

## Outlook for Alternative Investments Commodities and Real Estate

### Commodities

Commodity returns over the twelve months ending June 30<sup>th</sup> were extraordinarily high. From 30 June 2007 to 2008, the Standard and Poor's Goldman Sachs Commodity Index (S&P GSCI) increased 76.0% on a total return basis while the spot price index increased 76.4%. Not since 1973 and 1974 have total returns on a trailing twelve month basis been as high. Even after July's and August's price declines, the S&P GSCI total return index had increased 42.0% on a trailing twelve month basis as of the end of August.

These extraordinary returns are not likely to continue, although we do expect commodities to be a source of real return for investors over the next three to five years. A slower rate of global economic growth, a slower pace of dollar depreciation, and the combined effects of energy conservation and new investment in the production of mined and extracted commodities are likely to slow the pace of commodity price appreciation and result in more normalized returns for this asset class over the mid-term. In the short term, price corrections in some commodities, particularly energy, may result in negative returns for the asset class.

Readers who are not familiar with commodities as an asset class are strongly advised to read the article on this subject in the second issue of the *Advisor* and available at the *Advisor* web site, [www.aametrics.com](http://www.aametrics.com). In summary, investors may participate in the commodities market in several ways, some of which are extremely risky, and many of which rely on price appreciation to generate positive returns. For the purposes of portfolio optimization, we avoid highly speculative or leveraged commodity investments and define the commodities asset class by one of several indices of fully collateralized, passively managed funds of commodity futures contracts. These indices do not, strictly speaking, rely on price appreciation to generate positive returns, although returns on the indices are strongly correlated to price changes, as we shall see. The S&P GSCI index is one of the most widely used of several such indices and one of the oldest. It tracks a basket of 24 commodity futures contracts weighted according to world production of each commodity and rebalanced annually. Since energy now accounts for the bulk of traded commodities, energy commodities (crude oil, natural gas, gasoline, gasoil, and heating oil) account for approximately 77% of the total weight of the index.

Figure AIO.1 reports annual returns on the S&P GSCI total return index, changes in the spot price index, and changes in U. S. GDP since 1970. As is evident from figure AIO.1, commodity spot prices are highly variable even on an annual basis and the total return on the index is strongly correlated with changes in spot prices. With only one exception (2006), the total return index has produced negative returns only in years in which spot prices have fallen. A decline in spot prices, however, has not necessarily meant a negative return for the total return index. The correlation between spot prices and the total return index for the S&P GSCI is .78 on an annual basis.

Less evident from figure AIO.1 is the degree to which spot prices are correlated with real GDP. By visual inspection, spot prices appear to decline when GDP growth slows. In fact, since 1970, the annual S&P GSCI spot price index has had a .59 correlation with the level of real GDP. In plain language, when real GDP increases, commodity prices generally increase; when real GDP decreases, commodity prices generally decrease.

The correlation between commodity prices and real U. S. GDP growth is likely to change going forward, however, since the United States is no longer the driving force behind global economic growth. In 2007, the U. S. accounted for only 21% of global economic output. With growth in other parts of the world consuming a larger portion of global commodity output, commodity prices are less likely to be determined largely by U. S. economic activity. This change in correlation should ameliorate the impact which the stalling U. S. economy would otherwise have on commodity prices and returns. Although this may be good news for the commodity investor, it is not good news for the U.S. economy as it exacerbates the risk of stagflation (inflation without growth).

Global economic growth is likely to result in a continuation of the long-term secular trend of commodity price appreciation that began in 2001. Although the decrease in the spot price indices in July and August were between 17% and 18% (largely the result of the decline in crude oil prices from the early July peaks), we expect commodity prices to finish the year higher than they started and higher than their late August levels. This expectation is consistent with both current (early September) commodity price forecasts and forward rates, which expect an increase in the S&P GSCI spot index of approximately 10% through year-end. A 10% increase from September through December will leave the spot price index up more than 27% for 2008.

What are the longer-term price prospects for commodities?

Current longer-term forecasts provide little guidance as the range of forecasts is extremely wide. For example: current (early September) forecasts for the price of crude oil for 2009 range from \$83.00 to \$147.00 per barrel; forecasts for wheat range from \$7.05 to \$10.28 per bushel; and forecasts for copper range from \$6,450 to \$8,040 per metric ton. Each of these forecasts is by an analyst at a major investment bank or international bank. The range of forecasts represents the uncertainty over the U. S. and global economies, supply conditions in commodity markets, and the strength of the dollar. Since the dollar is the currency in which commodities are priced internationally, commodity prices will increase if the dollar falls in value and all other factors remain constant. From 2002 through 2004, the rise in commodity prices was largely attributable to the decline in the value of the dollar, and some of the recent decline in commodity prices is due to the rally in the dollar's value.

