

ALTERNATIVE INVESTMENT ADVISORS, LLC

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Innovations in Commodity Investing: Alpha and Beta in Institutional Portfolios

Investor interest in commodity investing has increased in recent years (BIS Quarterly Review, March 2007)

Proposed Explanations:

- Portfolio diversification
 - Erb and Harvey 2006, CISDM 2002 and 2006, Georgiev 2001
- Inflation hedge
 - o Greer 2000, Bodie 1983
- Secular Bull Run
 - Aging Infrastructure
 - Asian Demand for Resources
 - o Rogers 2007, Till and Gunzberg 2006, Legg Mason Equity Research 2002

Interest to continue in context of Central Banks' response to credit crisis in U.S. and sovereign debt issues in Europe?

Generally, institutional investors appear to access the space through commodity "beta"

For the purposes of this discussion, we define commodity beta as long exposure to one of the passive long-only commodity indices:

- S&P Goldman Sachs Commodity Index
- DJ UBS Commodity Index
- Rogers International Commodity Index
- Reuters/Jefferies CRB Index
- Others

*Descriptions available in Appendix on page 21.



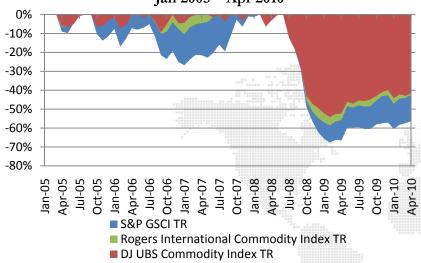
Potential disadvantages with the "beta" approach

Passive long-only commodity indices can be extremely volatile and susceptible to

large drawdowns

			Rogers
		DJ UBS	International
Performance Statistics,	S&P GSCI	Commodity	Commodity
January 2005 - April 2010	TR	Index TR	Index TR
Annualized Standard Deviation	27.64%	20.10%	22.21%
Skewness	-0.66	-0.83	-0.95
Excess Kurtosis	1.60	2.16	3.19
Worst Drawdown	-67.66%	-54.25%	-58.62%

Long-Only Commodity Indices: Historical Drawdowns Jan 2005 – Apr 2010



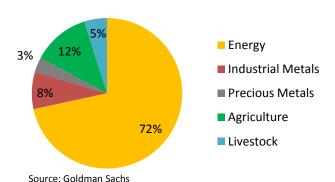
Sources: Bloomberg, AlphaMetrix Alternative Investment Advisors



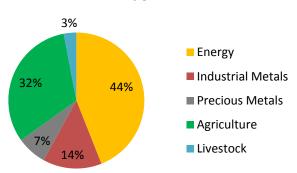
Potential disadvantages with the "beta" approach

May not offer balanced exposure across sectors

S&P Goldman Sachs Commodity Index

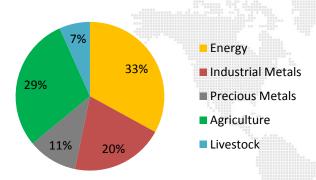


Rogers International Commodity Index



Source: Rogers Raw Materials

DJ UBS Commodity Index

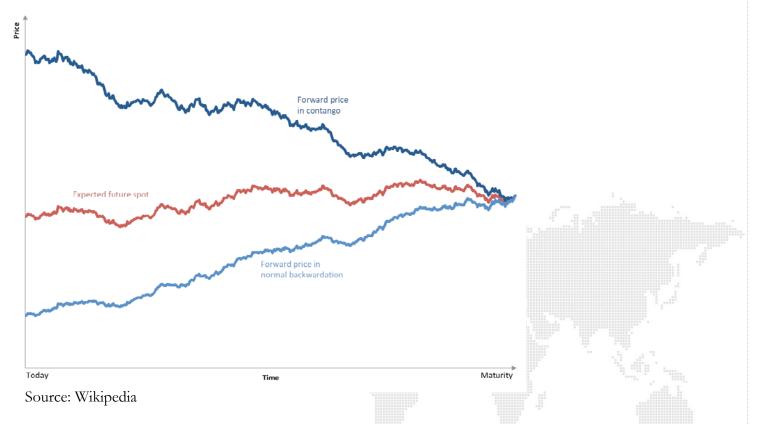


Source: UBS AG



Potential disadvantages with the "beta" approach

Negative roll yield for markets in contango can be detrimental to the performance of passive long-only indices



Despite these potential issues, passive-long only indices generally seem to be institutional investors' preferred method for investing in commodities

Generally accessed through:

- Total Return Swaps
- Exchange Traded Funds/Exchange Traded Notes
- Index futures
- Index replication with futures



What is Commodity Alpha?

