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Real Asset Solutions

Commodities Exposure via Indexing

Commodities, unlike most financial assets, are tangible resources that can be considered strong diversifiers and may also help reduce overall portfolio risk, when utilized properly.

The growing demand for commodities (due to modernization in emerging countries¹) and the minimal global opportunity costs of investing in commodities (a result of the current low interest rate environment) are two main factors that may make today an opportune time to consider an allocation to commodities.

Although most investment advisors recognize the significance of some real asset exposure, from a long-term strategic allocation perspective, the fundamental changes mentioned above have accelerated allocations from more traditional asset classes, like stocks and bonds, to more progressive investments such as commodities.

In the coming years, low interest rates and increased money supply may cause inflation or the weak economy may drive deflation. In either scenario, prices of commodities could rise rapidly and likely have an adverse impact on investors and the economy. It is clear that inflation could produce a rise in prices, but deflation could yield similar results if production slows to a pace that drops supply below demand. Therefore, an investment in commodities may act as a diversifying inflation or deflation hedge and serve as insurance. While commodities may be volatile with periods of underperformance, they may also provide event risk protection and may improve the return profile of an otherwise traditional portfolio.

Real Asset Exposure: Choices

Until the widespread availability of commodity index investing, the most practical method for investors to gain exposure to real assets was through equity investments in individual, real asset-related companies. For example, investors would have to purchase stocks from gold mining or oil drilling companies. However, commodity-related stock investments exhibit relatively high correlations to the broad stock market.

The development of investable futures-based commodity indices, such as the S&P GSCI®, has provided a way for investors to allocate assets to commodities while taking advantage of their typically low correlation with stocks. As a result, investments in commodities have become an accessible and popular source of enhanced risk-adjusted returns.

Although the S&P GSCI can be used as a gauge to gain pure commodity exposure,² some investors still prefer real asset-based equity indices that track

¹ During 2010, demand for oil grew to US\$ 2.4 million barrels per day, one of the highest levels on record and sustained growth of over 2.0 million b/d is forecasted for 2011 (Goldman Sachs, Global Energy Watch, Dec. 1, 2010). As demand outpaces supply with inventories as well as OPEC spare capacity declining, there will be upward price pressure on oil as well as a premium on the near contract. This is because it is hard to drill (or mine for metals), which slows new supply. As inventories decline, price is the only factor that can drive the market towards equilibrium.

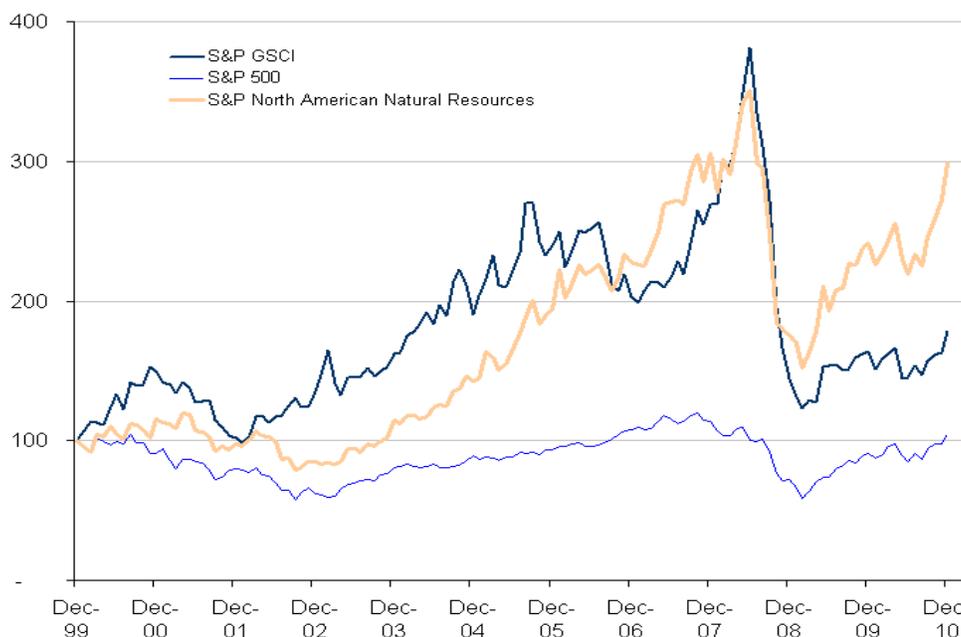
² Exposure can only be gained through investments linked to an index.

funds as a way to gain commodity exposure and reduce specific company-related risk.

Noting that past performance is never indicative of future returns, the chart below depicts the overall performance of the S&P 500®, the S&P GSCI, and the S&P North American Natural Resources Index, a measure of equity-based exposure to real assets, since December 1999.

Chart 1: S&P North American Natural Resources, S&P GSCI, and S&P 500 Performance from a base of 100 December 1999 – December 2010

One of the key benefits of futures-based commodity indices, such as the S&P GSCI, is their history of equity-like returns with low correlations to other asset classes.



