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Commodities: When is the right time?
Benefits and Timing the Cycle

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Introduction

History doesn't have to repeat, but sometimes it rhymes. As we ended the 1990's, few investors put much weight in commodities. Equity performance led market gains as the S&P500 had rallied over 300% while the Bloomberg Commodity Index (hereafter "BCOM") dropped about 7% over the entire decade.

While historically viewed as one of the few asset classes considered an inflation hedge, as we entered the new millennium, commodities managed to perform exceptionally well despite a lack of significant inflation. The outperformance to equities made investors excited about the commodity markets, given equities struggled as the "dot com" bubble burst and took the bulk of that decade to recover. From January 2000 to the end of 2007 the S&P500* was back to exactly flat after pulling back 46% into late 2002. During this period the BCOM* gained 9.1% annualized, or 100% cumulative. Commodities earned a seat at the investment table given the returns and the non-correlated portfolio benefits. This led to the birth of innovative commodity delivery mechanisms such as ETFs so that everyone, institutional and retail investor alike, had access to this valuable diversifying sector.

However, the last decade has been a different experience. Commodities have fallen while the equity market has rallied despite another pullback in 2008 during the financial crisis. While falling through the crisis, commodities started to rally back alongside other asset classes, but since late 2011 have deviated considerably. Since January 2008 (to December 2018), the S&P500 is up 71% while the BCOM is off 59%. This weakness has caused many to question the value of the asset class as our technologically driven world focuses online and through technology that is changing everything from currency to transportation.

With little concern for inflation, some market participants are ignoring the sector despite significant portfolio benefits that can be achieved. Moreover, given that the key factors of commodity price appreciation are in place, namely supply and demand and a low commodity to equity ratio, the outlook for commodities may be the most optimistic since the start of the millennium.

This paper is divided into two parts: Part 1 will review the benefits of commodity investing - inflation protection and diversification. Part 2 reviews commodity timing - global supply and demand, and the commodity to equity ratio.

**Note: S&P500 and BCOM (Bloomberg Commodity Index - previously the Dow Jones UBS ER) referring to the Excess Return versions.*

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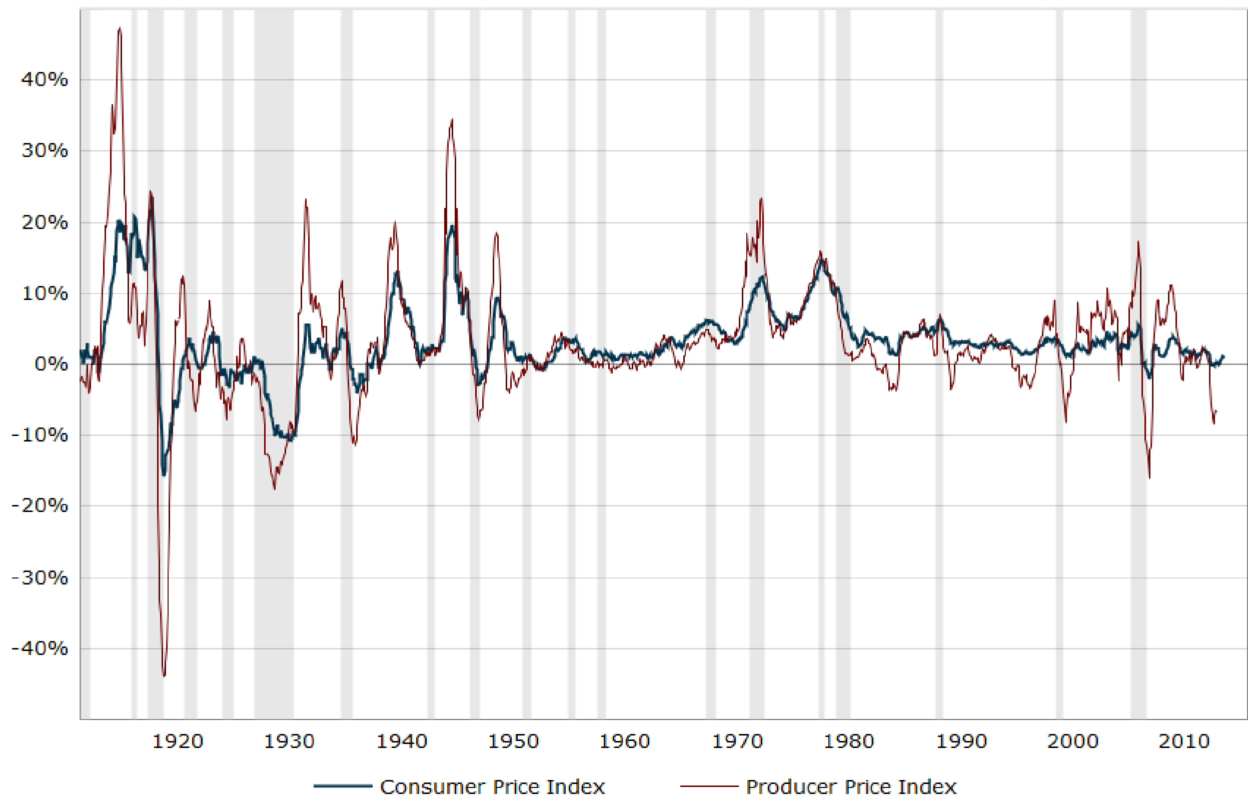
PART 1: The Benefits of Commodity Investing

