strategies or “Hedge Fund Betas”

- We call these “betas” as they are known strategies with systematic elements.
- The word “arbitrage” in its technically accurate form is very overused.
- An arbitrage strategy, in a looser sense, probably fits some/all of the following:
  - It goes long and short similar securities hedging out unwanted risks.
  - The believed mis-pricings or risk premia are economically significant.
  - Often it gets paid in the status quo (positive carry); this does not make it riskless!
  - Often it has an “insurance” characteristic where it assumes one large or many small risks unwanted by others, sometimes these risks are non-linear.
  - “Flows” may cause it to become a common risk factor even if it is usually idiosyncratic.
## Examples of Both Kinds of Hedge Fund Strategies

<table>
<thead>
<tr>
<th>Hedge Fund Strategies</th>
<th>What You Do</th>
<th>Potential Systematic Profit Source (Hedge Fund Beta)</th>
<th>Potential Manager Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convertible “Arb”</td>
<td>• Long embedded option from convertibles hedged with stock</td>
<td>• The market systematically pays you for taking on the unfamiliar/uncomfortable convertible</td>
<td>• Better models of rich/cheap and hedge ratios</td>
</tr>
<tr>
<td>Merger “Arb”</td>
<td>• Long a target and short an acquirer where spread is not fully closed yet</td>
<td>• The market systematically pays you to provide insurance that deals close; i.e., the average spread overcomes the failures</td>
<td>• More accurate underwriting by better deal selection, better risk management, systematic deal selection</td>
</tr>
<tr>
<td>Statistical “Arb”</td>
<td>• Long and short a hedged stock portfolio based on short-term supply / demand anomalies</td>
<td>• The market systematically pays you for providing short-term insurance and liquidity, perhaps against large information trades</td>
<td>• Low cost trading, better risk systems for removing unintended bets, other short-term factors</td>
</tr>
<tr>
<td>Equity Market-Neutral</td>
<td>• Long/short under/over priced stocks over intermediate term. Tends to be more quant.</td>
<td>• Expected returns on cheap stocks exceed those on expensive stocks.</td>
<td>• Momentum and other factors to attempt to improve timing aspect of value strategy.</td>
</tr>
<tr>
<td>Long-short Equity</td>
<td>• Long/short stocks based on valuation, catalysts, forensic accounting, etc. Tends to be more fundamental that quant.</td>
<td>• Does not have a non-traditional systematic profit source. Often has stock market beta (unfortunately).</td>
<td>• Manager expertise, acumen, and effort.</td>
</tr>
</tbody>
</table>
Hedge Funds Represent an Important Evolutionary Step

- Hedge funds can and should (but don’t always do) present manager skill or risk/liquidity premiums as separate investable assets. In contrast, traditional active management is often a package deal.

- There are considerable advantages to a world of hedge funds plus index funds versus traditional active management.
  - Many hedge fund strategies cannot be done in a traditional structure
  - Fee clarity (breaking the tie-in sale)
  - Performance attribution
  - Portfolio optimization

- In fact, traditional active management can be viewed as a strangely constrained combination of a particular type of hedge and index fund investing.

- How distant is this future and have we come too far too fast?
The Future of Hedge Funds May Require "Institutionalization"
Some Dark Sides To Hedge Fund Investing

- Hedge Fund Betas/Correlations*
- Lags in Mark-to-Market*
- Momentum Strategies*
- Survivorship Bias
- Option Writing
- Hot Money*
- High Water Mark Abuse
- Structured/Levered/Guaranteed Products

* Slides upcoming
Hedge Fund Betas / Correlations

Cumulative Return Over Cash for 2004

CSFB/Tremont Long/Short Equity Funds
S&P 500
Hedge Fund Betas / Correlations and Momentum

- Start with standard regression equation:
  \[ \text{LS Equity}_t = \alpha + \beta \times \text{S&P 500}_t \]
- Run regressions over January 1994 – August 2004*
  \[ \text{LS Equity} = 0.36\% + 0.48 \times \text{S&P 500}, \quad R^2 = 35.7\% \]
  \[ (1.48) \quad (8.19) \]
- Now define:
  \[ \beta = \gamma + \delta \times \text{TREND}_t, \]
  \[ \text{TREND}_t \text{ is the prior 1-year performance of the S&P 500 ending before quarter } t \]
- Plug in new definition of \( \beta \) then empirically estimate:
  \[ \text{LS Equity}_t = \alpha + \gamma \times \text{S&P 500}_t + \delta \times \text{TREND}_t \times \text{S&P 500}_t \]
  \[ \text{LS Equity}_t = 0.21\% + 0.46 \times \text{S&P 500}_t + 1.18 \times \text{TREND}_t \times \text{S&P 500}_t, \quad R^2 = 42.0\% \]
  \[ (0.93) \quad (12.86) \quad (4.69) \]
- Fitted forecast betas range from 0.06 to 0.92. Momentum in beta is a form of option replication / portfolio insurance. It works well in long slow bears (e.g., 2001-2002) but poorly in short sharp ones (e.g., 1987)