We are not so bold as to forecast commodity prices. However, we are in the camp with those analysts who believe that secular conditions will result in higher commodity prices long term. Global economic growth, even at a slower pace than over the past two years,

will add to the demand pressure on commodities, particularly energy. Although a recession in the United States may reduce some of the demand pressure temporarily, it will not eliminate it. We are not sanguine about supply conditions long term, particularly for crude oil. Higher oil prices will provide greater incentive to invest in new production, but increased production from new investment has a long lag time, and investment will have to make up for both diminishing yields from current fields as well as provide for rapidly increasing demand from emerging market economies. According to estimates by the International Energy Agency, two-thirds of the additional production capacity required over the next eight years to meet global energy needs will be necessary just to replace falling production from current sources. We also believe that less stable climatic conditions will result in more variability in crop yields and more uncertainty in agricultural commodity supplies. The U. S. current account and fiscal deficits will continue to erode the value of the dollar. Although the dollar is—by some measures—modestly undervalued against the euro and the pound, it remains overvalued against most Asian currencies and in general. According to a late July analysis by the Peterson Institute for International Economics, an independent, non-profit, and non-partisan institute devoted to global economic studies, the dollar remained overvalued on a multilateral basis by 9.4% in February, 2008.

For all of these reasons, we expect commodity prices to increase on average over the long term. More importantly, we do not expect a wholesale decrease in commodity prices, which could make the achievement of positive returns from commodities problematic. We expect a fully-collateralized, passively-managed basket of commodity futures contracts, as represented by an index like the S&P GSCI total return index, to generate returns of between 4.0% and 5.0% over the nominal three month Treasury bill rate. For our current optimization analysis, we projected an annual total return of 7.5%, at the low end of the range.

### Real Estate

Readers of our earlier commentaries on real estate know that we have had concerns about real estate valuations being too far above historical norms. In early 2007, valuations of domestic equity REITs were more than 50% above long-term historical medians and, in some cases, were near to or at all-time peaks. Figures AIO.2 and AIO.3 show how REITs have been valued relative to forward earnings and adjusted cash flow over the past ten years. Both figures clearly show valuations peaking in early 2007.

Fortunately, valuations have declined since 2007 largely as a result of declining REIT share prices. Actual earnings for 2007 compared favorably with those anticipated in late 2006 for 2007. Future earnings, however, are expected to grow more slowly according to current estimates. Whereas analysts were expecting 10% annual earnings growth over the next three years in late 2006, now they expect annual growth of only 4.8% through 2010.

Figure AOI.4 shows how current valuation levels compare with long-term median levels and levels in February 2007. Valuations for Office Buildings and Industrial Property REITs and Shopping Center REITs are closest to historical medians, with current valuations within a range of 0.90 to 1.06 times the historical median. Valuations for Apartment Building REITs and Diversified Property REITs, although lower than their 2007 peaks, are still above their historical medians, with current valuations ranging from 1.15 to 1.33 times the historical median.

Based on current valuation levels and projected growth rates of less than 5.0% for earnings and 3.0% for dividends, we project that domestic real estate returns over the next three to five years will average 9.25%. This projected return rate is less than the long-term average annual total return of 15.2%. It is, however, greater than the 7.5% projected return used in our portfolio optimization projection of August 2007. As valuations return to historical levels and prospects for the U. S. economy improve in the future, we expect projected real estate returns will more closely approximate the long-term average. For now, however, we expect real estate will be no different from U. S. stocks or bonds and will generate returns below historical average.

## The Outlook for Alternative Investments Charts and Tables

### CHANGES IN COMMODITY SPOT PRICES, COMMODITY INDEX RETURNS, AND REAL GDP

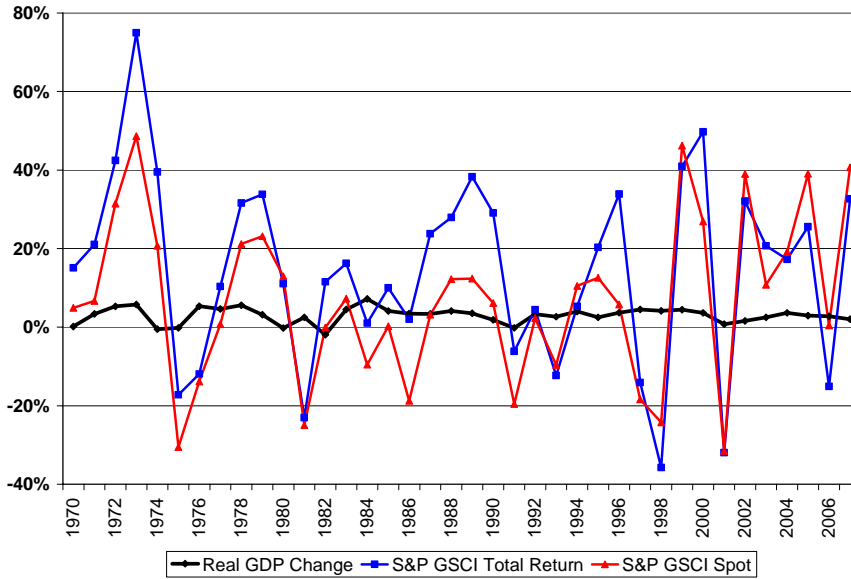


Figure AIO.1: Changes in Commodity Spot Prices, Commodity Index Returns, and Real GDP  
Source: Bloomberg, Bureau of Economic Analysis, and *Advisor* calculations