Benefit 1: Inflation protection

Given that commodities are the raw materials of real assets they tend to rise in price as demand for goods that require their input increases. This is why commodities are one of the few asset classes that can be considered an inflation hedge.

As illustrated in Figure 1, the correlation of commodities and inflation is clear. Commodities represent a significant portion of the CPI's volatility, resulting in a positive, and often outsized relationship to inflation.

Figure 1: 100 Year Historical Chart of (US) Inflation using CPI and PPI (all commodities)



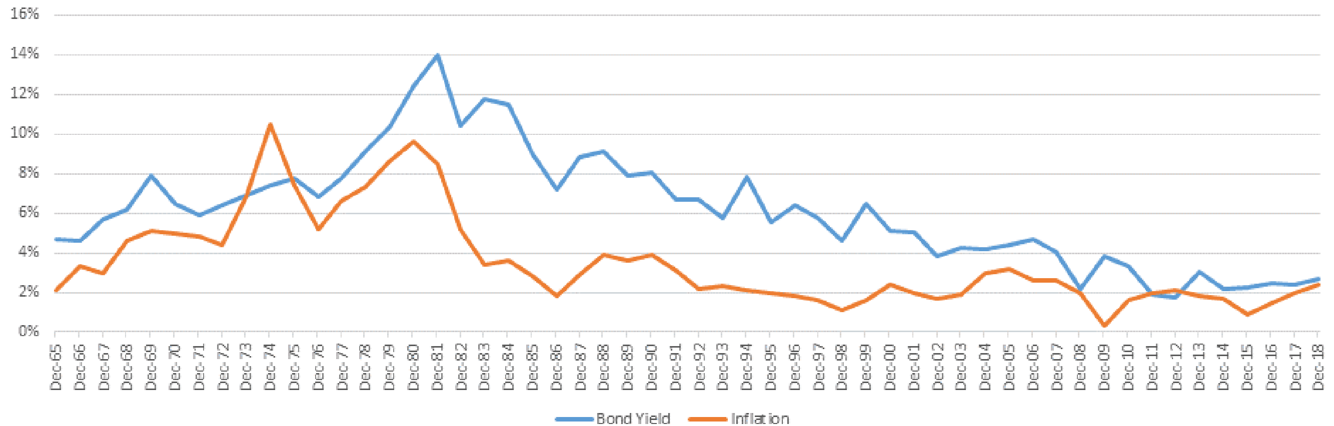
Source: MacroTrends.net Data Source: Bureau of Labor Statistics

However, despite commodities being an important tool in protecting against inflation, there has been little concern that inflation is coming – until recently. When we listen to the central bankers, both their words and actions indeed demonstrate concern.

Bank of Canada Governor Stephen Poloz noted in July 2017 that he is "…often puzzled…", by analysts saying "…how inflations been missing in action". He went on to say (it was) "…pushed further out". He also highlighted "heightened uncertainty" about the global economic outlook and inflation. If we take actions with greater significance than words, it is hard to ignore the central banks. The Bank of Canada raised rates twice in 2017, three times in 2018 and the US Fed three times in 2017 and four times in 2018. Bank of England Governor Mark Carney has warned inflation had hit its highest in 5 years. Rhetoric around the topic highlights that short term risk of significant inflation may be low, but a cause for significant concern long term.

If we consider the direction of interest rates and inflation, we see they are correlated long term. From 1965 to 2018, the US Treasury bond yield and inflation have moved in the same direction 80% of the time. See Figure 2.

Figure 2: Long Term US Treasury Rates and Inflation.



