

## COMMODITY AND GOLD STRATEGIES

Commodities and gold, a special case commodity, are uncorrelated with price moves in equity and fixed markets and often rise when equities and fixed income are declining. During the 1972-1982 bear market, eleven years of data, the S&P 500 returned +0.3% per year, single family housing returned 1.02% per year, Reits returned -17.32% per year, long bonds returned -2.2% per year, and 1-month T's returned -0.1% per year. The Goldman Sachs Commodities Index (GSCI) returned -1.56% per year. Gold returned 11.4% per year. Inflation averaged 7.30% per year. All the returns above are inflation adjusted.

Equities, fixed income, real estate, and commodities/gold are the four major investment asset class categories. Which major asset class will do best is unpredictable and changes over time. From 1927-1966, portfolios overweighted in US large growth did best. From 1967-2006 portfolios overweighted in US small value did best. From 1972-1982 only gold did well. From 1982-2000 stocks, bonds, Reits and commodities did well but gold was in a bear market. We simply can't predict which asset classes will do well over one or two decades and this argues for diversification across all major asset classes.

The GSCI tracks nineteen commodities including oil, natural gas, precious metals, base metals, and industrial and agricultural products. For 1972-1998, the GSCI returned 10.3% per year with a standard deviation of 24.25%. The S&P 500 returned 13.8% per year with a standard deviation of 16.7%, a better return with less volatility than commodities. But, a 50/50 combination of the S&P and the GSCI produced a 13.4% return with a 12% standard deviation, indicating commodities very substantially lowered the volatility of an equity portfolio without substantially reducing its returns. This period included a nasty bear market in the 1970's, high inflation, very high interest rates, a weak economy, then a booming economy with robust equity, fixed, and real estate markets from 1982-1998.

In early 2006, Ibbotson, a highly respected source of investment data, published an analysis of commodities as a portfolio diversifier from 1970-2004. They focused on a fully collateralized total return commodities index with monthly rebalancing. According to Ibbotson, "Our historical analysis supports the claims that commodities have low correlations to traditional stocks and bonds, produce high returns, hedge against inflation, and provide diversification through superior returns when they are needed most...we found that including commodities in the opportunity set resulted in a superior historical efficient frontier...the average improvement in historical return was approximately 133 basis points (1.33% annually)...We believe commodities offer an inherent or natural return that is not conditional on skill." Ibbotson recommends allocating between 9% and 29% of total portfolio value in commodities with 21% to 29% in portfolios running 60% equity and 40% fixed. Opinions in the world of DFA differ widely about commodities

with Bill Bernstein and Rick Ferri standing firmly against their inclusion and Larry Swedroe, author of several books on DFA strategies, urging their inclusion

Ibbotson also conducted a study of the benefits of precious metals on portfolio diversification covering February 1971 through December 2004. Ibbotson concluded that precious metals are the only asset class with a positive correlation to inflation. Of particular note is their finding that precious metals tend to do best when traditional asset classes like equities and fixed income have negative returns. Ibbotson found that the long-term risk/return ratio in conservative, moderate, and aggressive portfolios was improved by allocations of 7.1%, 12.5%, and 15.7% respectively. And, as is the case with equities, timing and trading gold is unlikely to add to returns.

Gold prices today can be calculated in terms of oil, the Dow, and earlier gold price peaks. Oil and gold have a correlation of 0.8 for 4-4-93 through 5-14-08 though they do not always track together. As of May 2008, it took about seven barrels of oil to buy one ounce of gold. The fifty year average is about 14:1 so gold would need to double in price to about \$1,800 an ounce to reach its average price ratio to oil or oil would have to drop to \$60/bbl, a price which is looking increasingly unlikely given oil today over \$130/bbl. As of May 2008, the ratio of the price of a share of the Dow to an ounce of gold was about 15:1. The one hundred year average is about 14:1 with it touching 1:1 in three bear equity markets last century. Should we encounter a serious bear market, either gold would have to go up to about \$13,000 an ounce or the Dow down to 900. The more likely scenario is that at some time in the future the two will come close to 1:1, maybe at \$5,000 an ounce for gold and 5000 on the Dow. Based on the 1980 peak above \$850 an ounce, an inflation adjusted peak price today would be about \$6,500 an ounce. Thus, gold at \$850-\$1,000 today looks relatively cheap by historical standards.

Gold is a special case commodity in that it is both a commodity used in jewelry, art, dentistry and technology as well as a monetary metal. It is also not a consumable commodity that is used up like energy and agricultural products and its supply isn't very reactive to demand. Mining it is expensive and dependent upon energy and water costs and estimates suggest that even at full output world gold supply can only be increased 1-2% per year. Barick, the world's largest gold producer, estimates that the base cost of delivering gold to the marketplace is \$700 to \$800 per ounce as of June 2008. Many central banks and foreign investors own gold since it has been a consistent medium of exchange, form of money, and store of value for over 5000 years while all paper (fiat) currencies have eventually ended up worthless due to monetary inflation. Most of Europe and the US were on a gold (or silver) standard from 1800-1946. Gold tends to move up with commodities though it is an uncorrelated asset class with all other major asset classes and thus a portfolio diversifier.

Gold tends to do well in times of monetary inflation, the excessive growth of paper money and credit, and during times of uncertainty and fear. Since 1996 the paper money and credit supply of the US has been inflating at rates far exceeding the growth rate of the US economy. As of 2008, money and credit is growing at about 16% annually and accelerating as the Fed and US government are trying to inflate their way out of what

appears to be the end of an historic credit bubble and accelerating credit contraction and economic downturn. Since 1970, the M3 money supply in the US has increased about sixteen times and the purchasing power of the dollar has declined 85% by the official current CPI and 95% by the older and less gimmicked 1970 CPI calculations.

EAM recommends that our clients at least consider the inclusion of a commodities index and/or gold bullion index in fully diversified equity and fixed portfolios. Our typical client who holds these assets has between 5% and 10% in commodities and/or gold with a few higher than that. Often, we'll place half of that allocation in a commodities index and half in gold bullion. Very low allocations of 2% to 3% are unlikely to offer much of a counterbalance if equities and fixed are declining. Their inclusion is, of course, a function of account objectives, investment time frame, risk tolerance and other factors. Many gold investors prefer gold mining stocks to gold bullion but gold stocks have been trailing the metal for years and can go down as the metal climbs.

For commodities indexes we recommend the Pimco commodities fund, PCRIX and GSG. PCRIX tracks the Dow Jones commodities index and de-leverages the inherent leverage and risk in commodities portfolios by placing most of the money in Treasuries and inflation-linked bonds which pay Federally taxable interest. Commodities futures contracts purchased without de-leveraging can trigger margin calls. PCRIX is about 35% in oil and energy commodities. We also recommend GSG, an i-shares commodity indexed trust based upon the GSCI, a commodities index weighted about 65% in oil and energy. For gold bullion we recommend GLD, an NYSE traded fund which purchases gold bullion bars and stores them in a vault owned by HSBC outside London. The share price is one-tenth the ounce price of gold. GLD is now the third largest gold reserve in the world and growing rapidly. We also use CEF, the oldest gold and silver bullion fund, but it is an ETF originating in Canada and can be volatile due to fluctuations in share price versus the underlying value of the metals and fluctuations in exchange rates.