For the purposes of this discussion, we define commodity alpha as actively-managed exposure to natural resources that has the flexibility to take long, short, neutral, or spread positions.

Examples include:

- Natural Resources Hedge Funds
- Natural Resources Only Commodity Trading Advisors
- Natural Resources Fund of Funds
- Actively managed/semi-passive natural resource index products

AlphaMetrix

What is Commodity Alpha?

Potential benefits of Active Management

- Opportunities on the Long AND Short side; Relative Value, and Niche Strategies
- Active Risk Management
- Enhanced Diversification and Dampening of Portfolio Volatility

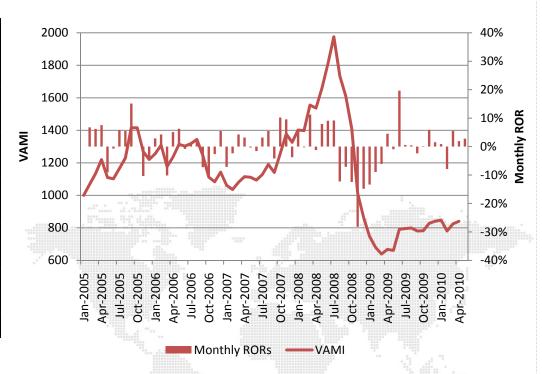
Potential limitations of Active Management

- Active Managers may only partially capture upside potential of the Index
- Difficult to understand which parts of which moves managers will capture, why, and when
- Additional Costs of Manager Sourcing, Selection, Due Diligence, and Monitoring; Requires Specialized Expertise



Consider an investor who holds a portfolio consisting of a 100 percent allocation to the S&P GSCI TR Index:

Performance Statistics, January 2005 - April 2010	S&P GSCI TR
Annualized Return	-2.72%
Annualized Standard Deviation	27.64%
Skewness	-0.66
Kurtosis	1.60
Sharpe Ratio (Rf = 0%)	-0.10
Sortino Ratio (0%)	-0.13
Omega (Threshold = 10%)	0.79
Annualized Downside Stdev.	21.20%
Annualized Upside Stdev.	14.63%
Worst Drawdown	-67.66%
Length of Largest Drawdown	8



Sources: Bloomberg, AlphaMetrix Alternative Investment Advisors

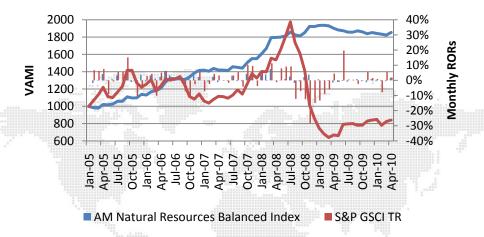


Could commodity alpha improve the performance and risk characteristics of the investor's portfolio?

For example:

• AlphaMetrix Natural Resources Balanced Index*: an equal-weighted hypothetical composite of all live natural resources trading programs on the AlphaMetrix Platform, the largest independent managed account platform** for hedge fund investing. The index is rebalanced monthly.

