

## LIQUID vs. ILLIQUID REAL ASSETS

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Over the past two decades, real assets—sometimes referred to as hard assets or inflation hedges—have become a growing part of most institutional portfolios. Many investors have established a separate asset class to incorporate investments such as energy, timber, commodities, and infrastructure. Treasury Inflation Protected Securities, or TIPS, are also a widely-used inflation hedge, although they are financial assets rather than real assets.

The many benefits of adding real assets to a portfolio have been thoroughly demonstrated over the past 20 years and are now well-recognized and accepted by institutional investors and consultants throughout the world. These key attributes include an attractive risk/return profile, excellent diversification, inflation protection, and in some strategies, the ability of top managers to add value in inefficient sectors.

Altius Associates' February 2010 paper, *An Introduction to Real Assets*, reviews and explains these advantages. It also addresses current market opportunities, the risks involved in real assets investing, mitigating those risks, and benchmarking returns.

One of the first questions investors face when starting or expanding a real assets program is whether to invest in liquid or illiquid real assets. The most common examples of liquid strategies include TIPS, publicly-traded stocks in the energy, gold, infrastructure, or timber sectors, and commodity indices. Illiquid assets refer to private market strategies in these areas. There are substantial differences between the two approaches. The purpose of this paper is to explore and explain these differences.

Liquid real assets have the singular advantage of being liquid. Investors can quickly gain exposure to real assets and exit on their own timing when investing in mutual funds, ETFs, and indices. A private markets strategy, on the other hand, takes several years to build and the investor cannot easily exit a position.

Of course those who have experienced working on or with investment committees know that being able to jump into and out of investments is not always advantageous. History has repeatedly demonstrated that investors often enter (or increase allocations to) asset classes near a peak in the cycle and exit (or reduce exposure to) sectors *after* a period of poor performance. Still, most investors view liquidity as a desirable attribute. Unfortunately, that is the only apparent benefit of investing in liquid real assets.

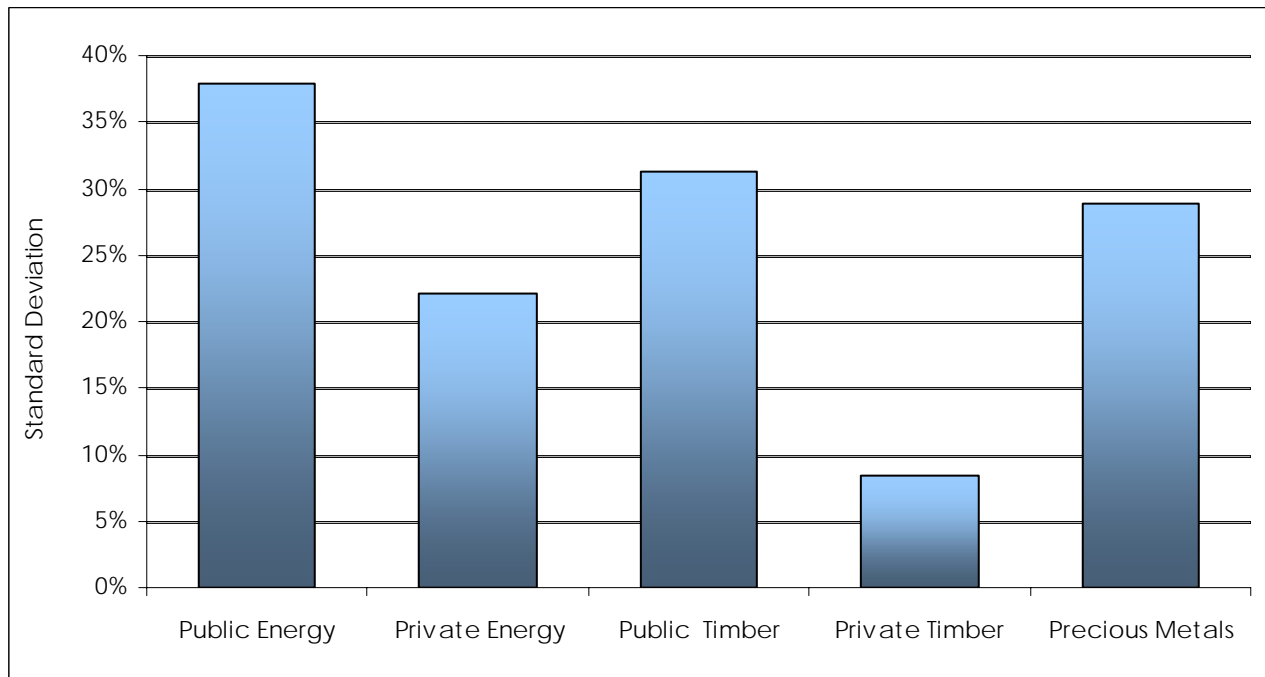
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Conversely, the advantages of an illiquid private markets-based approach to real assets are numerous. Compared to liquid real assets, private investments offer lower volatility, greater diversification, better inflation protection, and opportunities for top managers to add value. To be blunt, illiquid real assets deliver all the benefits that investors seek when they add real assets to their portfolios, while liquid assets often fall short. Let's examine each of these attributes individually.