Source: Bloomberg and Direxion Investments. Data range: 1965-2018. 10 year median yield 6.03% ending 2018. ***Bond Yield**: Quarterly average of long-term US Treasury rates. **Inflation**: annual percent changes in GDP deflator, annual percent changes in Core PCE deflator. Based on the 10 Year Treasury.*

This illustrates that at very least there are some indications that the 30 plus year down trend is ending and starting to show signs of moving the other way. This is consistent with central bank actions.

Given commodities and headline inflation are highly correlated (per Figure 1), there is little doubt that strategic investments in real assets such as commodities could help protect investors (Louie and Burton 2010). However, given inflation hasn't appeared significantly in so long, its seems everyone sees it coming but is not overly concerned. Perhaps this is understandable given we haven't seen much in 40 years and the last time can largely be blamed on an "oil crisis" as witnessed in Figure 3 in the 1970's. From this we began to understand the role energy plays in inflation and consumer pricing. Per the Federal Reserve Bank of San Francisco regarding the direct and indirect relationship:

- Rising oil prices tend to affect the overall consumer price index (CPI) directly by raising its energy cost component, which includes the prices of energy-related items, such as household fuels, motor fuels, gas, and electricity. Among these, gasoline and fuel oil are directly derived from crude oil, so their prices follow oil prices very closely.
- Rising oil prices tend also to affect the core portion of the CPI indirectly, because energy prices represent a considerable portion of the production cost for many of the items in it, such as transportation services.

https://www.frbsf.org/economic-research/publications/economic-letter/2008/october/oil-prices-inflation/

From the October 1973 until 1980, inflation exploded higher as the members of the Organization of Arab Petroleum Exporting Countries proclaimed an embargo. Further into the 1980's, price and inflation subsided until the early 2000's when oil (and other commodity) prices rallied. Inflation was indeed on the rise until the financial crisis hit in late 2008. Thereafter, low interest rates and inflation were held until beginning to turn in early 2016 again affirming an oil price relationship.

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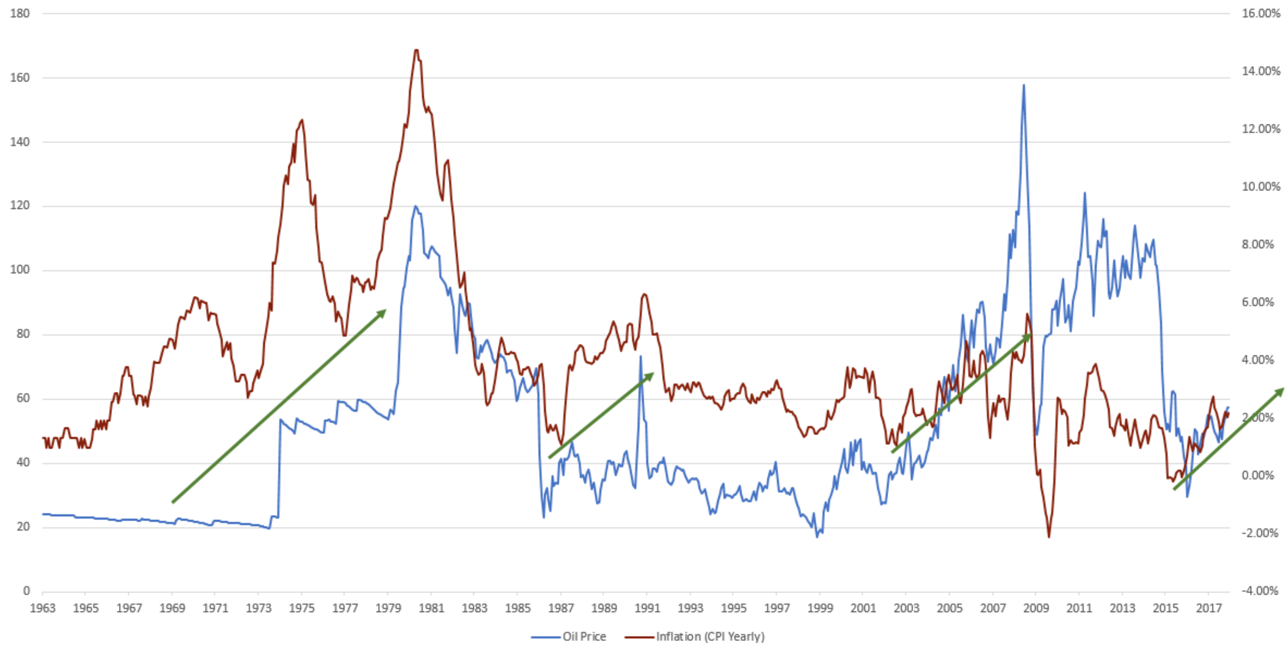
Figure 3: Oil and Inflation 1963 to Current



