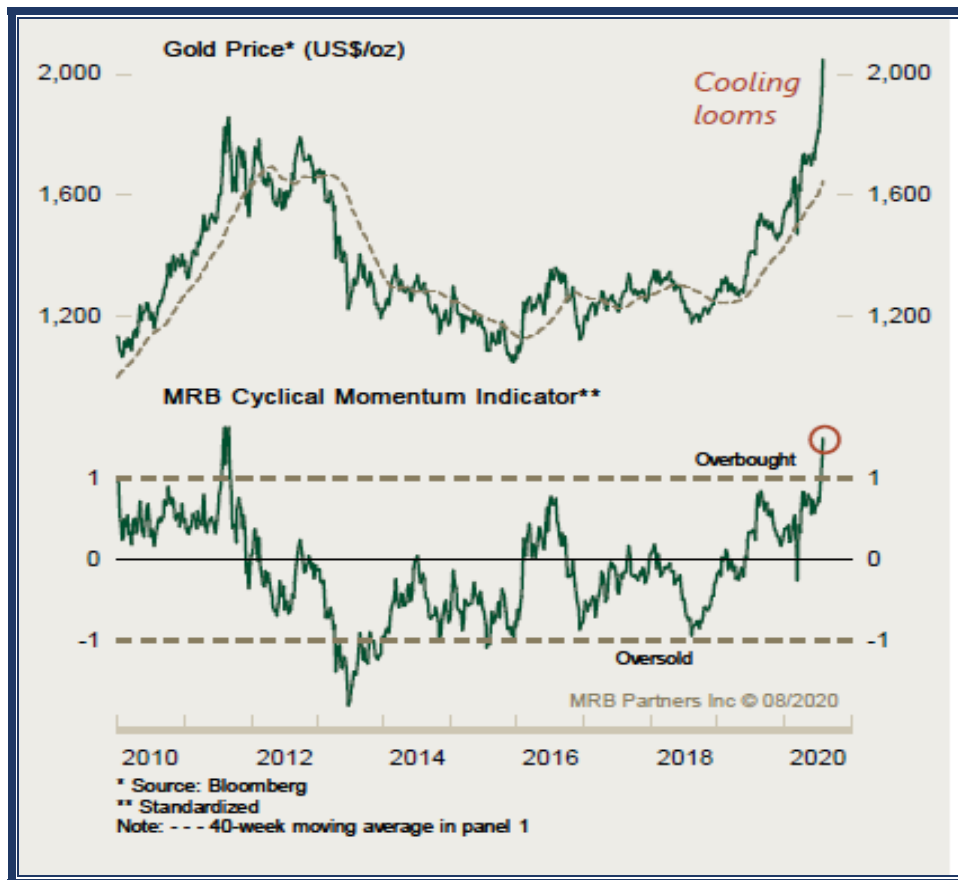


Gold Revisited:

The Complicated Task of Valuing Gold – Ideology vs. Evidence

Gold prices have had a remarkable recent run, surging approximately 10% since mid-July to an all-time high (see Exhibit I). Prices are up some 67% in the past two years in U.S. dollar terms. The latest surge has been fueled in large measure by the decline in the U.S. dollar, but prices are also at record highs in all major currencies. The combination of very low real interest rates, extraordinary monetary and fiscal expansion, uncertainty about the COVID-19 pandemic, and heightened political tensions in the U.S., are buoying investor sentiment toward gold. At the same time, gold prices are now overbought based on the MRB Cyclical Momentum Indicator, implying increasing risk of a correction.