Source: Standard & Poor's. Data as of December 31, 2010. Charts are provided for illustrative purposes only. It is not possible to invest directly in an index. Past performance is not an indication of future results. The S&P North American Natural Resources was launched on May 4, 2007 and all data presented prior to that date reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information on the index and the inherent limitations associated with back-tested index performance.

Asset Class Correlations

One of the key benefits of futures-based commodity indices, such as the S&P GSCI, is their history of equity-like returns with low correlations to other asset classes. While the performance of commodity-related investing, as demonstrated by the S&P GSCI and S&P North American Natural Resources Index since the end of 1999, has been attractive, the recent decade has experienced one of the most significant boom and bust cycles seen in indexing history (see Chart 1 above).

Despite elevated correlations among asset classes resulting from the 2008 global economic crisis, S&P North American Natural Resources is recovering from its trough in 2009. Historically the correlations have been low (see Table 1 below) due to the fundamentals discussed earlier.

**Table 1: S&P Indices Performance and correlations
December 2002 – December 2010**

Dec. 2002 - Dec. 2010*	S&P GSCI Index	S&P Global Natural Resources	S&P North American Nat. Res.	S&P 500 TR	S&P BG/Cantor 7/10 yr	Hypothetical Portfolio: 80% S&P 500 20% GSCI
Total Return	43.89%	282.33%	253.59%	57.80%	55.84%	59.76%
Annualized Total Return	4.60%	18.05%	16.91%	5.81%	5.64%	5.97%
Standard Deviation	26.33%	21.57%	23.53%	15.27%	7.15%	14.99%
Correlation						
S&P GSCI Index	1.00	0.68	0.73	0.35	-0.14	0.66
S&P Global Natural Resources	0.68	1.00	0.93	0.69	-0.16	0.82
S&P North American Nat. Res.	0.73	0.93	1.00	0.69	-0.16	0.83
S&P 500 TR	0.35	0.69	0.69	1.00	-0.19	0.93
S&P BG/Cantor 7/10 yr	-0.14	-0.16	-0.16	-0.19	1.00	-0.20
Portfolio: 80% S&P 500 / 20% GSCI	0.66	0.82	0.83	0.93	-0.20	1.00

Data for the S&P Global Natural Resources & S&P GNR Metals & Mining is not available prior to December 2002.

Source: Standard & Poor's. Data as of December 31, 2010. Charts are provided for illustrative purposes only. It is not possible to invest directly in an index. Past performance is not an indication of future results. All the indices referenced in this chart were not in existence for the entire time period depicted. Please see the Performance Disclosure at the end of this document for more information on the index and the inherent limitations associated with back-tested index performance.

Although the risk of commodities is higher than for stocks or bonds individually (as shown above in Table 1 above), commodities may reduce risk, due to the lower correlations, when added to a portfolio of stocks and bonds. This is shown in Table 2 below, where an investor begins with a pure stock portfolio then subsequently adds bonds then commodities. It demonstrates increasing returns, decreasing risk, and an enhanced Sharpe Ratio.

**Table 2: Adding Commodities to a Portfolio
Performance, Risk, Sharpe ratio: December 1999 – December 2010****

	Portfolio 1	Portfolio 2	Portfolio 3
Return	0.41%	3.71%	4.71%
Risk	16.41%	8.00%	7.79%
Sharpe Ratio	(0.14)	0.13	0.27
Stocks (%)	100	50	30
Bonds (%)	0	50	50
Commodities (%)	0	0	20

**Stocks are represented by the S&P 500, Bonds are represented by the S&P BG/Cantor 7/10 year Index, and commodities are represented by the S&P GSCI. Risk free rate was determined by referencing the Citigroup BIG Treasury Bill 3-month Index.

Source: Standard & Poor's. Data as of December 31, 2010. Charts are provided for illustrative purposes only. It is not possible to invest directly in an index. Past performance is not an indication of future results. Please see the Performance Disclosure for more information on the S&P/BGCantor 7/10 Year Index.

Real Asset Investment Index Alternatives

S&P Natural Resources Indices: S&P offers a broad family of natural resources indices including the S&P Global Natural Resources Index and the S&P North American Natural Resource Index.

The S&P Global Natural Resources Index is comprised of 90 of the largest publicly traded companies in natural resources and commodities businesses that meet specific eligibility criteria. The index offers diversified, liquid, and investable equity exposure across three primary commodity-related sectors: Agriculture, Energy, and Metals & Mining.

The S&P North American Natural Resource Index, a similar index, includes only North American based publicly traded companies in natural resources and commodities businesses.

The S&P Natural Resources Indices offer indirect exposure to commodities, but have historically shown a higher correlation to the S&P 500 than the actual underlying commodity markets.

S&P GSCI: The S&P GSCI provides investors with a publicly available benchmark for investment performance in the commodity markets. The index is a commodity futures-based index whose constituents are tradable, readily accessible to market participants, and cost efficient to implement.

The S&P GSCI is widely recognized as the leading measure of general commodity price movements and inflation in the global economy. S&P purchased the S&P GSCI from Goldman Sachs in 2007 and is the sole owner/manager of the index. The S&P GSCI family of indices offers a wide variety of sector, related, and sub-indices, some of which are tracked by ETP providers.

