

## Bond Basics

July 2006

### **Commodity Basics: What are Commodities and Why Invest in Them?**

Commodities are raw materials used to create the products consumers buy, from food to furniture to gasoline. Commodities include agricultural products such as wheat and cattle, energy products such as oil and gasoline, and metals such as gold, silver and aluminum. There are also “soft” commodities, or those that cannot be stored for long periods of time, which include sugar, cotton, cocoa and coffee.

The commodity market has evolved significantly from the days when farmers hauled bushels of wheat and corn to the local market. In the 1800’s, demand for standardized contracts for trading agricultural products led to the development of commodity futures exchanges. Today, futures and options contracts on a huge array of agricultural products, metals, energy products and soft commodities can be traded on exchanges around the world.

Commodities have also evolved as an asset class with the development of commodity futures indexes and, more recently, the introduction of investment vehicles that track commodity indexes. In this article, we will explain why investors might consider adding commodities to their portfolio, as well as some of the strategies for investing in commodities.

### **Why Invest in Commodities? Diversification and Inflation Protection**

Investor interest in commodities has soared in recent years as the asset class has outperformed traditional assets such as stocks and bonds. The performance of commodities as an asset class is usually measured by the returns on a commodity index, such as the Dow Jones-AIG Commodity Index, which tracks the return from a passive investment in 19 different commodity futures contracts. Over the five-year period ended March 31, 2006, the Dow Jones AIG Commodity Index has returned 10.6%, versus 2.6% for the S&P 500.

Commodity prices have been driven higher by a number of factors, including increased demand from China, India and other emerging countries that need oil, steel and other commodities to support manufacturing and infrastructure development. The commodity supply chain has also suffered from a lack of investment, creating bottlenecks and adding an “insurance premium” and/or a “convenience yield” to the returns of many commodity futures. Over the long term, these economic factors are likely to support continued gains in commodity index returns.

The potential for attractive returns is perhaps the most obvious reason for increased investor interest in commodities, but not the only factor. Commodities may offer investors other significant benefits, including enhanced portfolio diversification and a hedge against inflation and event risk.

Commodities are “real assets”, unlike stocks and bonds, which are “financial assets”. Commodities, therefore, tend to react to changing economic fundamentals in ways that are different from traditional financial assets. For example, commodities are one of the few asset classes that tend to benefit from rising inflation. As demand for goods and services increases, the price of those goods and services usually rises as well, as do the prices of the commodities used to produce those goods and services. Because

## Bond Basics

July 2006

commodity prices usually rise when inflation is accelerating, investing in commodities may provide portfolios with a hedge against inflation.

By contrast, stocks and bonds tend to perform better when the rate of inflation is stable or slowing. Faster inflation lowers the value of future cash flows paid by stocks and bonds because those future dollars will be able to buy fewer goods and services than they would today. For example, during the 1980s and 1990s, inflation fell and stocks and bonds experienced bull markets.

For these reasons, returns from a broad and diversified commodity index such as the Dow Jones AIG Commodity Index have historically been largely independent of stock and bond returns, but positively correlated with inflation. Since December 1990, quarterly returns on the Dow Jones-AIG Commodity Index have been negatively correlated with both the S&P 500 and the Lehman Brothers Aggregate Bond Index (LBAG), and positively correlated with both the CPI and the quarterly change in inflation.

### Correlation of Quarterly Returns

(Quarterly Returns December 1990 – March 2006)

	DJ-AIG	S&P 500	LBAG	Inflation (CPI-U)	Quarterly Change In Inflation
DJ-AIG	1.00	(0.18)	(0.14)	0.35	0.28
S&P 500		1.00	(0.11)	(0.23)	(0.07)
LBAG			1.00	(0.15)	(0.29)