Exhibit I
Gold is Now Overheated

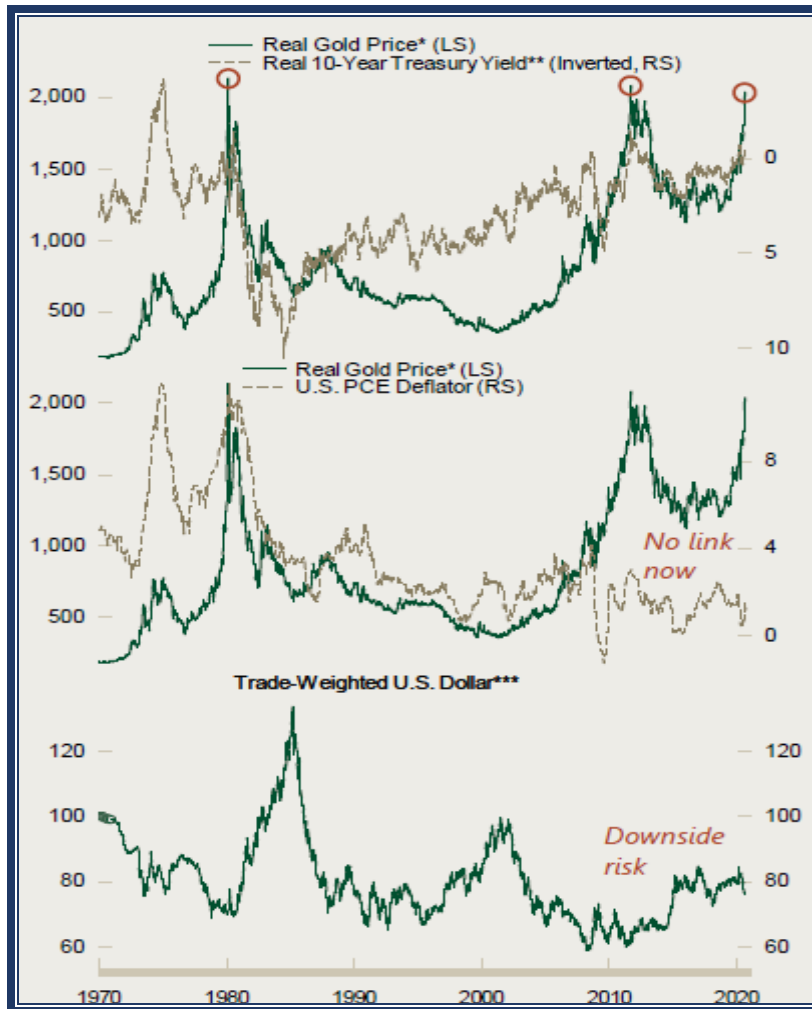


The big run-up in prices raises the issue of whether the risk-reward trade-off for gold is still attractive, both from a tactical and longer-term basis, and as a hedge against various economic and capital market risks.

Valuing assets is notoriously difficult in a very low interest rate climate such as currently exists, and gold is no exception. Indeed, there is no generally agreed valuation metric for gold as a monetary asset, although it typically benefits when the expected return on competing assets is low or highly uncertain. A common perception is that gold is a hedge against inflation, but as we indicated in a commentary back in July, our research indicates it is more sensitive to real interest rates than to inflation.

Real gold prices surged in two phases throughout the 1970s - during periods when the real U.S. 10-year Treasury yield was negative or very low (Exhibit II). Nominal gold prices were range bound, and real prices trended lower in the 1980s and 1990s, as real Treasury yields first rose significantly and then stayed high. The rise in gold prices in recent years has also coincided with declining real yields, as the latter have plunged deep into negative territory.

Exhibit II
Real Gold Price Near Record High



* Deflated by U.S. PCE Deflator** Nominal yield minus PCE inflation

Source: Bloomberg & U.S. Bureau of Economic Data

The relationship of the gold price to inflation is more varied. The surges in gold prices in the 1970s also coincided with high inflation, while real gold prices drifted lower in the subsequent two decades as inflation declined. Yet since the early-2000s there has generally been an inverse relationship between the real price of gold and the inflation rate, in contrast with the prior three decades.

We have also observed that swings in the price of gold in recent decades also reflected changes in the value of the U.S. dollar. The dollar declined sharply in the 1970s when gold prices were rising, and soared in the early-1980s, contributing to gold's coincident sharp drop. The dollar was also strongly and inversely correlated with gold prices from the mid-1990s to 2008. That said, the dollar's moves have typically accounted for only a moderate portion of the move in gold.

As is the case for most assets, valuation is more likely to influence the magnitude of gold price swings rather than drive the underlying trend. A positive stance on gold rests on an expectation that the monetary and fiscal backdrop will remain reflationary, that real bond yields will remain negative for some time, and that the dollar is biased downward. Nonetheless, below we present various valuation metrics for gold that are useful for understanding its potential upside and the associated risk-reward trade-off in accumulating additional exposure at current prices:

- **Real Gold Price:** Gold prices in real terms are approaching the peaks hit in 1980 and 2011 (Exhibit III). There have been three major multi-year trends for real gold prices in the past five decades, with prices surging in the 1970s, collapsing in the 1980s and 1990s, and soaring from 2001 to 2011. The profile since then has been more ambiguous, with a sharp decline from 2011 to 2015 and the latest rise since late-2018. The real price of gold according to our sources is now two standard deviations above its post-1970 trend, although the latter is of uncertain economic significance.

Exhibit III

Real Gold Prices Are Extended Versus Long-Term Trend



Source: Bloomberg deflated by US PCE deflator

- **Relative to Other Assets:** Despite its recent runup, gold does not appear to be historically expensive relative to other important asset classes (Exhibit III). For example, gold prices have been higher relative to U.S. equity total returns than currently for 75% of weekly observations since 1970, and approximately 65% higher relative to the MSCI global benchmark; i.e. gold prices are not historically high relative to equities. Nor is gold notably elevated relative to the total return from U.S. 10-year Treasuries. Of course, both equities and Treasuries offer a yield, which gold does not. By comparison, gold prices are historically high relative to copper, reflecting investor uncertainty about the economic and policy outlook, since copper prices are more economically sensitive.

