The Benefits of Managed Futures in Volatile Markets

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Agenda

• Liquidity
• Introduction to Managed Futures
• Lintner Study
• Statistical Properties & Diversification benefits
• Conclusion
Liquidity, Transparency and Technology

“Liquidity is the first line of Defense.”
- Daniel MacDonald, CFA, Portfolio Manager, Alternative Investments Ontario Teachers Pension Plan
Liquidity, Transparency and Technology

What is Managed Futures (a.k.a. CTAs)?

Liquid subset of the Hedge Fund universe, trading futures, forwards, and options

– A group of hedge fund sub-strategies employed by professional money managers who trade a diversified mix of liquid global markets utilizing futures, forwards and options on the foregoing

– Asset classes include interest rates, equity indices, currencies and commodities
Diversity of Managed Futures

Flexibility of Managers

– Broad range of markets and the ability to go long, short, or neutral, as well as take relative value or spread positions
– Taking both long and short positions may enable managers to produce returns that are uncorrelated with traditional assets
– Wide diversity of trading styles and holding periods may also yield returns that exhibit low correlations to traditional assets – like different radio receivers that “tune in” to different market frequencies
– Ability to actively manage risk and quickly shift positions to exploit opportunities

Strategies/Styles/Sectors/Time

– Managers focus on absolute return strategies:
  • Diversified Trend following; Counter-trend; Global Macro; Fundamental/Value; Short-term Trading; Natural Resources; Foreign Exchange (FX); Sector specialists; Statistical/Quantitative, Multi-Strategy; Relative Value
  • Systematic, Discretionary, & Hybrid
  • Equity Futures, Fixed Income Futures, FX, Natural Resources/Commodities

(Please note: not all managers focus in all these strategies at all times, and managed futures strategies may have material directional elements.)
Lintner Revisited

Dr. John Lintner Ph.D., Harvard University

- One of the co-creators of the Capital Asset Pricing Model
- Presented “The Potential Role of Managed Commodity-Financial Futures Accounts (and/or Funds) in Portfolios of Stocks and Bonds” at the Annual Conference of the Financial Analysts Federation in Toronto in May 1983.

“Indeed, [...] the return/risk trade-offs provided by augmented portfolios consisting partly of funds invested with appropriate groups of futures managers (or funds) combined with funds invested in portfolios of stocks alone (or in mixed portfolios of stocks and bonds), clearly dominate the trade-offs available from portfolios of stocks alone (or from portfolios of stocks and bonds). [Lintner, pages 105-106]
Mistaking Liquidity for Alpha

Consider the Following:

- Hedge Fund A has a two-year lock-up with annual redemption and trades illiquid instruments
- Hedge Fund B has no lock-up with monthly redemption and trades liquid instruments
- Both hedge funds have a five-year track record

How can the two investments be compared

- Empirical Research conducted on the returns of 1,904 hedge funds over the three year period from June 2004 – June 2007 neither supported nor refuted the existence of a liquidity premium in the returns of illiquid hedge funds.
- Illiquid hedge funds with lock-ups have since underperformed liquid hedge funds in general – is there any reason to invest with illiquid managers?
- Lock-ups hold the investor prisoner!
Managed Futures Risk Management

- 3-Year Rolling Returns: Various Traditional and Alternative Indices,
- January 1990 – October 2011

Source: AlphaMetrix Alternative Investment Advisors, CME Group, Bloomberg
Past results are not necessarily indicative of future results.
Managed Futures Risk Management

- 3-Year Rolling Returns: Various Traditional and Alternative Indices,
- January 1993 – October 2011

<table>
<thead>
<tr>
<th></th>
<th>S&amp;P 500 Index</th>
<th>Barclays Bond Composite Global Index</th>
<th>S&amp;P Goldman Sachs Commodity Total Return Index</th>
<th>HFR Equity Hedge Index</th>
<th>HFRI Fund Weighted Index</th>
<th>Barclay CTA Index</th>
<th>Barclay BTOP50 Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of 3 Year Rolling Negative Periods (out of n = 226)</td>
<td>69</td>
<td>0</td>
<td>81</td>
<td>22</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*Barclays Bond Composite Global Index did not report returns for Sep 2008 and Oct 2008
Source: AlphaMetrix Alternative Investment Advisors, CME Group, Bloomberg

