

# THE ROLE OF GOLD

## A LESS THAN PERFECT INFLATION HEDGE

July 27, 2020

**Gold has been on a tear over the last year, rising 32% while global equities have languished. Investors buy gold for many reasons, but a common objective is a hedge against some type of risk. In this report, we show how gold can reduce downside risk during big down markets, but that it isn't the most effective inflation hedge.**

Gold's strong performance over the last year has some investors wondering if it is time to add gold to their portfolios. We aren't recommending gold, as we find the current outlook for gold prices too uncertain.

We believe that investors should be compensated for the risks they take in individual investments, and that every asset should have a purpose. We do not have a strategic allocation to gold as, over the long term, gold doesn't generate returns sufficient enough to justify its risk levels. This can be seen in Exhibit 1, where gold is by far the riskiest asset, yet has generated returns lower than the other long-term assets. Gold can, however, be more useful on a shorter term basis and potentially as a hedge against risk. While many investors believe gold is a good inflation hedge, we show that both TIPS (Treasury Inflation-Protected Securities) and natural resource equities are superior hedges. We also show that gold can reduce portfolio downside risk during market downturns — as we have recently encountered. Because we are not overly bearish on the present risk taking environment, we are not currently recommending a tactical position in gold in our global policy model.

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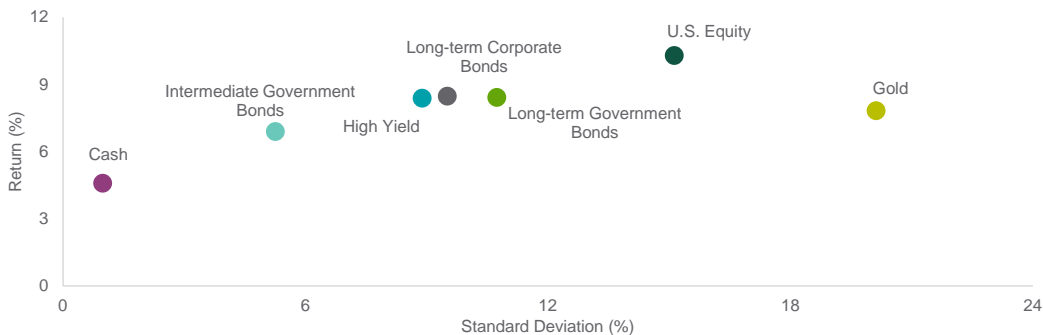
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### EXHIBIT 1: MAJOR PUBLIC ASSET CLASSES – RISK AND RETURN

Gold is highly volatile, without commensurate return.

MAJOR ASSET CLASSES - LONG-TERM RISK AND RETURN



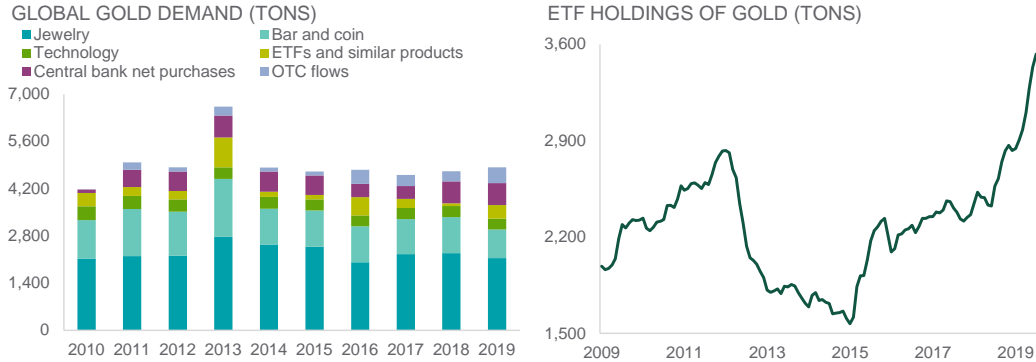
Source: Northern Trust Asset Management, Bloomberg, Ibbotson. Data from 12/31/1971 – 3/31/2020.

**DRIVERS OF GOLD PRICES**

One of the key challenges in investing in gold is determining its true value. With no income stream to value, gold prices fluctuate widely based on short-term supply and demand. As shown in Exhibit 2, the traditional driver of gold demand (jewelry) has fallen as a percentage of total demand, while financial demand has increased. Because of this changing dynamic, we do not feel much insight will be gained by digging into non-financial supply and demand for gold as a clue to future prices.

**EXHIBIT 2: LESS GOLD EARRINGS, MORE GOLD BARS**

Rising exchange-traded fund sales are indicative of gold’s increased use as a financial investment.

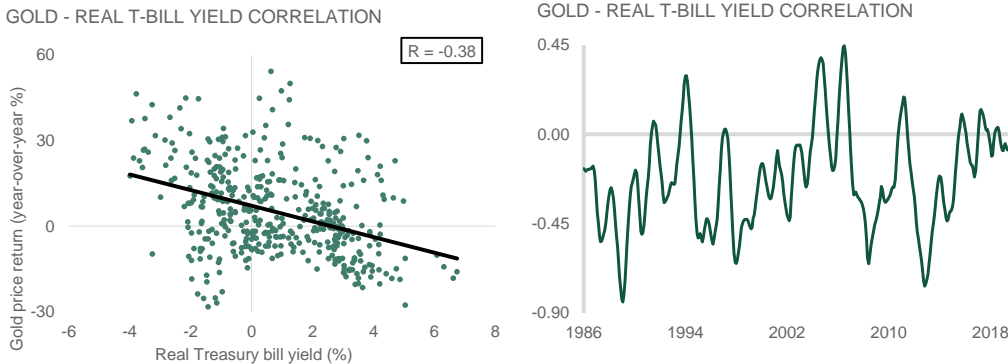


Source: Northern Trust Asset Management, Bloomberg, Metals Focus. Total known ETF holdings of gold shown on a monthly basis from 12/31/2009 – 6/30/2020.