Exhibit IV
Gold Is Not Expensive Relative to Stocks



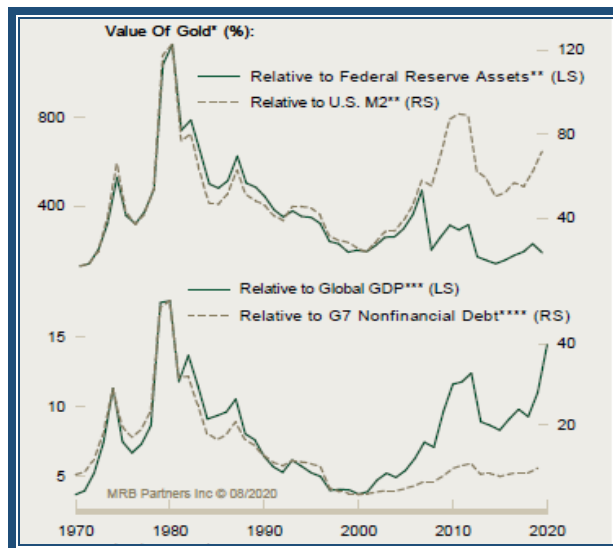
Gold Relative to the Economy and Monetary Backdrop:

As a monetary asset, gold can be measured relative to the stock of money, GDP or debt outstanding (Exhibit V). According to GOLDHUB (1), the above-ground stock of gold at the end of 2019 was 198k tons, equivalent to approximately US\$13 tn. That, in turn, is equivalent to approximately 180% of the stock of Fed assets, which is at the very low end of the range over the past 50 years.

By comparison, the value of outstanding gold is equal to about 70% of U.S. M2, and is in the middle of a wide range that has prevailed since 1970. Gold is comparatively expensive relative to global GDP, but comparatively inexpensive relative to the stock of G7 outstanding nonfinancial debt. The overall takeaway from our research is not obvious, although we have illustrated that the ideological argument in favor of gold as a hedge against monetary debasement shows little evidence to support this view.

1).GOLDHUB : A platform for gold data, analytics and research. John Reade Chief Market strategist joined the World Gold Council in February 2017 as Chief Market Strategist. He is responsible for producing strategy and developing insights on the gold market; leading our global dialogue by engaging with leading economists, academics, policy makers, fund managers and investors on gold. John has over 30 years' experience in the gold industry and related fields, most recently as a partner and gold strategist with Paulson & Co for the past seven years. Prior to that, he worked as a precious metals' strategist at UBS for 10 years.

Exhibit V
Gold Buys A Lot Of GDP, But Not Much Debt



While the above characteristics we examined paint a mixed picture of valuation, gold's elevated level in real terms implies limited sustainable real returns over the medium- to longer-term. Keep in mind that history indicates considerable risk whenever fundamental drivers of gold shift, with real prices declining dramatically between the peak in 1980 and the low in 2001, and between late-2011 and late-2015. Gold has generated a strong 4.8% compound annual real return over the past 50 years, but just 0.2% per year since 1979. More sobering is the fact that gold has experienced more sizeable down years than equities since 1970, with real gold prices declining 15% or more seven times versus five for global equities when measured in U.S. dollars and total return terms.

The above conclusions are not to overlook the portfolio stabilizing benefits of gold during equity bear markets. In each of the five years when global equity total returns were -15% or greater, gold dramatically outperformed equities, albeit with strong positive returns in only two of the years. Even so, it is helpful to put gold's role in a multi-asset portfolio into context. When using hypothetical performance scenarios of a portfolio of 55% U.S. equities, 35% U.S. 10-year Treasuries and 10% gold - versus a conventional 60/40% equity/bond portfolio - gold contributes only modestly in most cases. This assumes that gold prices rise moderately or sharply when stocks are falling moderately or sharply, and decline moderately when bond yields rise. In the most extreme example shown, when stock prices decline 30% and Treasury yields rise by 50 bps, an assumed 20% rise in gold prices would transform a 19.6% decline in a 60/40% portfolio to a 15.9% decline; i.e. a 10% allocation to gold would reduce the portfolio loss by 3.7%.

On balance, we conclude that gold is expensive by historical standards, and already reflects significant uncertainty about the economic outlook, including the potential for higher inflation over time. Nonetheless, the highly reflationary policy backdrop, deeply negative real bond yields and prospects for a weaker U.S. dollar could carry gold higher in the short run in a multi-asset portfolio. In that event, some investors might choose to accumulate the commodity on any material weakness.

In conclusion, we have determined that an investment in gold at this juncture is not quite significant enough to warrant either a permanent allocation segment to portfolios or a short-term trade based on the uncertain macroeconomic outlook.

The opinions expressed in this commentary are those of Altman Investment Management, LLC as of the date appearing on this material only and are subject to change. The material is based upon information we consider reliable but we do not represent that it is accurate or complete and should be relied upon as such. This material does not take into account the particular investment objectives, financial situation or needs of the individual client and should not be viewed as an endorsement of any particular investment. Certain investments give rise to substantial risk and are not suitable for all investors.