FUTURES TRADING IS SPECULATIVE, AND INVESTORS CAN LOSE ALL OR SUBSTANTIALLY ALL OF THEIR INVESTMENT. MEASURES THAT PROFILE RISK AND REWARD SUCH AS STANDARD DEVIATION, MAX DRAW DOWN AND THE SHARPE RATIO MAY MATERIALLY UNDERSTATE TRUE RISK BECAUSE FUTURES TRADING IS SUBJECT TO A “RISK OF RUIN” WHICH IS NOT REFLECTED IN SUCH STATISTICS. COMPARISONS OF ACTIVELY MANAGED PRODUCTS TO PASSIVE FINANCIAL INDICES INVOLVE MATERIAL INHERENT LIMITATIONS.

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Managed Futures Risk Management

- CTAs generally employ active risk management which typically includes disciplined adherence to well-defined stop-loss limits
- Managed futures programs also have the ability to go long, short, or neutral which also may help CTAs to recover more quickly from drawdowns by generating returns in falling markets
- Indices of managed products are not indicative of the performance of any individual account.

Drawdowns of S&P 500 and Barclay CTA Index
January 1990 - October 2011

Past results are not necessarily indicative of future results.
The Case for Diversification: Omega Functions

The Case for Diversification: Correlations

• Managed futures have potential to show low correlation to broader market indices
  • (Jan 1990 – October 2011)

<table>
<thead>
<tr>
<th></th>
<th>S&amp;P 500 Index</th>
<th>Barclays Capital Bond Composite Global Index</th>
<th>S&amp;P Goldman Sachs Commodity Total Return Index</th>
<th>HFR Equity Hedge Index</th>
<th>HFRI Fund Weighted Index</th>
<th>Barclay BTOP50 Index</th>
<th>Barclay CTA Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;P 500 Index</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barclays Capital Bond Composite Global Index</td>
<td>0.14</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S&amp;P Goldman Sachs Commodity Total Return Index</td>
<td>0.17</td>
<td>0.05</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFRI Fund Weighted Index</td>
<td>0.74</td>
<td>0.07</td>
<td>0.30</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFR Equity Hedge Index</td>
<td>0.73</td>
<td>0.06</td>
<td>0.35</td>
<td>0.95</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barclay BTOP50 Index</td>
<td>-0.11</td>
<td>0.26</td>
<td>0.14</td>
<td>-0.02</td>
<td>-0.03</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Barclay CTA Index</td>
<td>-0.10</td>
<td>0.21</td>
<td>0.19</td>
<td>0.02</td>
<td>0.01</td>
<td>0.92</td>
<td>1.00</td>
</tr>
</tbody>
</table>

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Managed Futures – Performance During Equity Market Drawdowns