	AM Natural			
Performance Statistics,	Resources	S&P GSCI		
January 2005 - April 2010	Balanced Index	TR		
Annualized Return	12.35%	-2.72%		
Annualized Standard Deviation	7.14%	27.64%		
Skewness	0.99	-0.66		
Kurtosis	0.42	1.60		
Sharpe Ratio (Rf = 0%)	1.73	-0.10		
Sortino Ratio (0%)	7.29	-0.13		
Omega (Threshold = 10%)	1.27	0.79		
Annualized Downside Stdev.	1.69%	21.20%		
Annualized Upside Stdev.	6.38%	14.63%		
Worst Drawdown	-5.86%	-67.66%		
Length of Largest Drawdown	13	8		



Sources: Bloomberg, AlphaMetrix Alternative Investment Advisors

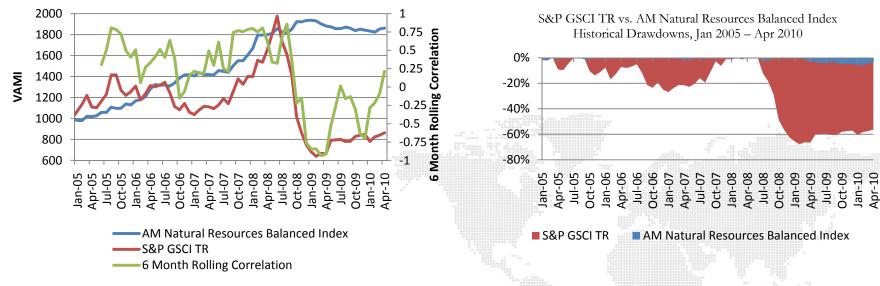
^{*} As of May 2010, there were 7 Natural Resource trading programs included in the AlphaMetrix Natural Resources Balanced Index

^{**}Infovest21 special research report on managed account platforms, October 2009



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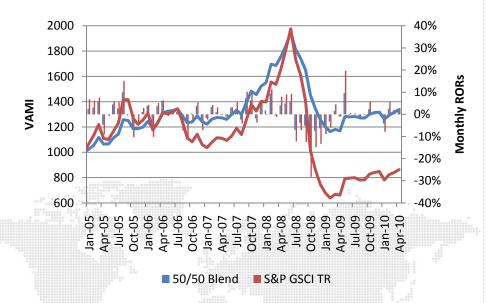
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Example: 50/50 Alpha Beta Blend (50 % AM Natural Resources Balanced Index and 50% S&P GSCI TR)

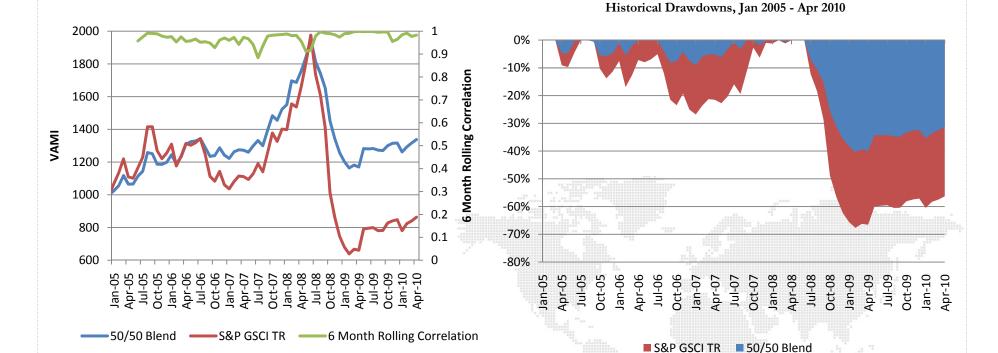
	50/50 Blend: AM NR Balanced	
Performance Statistics,	Index and	S&P GSCI
January 2005 - April 2010	S&P GSCI TR	TR
Annualized Return	5.60%	-2.72%
Annualized Standard Deviation	14.97%	27.64%
Skewness	-0.20	-0.66
Kurtosis	0.39	1.60
Sharpe Ratio (Rf = 0%)	0.37	-0.10
Sortino Ratio (0%)	0.57	-0.13
Omega (Threshold = 10%)	0.86	0.79
Annualized Downside Stdev.	9.85%	21.20%
Annualized Upside Stdev.	9.32%	14.63%
Worst Drawdown	-40.28%	-67.66%
Length of Largest Drawdown	8	8