Sources: MacroTrends.net and Inflationdata.com Data Source: Bureau of Labor Statistics

Could oil be a catalyst again? Many people believe that given changes in consumption and the move to renewable energy sources and electric cars, oil will lose its demand importance. We don't believe this will happen anytime soon. We note that China and India are showing the greatest demand growth in history. In fact, China has become the largest importer of Crude Oil surpassing the US. Further, the International Energy Agency (IEA) has just recently reiterated its warning that three years of low oil prices have constrained investments in conventional projects, and an oil price spike is in the cards by 2020, citing growing demand for oil that could outstrip the pace of new conventional supply. Source: Head of the IEA's oil market and industry unit, Neil Atkinson.

Here again, we can look at the home of the third largest oil reserves in the world in Canada. The Bank of Canada has noted they cut rates as oil fell in 2015 and are now responding the other way and raising rates. Since bottoming in January 2016, oil prices have moved higher with WTI* rising over 50% while the CCI* has gained 76% as the central bankers began and continued to raise rates. Moreover, since the oil lows in 2016, we can see in Figure 3 that inflation also bottomed and has started to trend higher.

Regardless of the specific "event risk" benefit of holding a single commodity exposure such as oil, we realize planning for this is difficult to do based on timing. While the outlook for inflation is difficult to gauge, the more pertinent question is "how do we prepare for its arrival?" If and when inflation does appear, it will likely show up as higher commodity prices making "unexpected inflation" the big risk and a core reason to own broad commodities exposure.

As such, we believe the best approach is to allocate to strategy that holds commodities but also is able to limit the risk if commodity prices move sideways or fall, being patient if inflation doesn't appear immediately, while providing portfolio diversification.

**Note the CCI is the Canadian Crude Index as created by Auspice and published and disseminated by the NYSE under the ticker CDNCRUDE. Both are Excess Return versions, considering roll yield but not collateral return.*

Benefit 2: Diversification

Despite the lackluster performance of commodities over the last decade, including the asset class in a portfolio long-term is historically accretive. Given the correlation of financial assets and commodities is low, the diversification benefit is tangible.

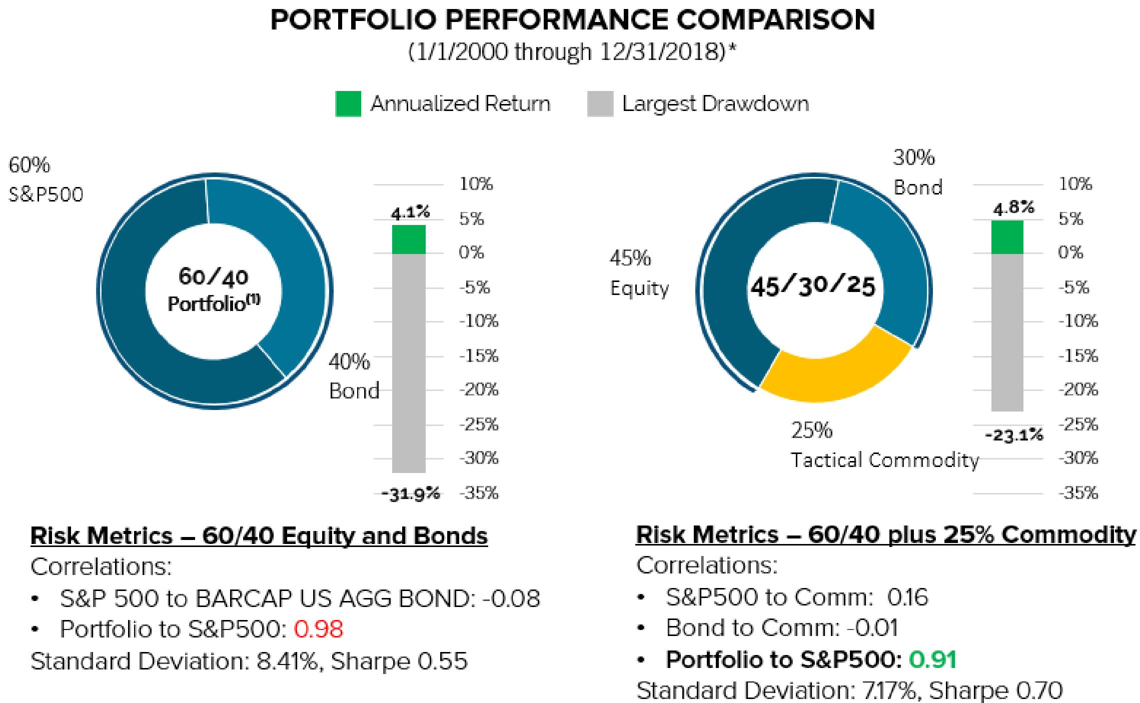
Including a tactical broad commodity index allocation has the ability to improve overall performance and significantly reduces volatility and drawdowns. Per Figure 4 below, the addition of this commodity benchmark not only improves historical returns and risk metrics, it also reduces the portfolio correlation to the market itself.