### Volatility

As can be seen in the chart below, liquid real asset options are more volatile than private market strategies. Publicly-traded energy stocks, for example, as represented by the S&P GSCI Energy Index, are over 50% more volatile than private energy. In the past decade the S&P Goldman Sachs Commodity Index (S&P GSCI) has experienced quarterly losses as high as 47%. To be fair, the index has also generated quarterly gains of as high as 29%. Investors must be prepared to tolerate such extreme volatility prior to investing in commodity indices.

Volatility as Measured by Standard Deviation



Source: Altius Associates Research Group; Data as of June 30, 2010

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Similarly, publicly-traded timber stocks, as represented by the S&P Global Timber and Forestry Index, are over three times more volatile than private timberland holdings. Of course, standard deviations from all private market investments are muted somewhat by the use of appraisals and only periodic valuation exercises. Still, the differences are significant.

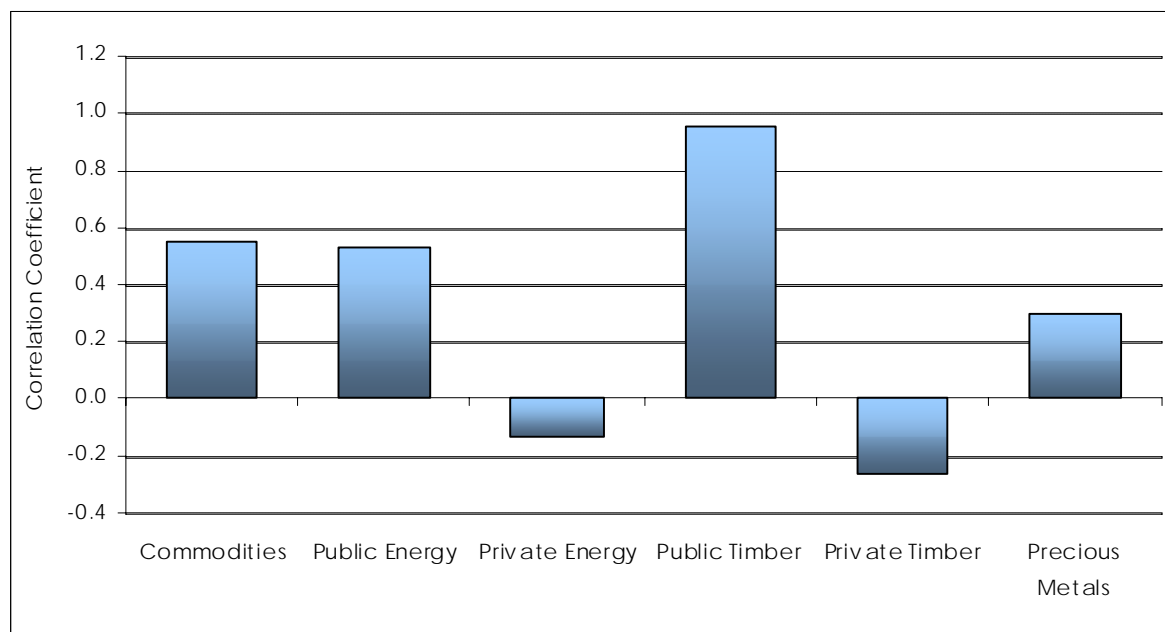
Volatility is important because it makes compounding returns more difficult. Most of us are familiar with the old truism that after suffering a 50% loss, an investor must earn a 100% gain just to break even. In addition, volatile performers create rebalancing issues and are subject to being abandoned after a period of poor performance.