Sources: Bloomberg, AlphaMetrix Alternative Investment Advisors



Example: 50/50 Alpha Beta Blend



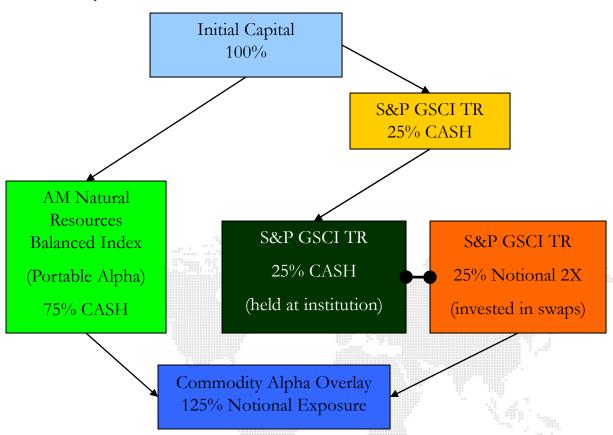
S&P GSCI TR vs. 50/50 Blend (AM Natural Resources Balanced and SPGSCI TR)

Sources: Bloomberg, AlphaMetrix Alternative Investment Advisors



Example: Commodity Alpha Overlay

- 1. Investor begins with Initial Capital Outlay (100%).
- 2. 25% of Investor's Initial Capital Outlay invested in S&P GSCI TR swaps. Since swaps currently require only a small cash deposit, exposure to the GSCI is increased to 50% in notional terms.
- Remaining 75% of Investor's Initial Capital Outlay invested in AM Natural Resources Balanced Index*.
- 1. This example shows how using a commodity alpha overlay may enhance the returns of commodity beta.

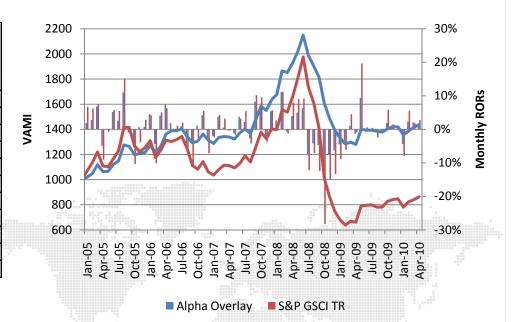


^{*} Since this index is a hypothetical, a direct investment in the index at this time is not possible.



Example: Commodity Alpha Overlay (75% allocation to AM Natural Resources Balanced Index and 25% allocation to S&P GSCI TR funded at 2X)

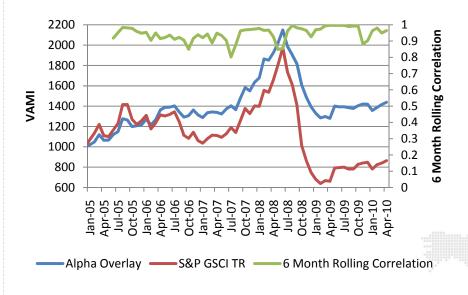
	Alpha Overlay: AM NR Balanced	
Performance Statistics,	Index and	S&P GSCI
January 2005 - April 2010	S&P GSCI TR	TR
Annualized Return	7.05%	-2.72%
Annualized Standard Deviation	15.82%	27.64%
Skewness	0.04	-0.66
Kurtosis	0.11	1.60
Sharpe Ratio (Rf = 0%)	0.45	-0.10
Sortino Ratio (0%)	0.75	-0.13
Omega (Threshold = 10%)	0.93	0.79
Annualized Downside Stdev.	9.36%	21.20%
Annualized Upside Stdev.	10.50%	14.63%
Worst Drawdown	-40.45%	-67.66%
Length of Largest Drawdown	10	8



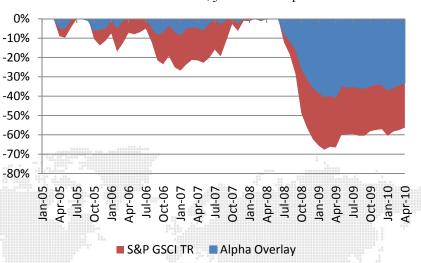
Sources: Bloomberg, AlphaMetrix Alternative Investment Advisors