The S&P GSCI offers direct real asset exposure to a diversified group of commodities with a history of low correlations to other asset classes. It has a high correlation to the underlying commodity prices and returns.

The S&P GSCI can be enhanced or reduced by the term structure of the futures market as the index systematically rolls out of the near-expiration futures and into the most liquid futures contract due in the upcoming months. Since the 2008 crisis, total return performance has been reduced due to a high negative roll yield. However, roll yield is contingent on storage situations, which are cyclical, meaning that a positive roll often follows a negative roll.³

The S&P GSCI is widely recognized as the leading measure of general commodity price movements and inflation in the global economy.

³As the benefit to inventory holders (convenience yield) exceeds the riskless rate plus the physical cost of storage, the futures curve goes into backwardation, where the near contract is more expensive than the further out contract. This results in a positive roll yield due to selling the expensive contracts and buying the cheap contracts. Historically since the inventories build and deplete, the curve shifts cyclically between backwardation and contango.

Real Asset Accessibility		
S&P Commodities Indices	Investment Tool	ETP (Exchange Traded Product) Ticker
S&P North American Natural Resources Sector	iShares S&P North American Natural Resources Sector	IGE
S&P Global Natural Resources	SPDR S&P Global Natural Resources ETF	GNR
S&P Metals & Mining Select Industry	SPDR S&P Metals and Mining ETF	XME
S&P GSCI Based		
S&P GSCI	iShares S&P GSCI Commodity Indexed Trust	GSG
	iPath S&P GSCI Total Return ETN	GSP
S&P GSCI Enhanced	GS Connect S&P/GSCI Enhanced Commodity TR Strategy Index ETN	GSC
S&P GSCI Crude Oil	iPath S&P GSCI Crude Oil TR Index ETN	OIL

Additional Resources

- Related Practice Essentials paper: [Understanding Commodities and the S&P GSCI®](#)
- For more information on S&P commodity indices, visit www.SPindices.com/commodities.
- To access more articles on a broad range of index-related topics or to sign up to receive periodic updates, visit us at www.SPindices.com.
- Solutions for Financial Advisors: www.SPindices.com/4solutions

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Performance Disclosure

It is not possible to invest directly in an S&P index. Past performance of an index is not an indication of future results.

The inception date for the S&P/BGCantor U.S. Treasury Bond and S&P/BGCantor U.S. Treasury Bill Indices is March 24, 2010 at the market close. These indices have not been in existence prior to that date. All information for these indices prior to March 24, 2010 is back-tested. The back-test calculations are based on the same methodology that was in effect at the time that the index was launched. The actual performance period shown begins March 24, 2010 at the market close. Complete index methodology details document available at www.indices.standardandpoors.com.

The inception date for the S&P Global Natural Resources Index is May 27, 2008 at the market close. This index has not been in existence prior to that date. All information for these indices prior to May 27, 2008 is back-tested. The back-test calculations are based on the same methodology that was in effect at the time that the index was launched. The actual performance period shown begins May 27, 2008 at the market close. Complete index methodology details document available at www.indices.standardandpoors.com.

The inception date for the S&P North American Natural Resources is May 4, 2007 at the market close. This index has not been in existence prior to that date. All information for these indices prior to May 4, 2007 is back-tested. The back-test calculations are based on the same methodology that was in effect at the time that the index was launched. The actual performance period shown begins May 4, 2007 at the market close. Complete index methodology details document available at www.indices.standardandpoors.com.

S&P acquired the GSCI from Goldman Sachs on February 2, 2007 and it was subsequently renamed the S&P GSCI. Goldman Sachs began first publishing the GSCI related indices in 1991 but has calculated the historical value of the GSCI beginning January 2, 1970 based on actual prices from that date forward and the selection criteria, methodology and procedures in effect during the applicable periods of calculation (or, in the case of all calculation periods prior to 1991, based on the selection criteria, methodology and procedures adopted in 1991). The GSCI has been normalized to a value of 100 on January 2, 1970, in order to permit comparisons of the value of the GSCI to be made over time.

Prospective application of the methodology used to construct the back-tested data for any of the indices may not result in performance commensurate with the back-test returns shown. The back-test period does not necessarily correspond to the entire available history of the indices. Please refer to the methodology paper for the index, available at www.standardandpoors.com for more details about the index, including the manner in which it is rebalanced, and the timing of such rebalancing, criteria for additions and deletions and index calculation. The index is rules based, although the Index Committee reserves the right to exercise discretion, when necessary.

The index performance has inherent limitations. The index returns shown do not represent the results of actual trading of investor assets. Standard & Poor's maintains the indices and calculates the index levels and performance shown or discussed, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor would pay to purchase the securities they represent. The imposition of these fees and charges would cause actual and back-tested performance to be lower than the performance shown. For example, if an index returned 10% on a US\$ 100,000 investment for a 12-month period (or US\$ 10,000) and an annual asset-based fee of 1.5% were imposed at the end of the period (or US\$ 1,650), the net return would be 8.35% (or US\$ 8,350) for the year. Over 3 years, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.1%, a total fee of US\$ 5,375, and a cumulative net return of 27.2% (or US\$ 27,200).

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