The conclusion is clear: For investors seeking to avoid highly volatile return streams from their real assets holdings, the private markets/illiquid approach is superior.

### Diversification

Another advantage of private real assets is superior diversification. As one can see in the chart below, private timber and private energy both exhibit a negative correlation with the US public equity market—thus providing excellent diversification.

Correlations with S&P 500



Source: Altius Associates Research Group; Data as of June 30, 2010

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All liquid options, on the other hand, are positively correlated to the stock market. Public timber, represented by the S&P Global Timber and Forestry Index, has a nearly perfect correlation with the broader stock market, thus providing little or no diversification to investors.

For investors who want true diversification from their real assets allocation, the evidence is strong: the private markets approach is superior.

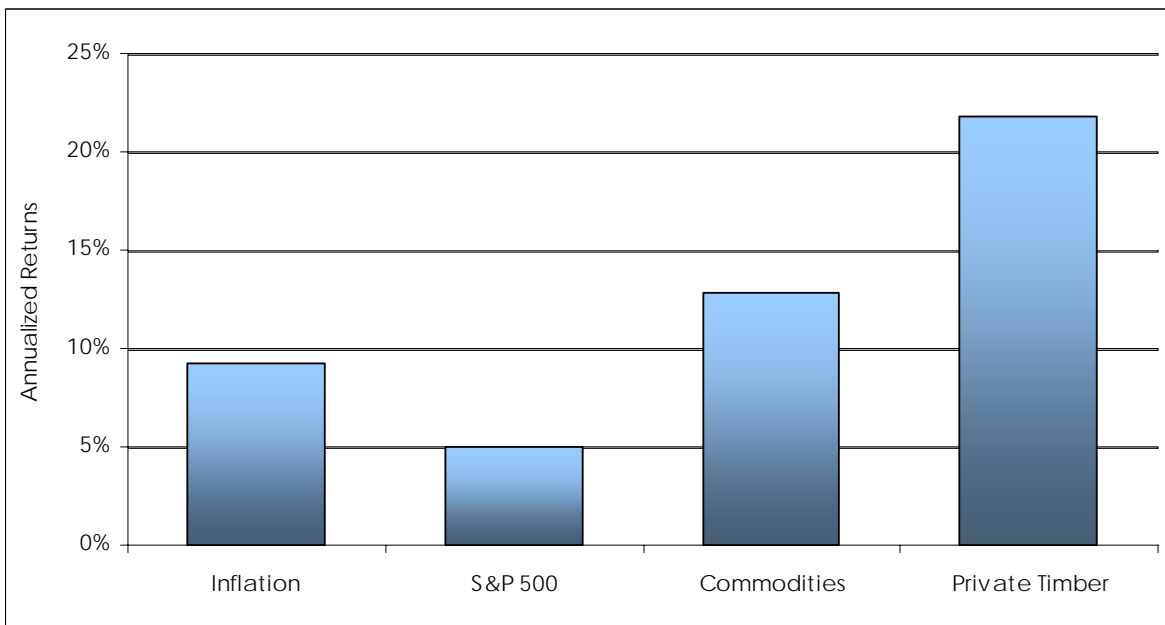
### Inflation Protection

Because publicly-traded stocks in most sectors are highly correlated to stock market performance, and stock markets generally react poorly to inflation, we expect that liquid real assets will not provide the same degree of inflation protection that private or direct real assets do.