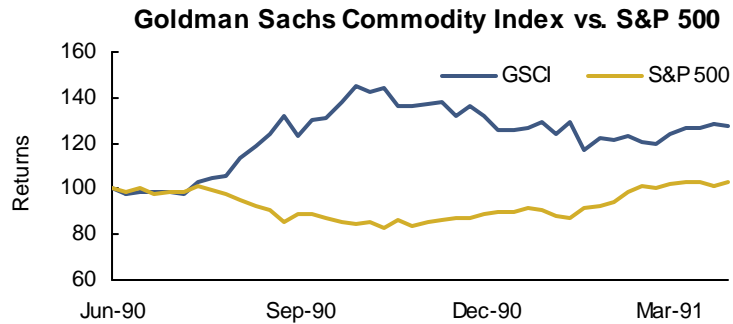
Source: Bloomberg Financial Markets and Bureau of Labor Statistics

The Dow Jones-AIG Commodity Index's lack of correlation with stocks and bonds illustrates what may be the most significant benefit of broad exposure to commodities: diversification. In a diversified portfolio, assets do not move in sync with each other, which tends to reduce the volatility of the overall portfolio. Lower volatility reduces portfolio risk and should improve the consistency of returns over time. Because of its potential to reduce risk while improving returns at the same time, diversification has been called the only free lunch in investing. However, diversification does not ensure against loss.

Finally, in addition to providing enhanced diversification and a potential hedge against inflation, commodities may also offer investors a hedge against "event risk", or the risk that a financial crisis, war or another geopolitical event could cause other assets to fall. For example, after Iraq invaded Kuwait in 1990, commodities performed well while equities faltered, as the chart below illustrates.

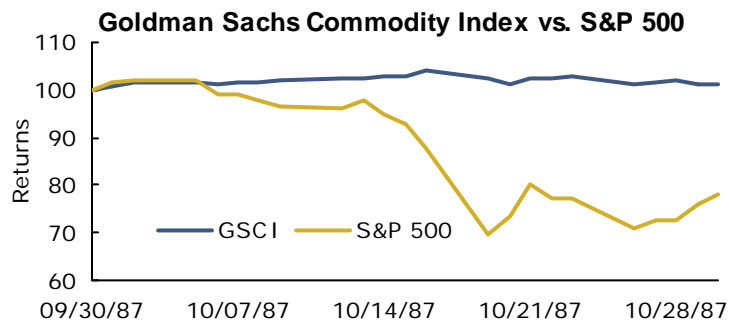
## Bond Basics

July 2006



Source: Goldman Sachs, Bloomberg Financial Markets

As another example, commodities provided diversification during the stock market crash of 1987, as the chart below illustrates.



Source: Goldman Sachs, Bloomberg Financial Markets

While the benefits of commodities may be substantial, the asset class entails risks as well. Commodity returns tend to be about as volatile as equity returns, potentially resulting in periods of underperformance. For example, annualized monthly volatility from January 1990 through March 2006 was 12.1% for the Dow Jones-AIG Commodity Index, 13.9% for the S&P 500, and 18.8% for the Goldman Sachs Commodity Index. Despite the similar volatility, equities and commodities have rarely fallen in the same year. From 1970 through 2005, the S&P 500 has produced negative returns in seven of those years, while the Goldman Sachs Commodity Index produced negative returns in eight of those years. However, only twice over that 35-year period did both indexes produce negative returns.

### Commodity Investment Strategies

Capturing the full benefits of commodity exposure has been a challenge in the past. Investing in physical commodities—a barrel of oil, a herd of cattle or a bushel of wheat—is impractical, so investors have tended to seek commodity exposure either by purchasing commodity-related equities or through actively managed futures accounts.