* Regressions come from Asness [2004]. Returns are quarterly overlapping excess returns over t-bills. T-statistics reported in parenthesis are adjusted for overlapping observations.
Lags in Mark-to-Market

Cumulative Return Over Cash for 2004

-2% 0% 2% 4% 6% 8% 10% 12% 14%

CSFB/Tremont Distressed Funds  S&P 500
Hot Money

➢ How do you tell in advance if an investor is hot money?

➢ The real problems with hot money
Future Evolution of Hedge Funds

- Expectations Must be Moderated*
- Capacity Issues*
- Rational Fees*
- Benchmarking Hedge Funds
- Headline risk must be tolerated (and understood)*
- Transparency Wars Must Be Settled*
- What Constitutes a Hedge Fund?

* Slides upcoming
Expectations Moderation and Capacity

- More money into the same strategy or asset class implies lower future returns. That’s one of the only things we really know about capital markets.

- The question should never be “what capacity is there?” but rather “what capacity is there at a certain level of risk adjusted return?”

- Institutions are doing the math and discovering that they do not need a Sharpe-ratio (return over risk) of 1.00 - 2.00. But, rather, a 0.75, 0.50, even a 0.25, if truly uncorrelated with their portfolio, substantially improves their risk-adjusted returns.

- Institutions will invest until they get those lower Sharpe ratios. Big money sets the price and expected return.

- What was a free lunch might become a smaller free lunch if net Sharpe ratios follow this path. But, what’s the rational thing to do with a small but still free lunch?
Rational Fees

➢ “Institutions are coming so fees must fall” is backwards (for now).

➢ Institutionalization may not drive hedge fund fees down, but they could/should drive them to be more rational.

  • Pay a lot for true “unavailable anywhere else” alpha-like idiosyncratic skill. But, be cynical about it too...

  • Pay less for “systematic” exposure to known non-traditional strategies, but more than regular old stock market beta (i.e., index fund fees) as skills are rarer.

  • Don’t pay hedge fund fees for stock market index fund exposure.

  • Don’t pay for realized non-repeatable noise.

  • An increased role for fixed fees for “hedge fund beta”.

  • Some innovative structures, e.g., longer lock-ups to ration scarce capacity instead of higher fees, performance fees paid at the end of the lock-up.

  • A careful examination of pros and cons of performance fees.
Wealthy individuals often define risk as “don’t lose me money” (over any given hour), while institutions don’t particularly enjoy losses, other risks (e.g., headline risk below) feature as prominently in their worries.

What is headline risk?

- Blow-up in strategy
- Fraud or malfeasance
- More generally “being in the paper”

Headline risk might get more attention than it deserves investment-wise.

Are blow-ups a natural consequence of loosening the rules and widening the opportunity set for hedge funds vs. other investments? Whether this is net good or bad across time and the whole portfolio should be the main question for investors (not whether blow-ups exist).
Transparency

- Why do managers (sometimes) not want to provide full transparency?
  - Revealing proprietary strategies
  - Revealing proprietary positions where there is vulnerability
  - Logistics
  - The general frustration that comes from feeling it goes into a black hole
  - Revealing the basic simplicity and lack of magic behind what we do :)

- Other kinds of transparency (not full) are sometimes more reasonable
  - Summary risk-reports
  - Some process transparency
Conclusion

- Hedge funds exist (or should) to take sources of expected return like individual skill, or non-traditional arbitrage strategies (hedge fund betas), and turn them into investable assets.

- Hedge funds should not be a really expensive stock market index fund with a few shorts thrown in for credibility!

- Hedge funds are here to stay. It’s very possible that the model for the future will be index funds plus hedge funds.

- Institutionalization, with it’s pros and cons, is definitely underway, though there is a long way to go for both investor and manager best practices to improve.

- Risks and issues also abound in traditional markets (long-only stocks and bonds). If there is ever a time to look for some non-traditional sources of return this is it.

- Hedge funds are the future of active management, but many things have to change before this occurs, and “bumps” on the path to this future exist (and “bump” is generally a euphemism for someone losing a lot of money).