### U. S. REIT VALUATIONS, PRICE/YEAR-FORWARD EARNINGS

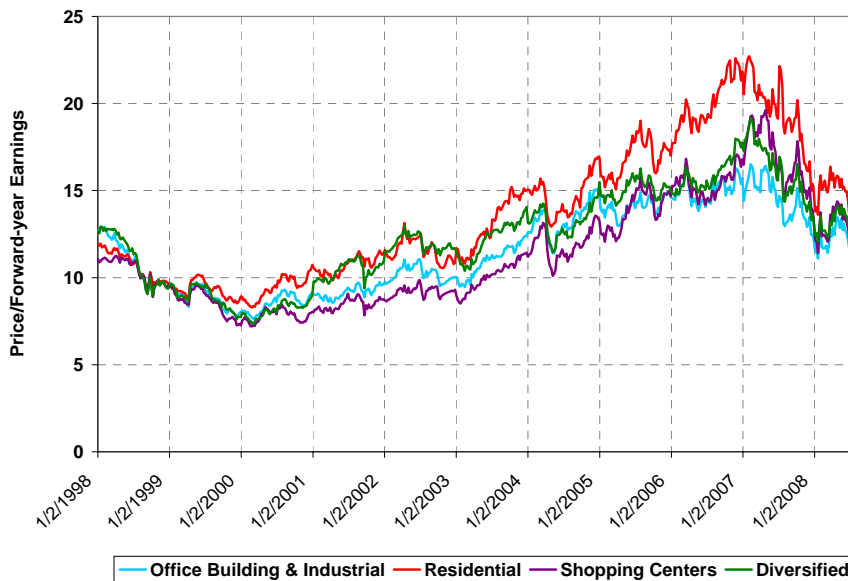


Figure AIO.2: U. S. REIT Valuations, Price/Year-forward Earnings  
Source: Reuters StockVal

### U. S. REIT VALUATIONS, PRICE/CASH FLOW (ADJUSTED)

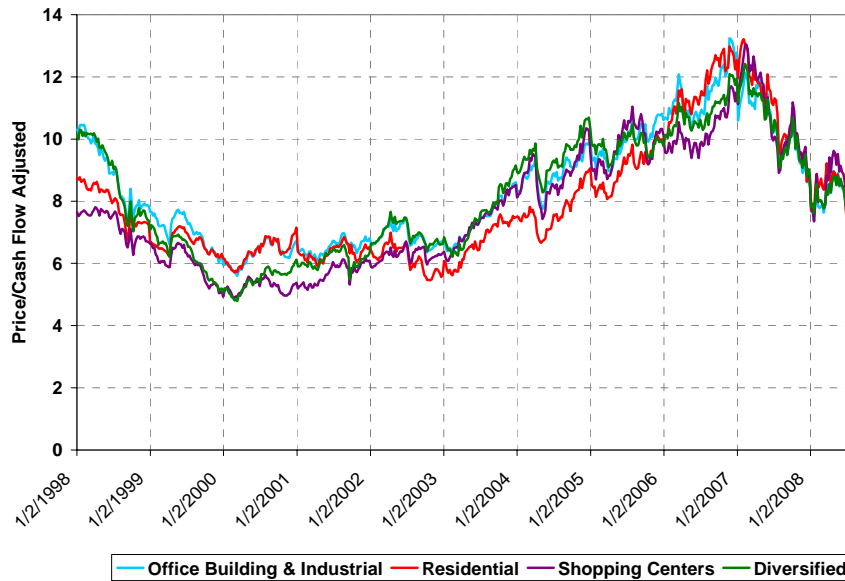


Figure AIO.3: U. S. REIT Valuations, Price/Cash Flow (Adjusted)  
Source: Reuters StockVal

### U. S. REIT VALUATION COMPARISONS TO HISTORICAL MEDIANS

| Equity REIT category | Price/Year-forward earnings |        |        | Price/Cash flow |        |        | Time Period  |
|----------------------|-----------------------------|--------|--------|-----------------|--------|--------|--------------|
|                      | Aug 08                      | Feb 07 | Median | Aug 08          | Feb 07 | Median |              |
| Office & industrial  | 11.9                        | 16.4   | 11.2   | 8.0             | 12.1   | 8.8    | 1990 to date |
| Residential          | 16.1                        | 22.3   | 12.2   | 9.8             | 13.0   | 8.1    | 1990 to date |
| Shopping centers     | 12.3                        | 19.3   | 12.1   | 8.3             | 13.0   | 8.0    | 1987 to date |
| Diversified          | 15.9                        | 19.0   | 11.9   | 10.3            | 12.3   | 8.9    | 1986 to date |

Figure AIO.4: U. S. REIT Valuation Comparisons to Historical Medians  
Source: Reuters StockVal