Starting from 2000, the typical "60/40" equity to fixed income base case generates 4.1% annualized return and 0.55 Sharpe with a 31.9% pullback at 8.41% volatility. This portfolio has a 98% correlation to the S&P500 itself. Including a 25% allocation to a tactical commodity index improves this result. The improved portfolio generates 4.8% annualized return and 0.70 Sharpe with a reduced 23.1% pullback at 7.17% volatility. This portfolio also has a reduced correlation to the S&P500 itself at 91%.

Note that the time period considered had both up and down commodity trends yet still was a "value-add" to the portfolio. It is comforting to know that while adding a protective layer to the portfolio in terms of unexpected inflation, it can also improve the portfolio even if inflation doesn't appear or accelerate.

Quite simply, addition of commodities has the benefit of improving risk-adjusted returns.

Figure 4



(1) Equity allocation based on results from 'Global Pension Assets Study 2015' by Towers Watson reporting an average allocation to 42.9% domestic equities and 57.1% non-domestic equities amongst Pension Funds. Yearly Rebalancing used.

* The Tactical Commodity strategy used is the performance of Auspice Broad Commodity ER Index as calculated and published by NYSE.

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PART 2: Commodity Timing

Global Supply and Demand Fundamentals

Historically, as demand increases, commodity prices rise. But one also must consider the supply side of the equation. If we compare the ratio of demand and supply, we can learn something about the pressure that this can exert on markets and correlate it to timing price increases.

As Figure 5 illustrates, when the demand/supply ratio exceeds 1:1 (green line) for a period of time, the commodity price historically increases as illustrated by the BCOM Index (white line). Over the last 20 years, this occurred as demand exceeded supply in the early 2000's prior to commodities significant rally through 2007. As this ratio tipped over 1:1 again post crisis, we witnessed another rally from 2009-2011. Since that time, the ratio has been mostly less than 1:1, until recently. At the same time, the commodity price remains low and lagging while the US dollar (pink line) remains weak, a similar scenario to early 2000.

Given that, current supply and demand numbers may be favorable for a move higher in commodity prices.

Figure 5: Global Supply and Demand

Source Bloomberg to December 2018

General Outlook for commodities

Consider the following:

- Oil has upwards momentum since bottoming in 2016 driven by favourable global demand characteristics coupled with recent reduced supply from OPEC+, Canada and Venezuela along with underinvestment the last few years during low prices.

- Metals underperformed in 2018 but have showed signs of positive momentum at year end led by Precious metals.
- Grains have underperformed and bound to recover as global growth continues and mean reversion kicks in.
- Continued weakness in the US dollar is the trend and commodities may be a beneficiary. Per the chart above, the last time the dollar and commodities were both this low was in 2000 prior to a seven year rally.