Example: Commodity Alpha Overlay



S&P GSCI TR vs. Alpha Overlay (AM Natural Resources Balanced and SPGSCI TR) Historical Drawdowns, Jan 2005 - Apr 2010



Sources: Bloomberg, AlphaMetrix Alternative Investment Advisors



	Passive Long-Only Index	Alpha/Beta Blend	Structured Products / Portable Alpha	Managed Futures	Equity Hedge Funds	Private Equity	Niche Strategies (Land, Resource Concessions, Electricity Trading, etc.)
Flat Price Exposure	Х	Х	Х				
Low Cost Access	Х						
Active Risk Management		Χ	Х	Х	Х		
Liquidity	Χ	*	*	Х	*		
Transparency	Χ	*	*	*	*	*	*
Efficient Use of Cash	*		Х	Х			
Control of Assets	*			*	*		
Limited Liability	*	*	*	*	*	Х	
Requires Sourcing, Selection, Due Diligence, Monitoring		Х	Х	Х	Х	Х	Х
X - Generally True							
* - Case Dependent							
Beta (Passive)							
Combination (Passive and Active)							
Alpha (Active)							

Conclusion

Generally, Institutional Investors access commodity investments through passive long-only indices, or "beta"

Passive-long only indices can be extremely volatile and susceptible to large drawdowns

Actively managed commodity "alpha" strategies offer exposure to commodities as at asset class with the added benefits of opportunistic trading from the long and short side, active risk controls, and dampened volatility and drawdown

The potential benefits of commodity alpha come with the increased costs of higher fees, selection, and monitoring, among others

Commodity alpha strategies can potentially enhance the returns and reduce the risk of commodity portfolios through blends or overlay strategies

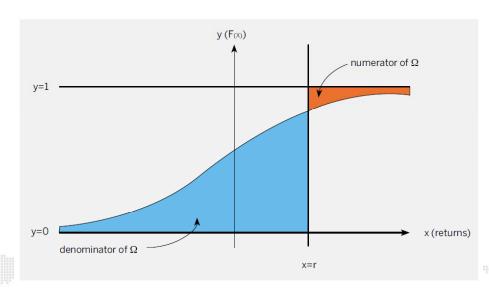


Appendix

Omega Function

$$\Omega(r) := \frac{\int_{r}^{\infty} [1 - F(x)] dx}{\int_{r}^{r} F(x) dx}$$

Source: Keating and Shadwick, 2002



Source: Bhaduri and Kaneshige, 2005



Appendix

S&P GSCI TR - The S&P GSCI is calculated primarily on a world production weighted basis, and is comprised of the principal physical commodities that are the subject of active, liquid futures markets. The weight of each commodity in the index is determined by the average quantity of production as per the last five years of available data. The production weights are designed to reflect the relative significance of each of the constituent commodities in the world economy while preserving the tradability of the index.

DJ UBS Commodity TR Index – The index is composed of futures contacts on 19 physical commodities. It reflects the return on fully collateralized futures positions. It is quoted in USD.

Rogers International Commodity Total Return Index - The Rogers International Commodity Index® ("RICI") is a composite, U.S. dollar-based, total return index designed by James B. Rogers, Jr. ("Rogers") in the late 1990s. The index was designed to meet the need for consistent investing in a broad based international vehicle; it represents the value of a basket of commodities consumed in the global economy, ranging from agricultural to energy and metals products. The value of this basket is tracked via futures contracts on 35 different exchange-traded physical commodities, quoted in four different currencies, listed on eleven exchanges in five countries. The index aims to be an effective measure of the price action of raw materials not just in the United States but also around the world. Indeed, the index's weights attempt to balance consumption patterns worldwide (in developed and developing economies) and specific contract liquidity.

The RJ/CRB Total Return Index is the Total Return Index for the RJ/CRB Commodity Price Index, which measures the price movements of 22 sensitive basic commodities whose markets are presumed to be among the first to influenced by changes in economic conditions.

Sources: Bloomberg, Standard and Poors, Rogers Raw Materials



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