However, because inflation has been benign for over 20 years, it is difficult to gauge inflation protection simply from calculating the correlation of recent returns with the Consumer Price Index (CPI).

To analyze returns during an inflationary environment, one must look back to the high inflation years of 1973-1981. As you can see from the chart below, private timber provided returns greater than the stock market, inflation, and the Goldman Sachs Commodity Index during these years.

Returns from 1973 through 1981



Source: Cambridge Associates

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Unfortunately, no data on public or private energy was included in the study reflected in the above chart. However, a study performed by Ibbotson Associates (covering the period 1970-2004) demonstrated that private energy had provided inflation protection 2.5 times greater than that of public energy stocks during this period. Private energy returns exhibited a 0.5 correlation with inflation, while the corresponding figure for public energy stocks over the same time period was just 0.2.

TIPS are a liquid alternative that should provide more direct inflation protection. However, if inflation is accompanied by rising interest rates, as is often the case, the concurrent fall in bond prices will offset to some extent the boost to returns provided by higher inflation figures. The Barclays US TIPS Index has a duration of 4.7 years, meaning that a 1% rise in interest rates would cause the value of index to decline almost 5%. Thus, the ability of TIPS to hedge against inflation in a rising interest rate environment is compromised.

Altius recognizes that no two periods of high inflation are quite the same. Still, the facts are convincing: The private markets/illiquid approach is likely to provide the greater inflation hedge.

### Inefficient Markets

Private real assets managers operate in inefficient markets where the best managers can add value. This is accomplished through hands-on operational and financial improvements to assets, properties, and companies. Many of the top managers operating in this space have a long history of providing attractive returns to investors throughout commodity pricing cycles.

In contrast, liquid markets are deeply traded and highly efficient—thus making it next to impossible for managers to add value through active management. For example, commodity indices earn a positive return only when commodity prices go up. There is simply no other value to be extracted.

### Conclusion

In summary, a diversified private markets approach to real assets is superior to the liquid alternatives. Liquid real assets certainly have their role—enabling a quick ramping up of exposure, for example, or facilitating rebalancing. Still, there is little question that institutional investors will benefit most by investing the great majority of their real assets allocation in private market strategies. This approach enables them to fully access all the benefits that real assets have to offer—attractive risk/return profile, excellent diversification, inflation protection, and the ability of top managers to add value in inefficient sectors.

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### Charts & Graph Data Disclosure

*The Volatility as Measured by Standard Deviation chart reflects data sourced from Standard and Poors, Ibbotson Direct Energy, NCREIF and Yahoo Finance. Indices used: Public Energy/S&P GSCI Energy; Private Energy/Ibbotson; Public Timber/S&P Global Timber & Forestry; Private Timber/NCREIF Timberland and Precious Metals/PHLX Gold/Silver. Periods covered: Public Energy/March 1987-June 2010; Private Energy/1970-2004; Public Timber/March 2006-June 2010; Private Timber/March 1987-June 2010; Precious Metals/March 1987-June 2010.*

*The Correlations with the S&P 500 chart displays data sourced from Standard and Poors, Ibbotson Direct Energy, NCREIF and Yahoo Finance. Indices used: Commodities/S&P GSCI; Public Energy/S&P GSCI Energy; Private Energy/Ibbotson; Public Timber/S&P Global Timber & Forestry; Private Timber/NCREIF Timberland and Precious Metals/PHLX Gold/Silver. Periods covered: Private Energy/1970-2004; All others/March 2006-June 2010.*

*The Returns from 1973 through 1981 chart reflects data sourced from Standard and Poors, Ibbotson Direct Energy, NCREIF, Cambridge and Yahoo Finance. Indices used: Inflation/CPI; S&P 500/S&P 500; Commodities/GCSI; Private Timber/John Hancock Timber Index. Time period covered for all is 1973-1981.*

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