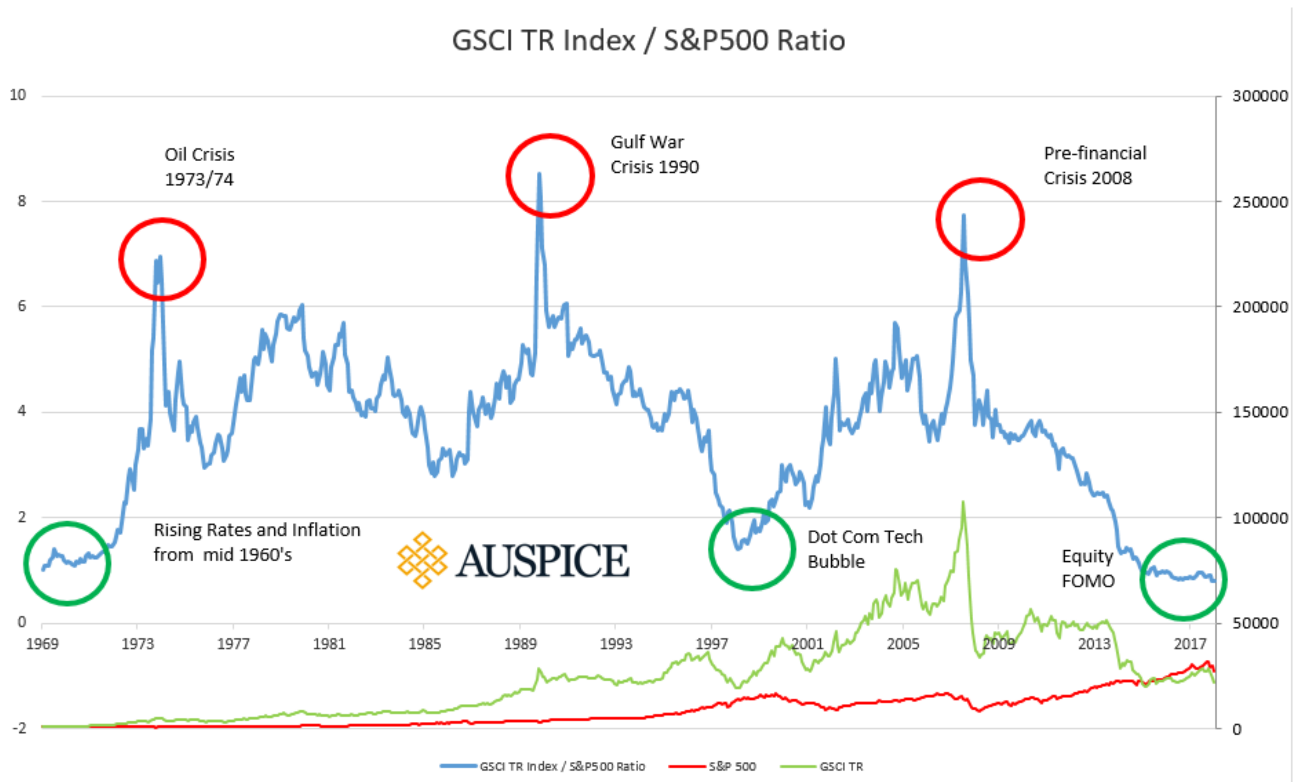
Commodity to Equity Ratio

While the pricing of commodities appears out of sync with global demand and supply cycles we also note a very obvious cycle that has emerged several times in history. See Figure 6.

As we discussed in the Introduction, the equity rally of the 1990's had outstripped the commodity performance and left investors without a sector focus. However, the Commodity to Equity ratio was stretched as evidenced below. It would appear the market is in a similar place ending 2018 as it was in the late 1990's. Given the equity market has ended the year with downwards momentum, and commodities (other than energy) have stabilized, it does offer insight into the cycle, its length and the potential upside.

Simply put, the current ratio is low in front of a typical long-term cycle.

Figure 6: Commodity to Equity Ratio



Source: Auspice Capital Advisors and Incrementum AG.

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Conclusion

If you chose to ignore global growth including massive growth in developing world markets like China and India, perhaps one can rationalize a technologically driven world that no longer needs commodities. But that's not today's reality.

There are a number of favorable aspects supporting the timing of commodity allocations:

- Commodities are considered one of the few asset classes that are an inflation hedge.
- Interest rates and inflation are correlated and have begun to rise.
- Central banks have cited concerns regarding inflation and are raising rates.
- Unexpected inflation caused by a commodity rally is a real risk especially given the low commodity price.
- Historically commodities are a portfolio diversifier with the potential to enhance risk adjusted returns.
- Global demand exceeds supply at a time of low prices and a low US dollar potentially pointing to higher commodity values if this condition persists.
- The Commodity to Equity ratio has only been this low two other times in history.

However, regardless of the timing aspects of commodity cycles or fears of inflation the most important takeaway is the portfolio benefits. Even if inflation does not materialize anytime soon, the tactical commodity approach adds value through the addition of diversification while mitigating downside risk.

Yet while we believe it is generally better to look at commodities from a portfolio asset allocation perspective than from a pure timing perspective, it is hard to ignore the timing attributes at this time – they are unique and rare which further enhance the opportunity.

References:

Louie, Nelson and Burton, Christopher: 2010. How Commodities Can help investors face the uncertainty of the Inflation /Deflation Debate. Credit Suisse Asset Management White paper