## Bond Basics

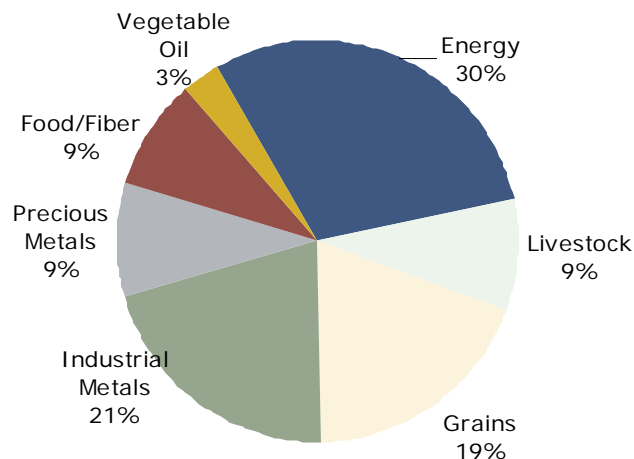
July 2006

However, these investment strategies may not capture the potential diversification and other benefits of commodity exposure in a portfolio. For example, commodity-related equities will not necessarily reflect changes in the price of commodities. If an oil producer has already sold its supply on a forward basis, the producer's stock price may not fully benefit from a rise in the price of oil. Commodity-related equity returns can also be affected by the issuer's financial structure or the performance of unrelated businesses. In fact, commodity-related equities may actually have a higher correlation to movement in equities than the commodity market. Actively managed commodity futures accounts also may not provide the benefits of commodity exposure suggested by historical commodity index performance, because these accounts tend to reflect the manager's skills at selecting the right commodities, at the right time, rather than the inherent returns of the commodity market.

The emergence of investment vehicles that track commodity futures indices has provided investors with another option for gaining exposure to commodities that may offer better potential to capture the full benefits of the asset class. Investment vehicles that track commodity futures indices are not the same as actively managed futures accounts. Instead, commodity index returns provide passive exposure to a broad range of commodities. For example, the Dow Jones AIG Commodity Index tracks the futures price of 19 different commodities, including energy, livestock, grains, industrial metals, precious metals and "soft" commodities. Changes to the composition of the index are determined by preset rules rather than a manager's discretion.

### Dow Jones-AIG Commodity Index Components

As of March 31, 2006



Source: AIG

One advantage of commodity exposure that tracks a broad index is that commodities are not highly correlated with each other and index returns should be less volatile than the returns on an individual commodity. Another advantage is that commodity indexes themselves have existed for decades, providing ample historic data for asset allocation studies and research.

## Bond Basics

July 2006

While broad commodity exposure can provide investors with a number of potential benefits, investing in commodities entails risks as well. In particular, commodities may not perform well during cyclical downturns in the U.S. or global economy, when consumer and industrial demand slows. Commodities have historically been about as volatile as the equity market. For example, from December 1990 through March 2006, annualized monthly volatility for the Dow Jones-AIG Commodity Index was 12.2% compared to 13.8% for the S&P 500. More recently, from June 2001 through June 2006, annualized monthly volatility for the Dow Jones-AIG Commodity Index was 13.9%, slightly above the 13.5% volatility of the S&P 500 over the same period.

### Conclusion

Commodities are a distinct asset class with returns that are largely independent of stock and bond returns. Therefore, adding broad commodity exposure can help diversify a portfolio of stocks and bonds, lowering risk and potentially boosting return. Achieving this diversification has been made easier with the development of investment products that passively track a broad range of commodities.

### Past performance is no guarantee of future results.

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Commodities are assets that have tangible properties, such as oil, metals, and agricultural products. An investment in commodities may not be suitable for all investors. Commodities and commodity-linked securities may be affected by overall market movements, changes in interest rates, and other factors such as weather, disease, embargoes, and international economic and political developments, as well as the trading activity of speculators and arbitrageurs in the underlying commodities.

The correlation of various indices or securities against one another or against inflation is based upon data over a long time period. These correlations may vary substantially in the future or over shorter time periods, resulting in greater volatility

Statements concerning financial market trends are based on current market conditions, which will fluctuate. There is no guarantee that these investment strategies will work under all market conditions, and each investor should evaluate their ability to invest for the long-term, especially during periods of downturn in the market.

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