<table>
<thead>
<tr>
<th>Title</th>
<th>Events</th>
<th>SPX Index</th>
<th>Barclay BTOP 50 Index</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourth Quarter of 1987</td>
<td>Black Monday – Global Stock Markets Crash</td>
<td>-23.23%</td>
<td>16.88%</td>
<td>40.11%</td>
</tr>
<tr>
<td>Fourth Quarter of 2008</td>
<td>Bear Market in U.S. Equities led by Financials</td>
<td>-22.56%</td>
<td>9.14%</td>
<td>31.69%</td>
</tr>
<tr>
<td>Third Quarter of 2002</td>
<td>WorldCom Scandal</td>
<td>-17.63%</td>
<td>9.42%</td>
<td>27.05%</td>
</tr>
<tr>
<td>Third Quarter of 2001</td>
<td>Terrorist Attacks on World Trade Center and Pentagon</td>
<td>-14.98%</td>
<td>4.12%</td>
<td>19.10%</td>
</tr>
<tr>
<td>Third Quarter of 1990</td>
<td>Iraq Invades Kuwait</td>
<td>-14.52%</td>
<td>11.23%</td>
<td>25.75%</td>
</tr>
<tr>
<td>Third Quarter of 2011</td>
<td>Libya Civil War, Egyptian Revolution</td>
<td>-14.33%</td>
<td>1.71%</td>
<td>16.04%</td>
</tr>
<tr>
<td>Second Quarter of 2002</td>
<td>Continuing Aftermath of Technology Bubble Bursting</td>
<td>-13.73%</td>
<td>8.51%</td>
<td>22.25%</td>
</tr>
<tr>
<td>First Quarter of 2001</td>
<td>Bear Market in U.S. Equities led by Technology</td>
<td>-12.11%</td>
<td>5.97%</td>
<td>18.09%</td>
</tr>
<tr>
<td>Second Quarter of 2010</td>
<td>European Sovereign Debt Crisis, “Flash Crash” in U.S. Equities</td>
<td>-11.86%</td>
<td>-1.93%</td>
<td>9.93%</td>
</tr>
<tr>
<td>First Quarter of 2009</td>
<td>Pressure on Home Prices Continued</td>
<td>-11.67%</td>
<td>-1.75%</td>
<td>9.91%</td>
</tr>
<tr>
<td>Third Quarter of 1998</td>
<td>Russia Defaults on Debt, LTCM Crisis</td>
<td>-10.30%</td>
<td>10.54%</td>
<td>20.85%</td>
</tr>
<tr>
<td>First Quarter of 2008</td>
<td>Credit Crisis, Commodity Prices Rally</td>
<td>-9.92%</td>
<td>6.43%</td>
<td>16.35%</td>
</tr>
<tr>
<td>Third Quarter of 2008</td>
<td>Credit Crisis, Government-Sponsored Bailout of Banks</td>
<td>-8.88%</td>
<td>-4.11%</td>
<td>4.77%</td>
</tr>
<tr>
<td>Fourth Quarter of 2000</td>
<td>DotCom Bubble Bursts</td>
<td>-8.09%</td>
<td>19.78%</td>
<td>27.87%</td>
</tr>
<tr>
<td>Third Quarter of 1999</td>
<td>Anxiety during Run Up to Y2K</td>
<td>-6.56%</td>
<td>-0.67%</td>
<td>5.89%</td>
</tr>
</tbody>
</table>

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Managed Futures – Performance During Equity Market Drawdowns

- While not a hedge, managed futures has historically tended to perform well during periods that have been difficult for equities and many other hedge fund strategies.
- This effect may possibly enhance the benefits from diversification managed futures offer by potentially contributing to an investor’s portfolio during periods that may be difficult for other investments.

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**True / False**

a) All CTAs trade only commodities - **X – FALSE**

b) All CTAs are very volatile - **X – FALSE**

c) All CTAs are systematic - **X – FALSE**

d) In general, CTAs are just a cost (i.e. insurance premium), that do not provide an attractive risk-adjusted return on its own. **X – FALSE**

e) CTAs are great investments – one does not need to do rigorous due diligence. **X – FALSE**
Conclusion

1. Liquidity, Transparency and Technology are all interrelated and reinforce one another
2. Behavioral Finance – we tend to underestimate the value of liquidity.
3. Why invest in illiquid strategies when it may be possible to generate similar returns with liquid strategies?
4. Managed Futures gives liquid alpha.
5. Diversification is the only free lunch in finance, and CTAs are a proven diversifier and proven performer. Like anything else, prudent and rigorous due diligence is required.
6. Very diverse set of CTAs
7. If a pension, endowment, foundation do not invest in CTAs, they should be forced to articulate WHY they are not doing so in a written piece, since it contradicts what has been established in both literature and practice.
References


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Source: Keating and Shadwick, 2002

\[ \Omega(r) := \frac{\int_{r}^{b} [1-F(x)] \, dx}{\int_{a}^{b} F(x) \, dx} \]

Source: Bhaduri and Kaneshige, 2005
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