As shown in Exhibit 3, the best evidence we have found historically to explain gold price moves is what is happening with short-term real (after inflation) interest rates. Why should gold prices rise when real short-term rates are falling, and vice versa? If you decompose interest rates into two components — the real rate of interest and the inflation premium — you can better understand the drivers. Falling real rates of interest occur when economies are slowing and gold is attractive to some investors in that environment as a portfolio hedge. It is also less expensive to own gold in that environment, as both the carrying cost of the investment and the opportunity cost of foregone investment have fallen. If the inflation premium is rising (which lowers the real rate of interest), this will entice some investors to buy gold as an inflation hedge.

**EXHIBIT 3: GOLD VERSUS REAL SHORT-TERM INTEREST RATES**

Falling real rates lead to rising gold prices.



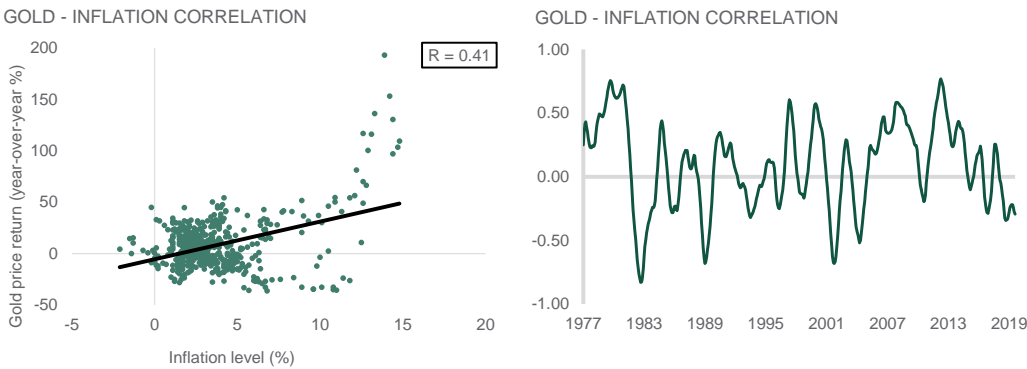
Source: Northern Trust Asset Management, Bloomberg. T-bill is 3-month U.S. Treasury bill. Correlation time series represents one-year rolling values of one-year correlations. R = correlation. Monthly data from 6/30/1983 through 6/30/2020.

**GOLD AS AN INFLATION HEDGE**

Investors have many options to hedge against inflation risk in their portfolios, from the simple (gold) to the more esoteric (inflation swaps). Three of the most common vehicles (and which we have utilized in the past) are gold, inflation-protected securities and natural resources (the equities of commodity-producing companies). Exhibit 4 shows that gold prices have historically had a reasonably positive correlation to rising inflation, but this correlation is not as strong as the alternatives. Additionally, the correlation has been more volatile over time as shown on the right side of the chart.

**EXHIBIT 4: GOLD VERSUS INFLATION**

Reasonable correlation, but fairly volatile.

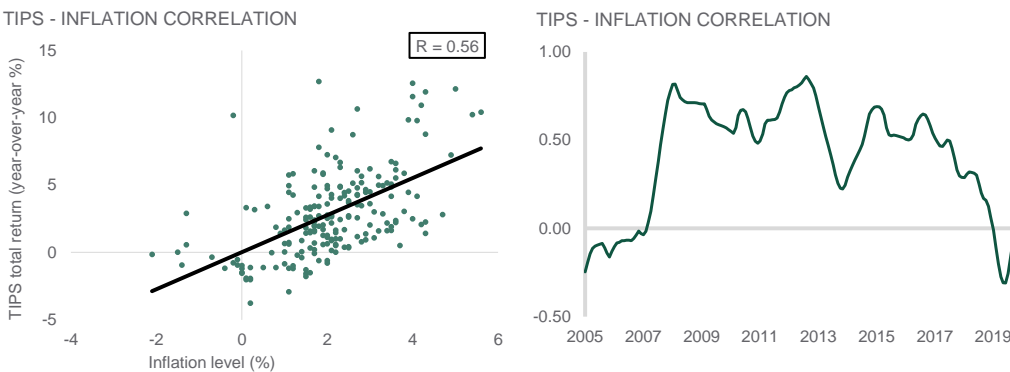


Source: Northern Trust Asset Management, Bloomberg. Inflation proxied by Consumer Price Index. Monthly data from 1/31/1975 through 6/30/2020.

A higher correlation with inflation comes from TIPS (in this instance TIPS with a 5-year and shorter maturity). TIPS have the benefit of an income stream that is directly tied to the rate of inflation, but longer-maturity TIPS do carry greater interest rate risk. We favor shorter maturity inflation-protected securities to reduce this interest rate risk.

**EXHIBIT 5: TIPS VERSUS INFLATION**

Improving correlation, and also more stable.



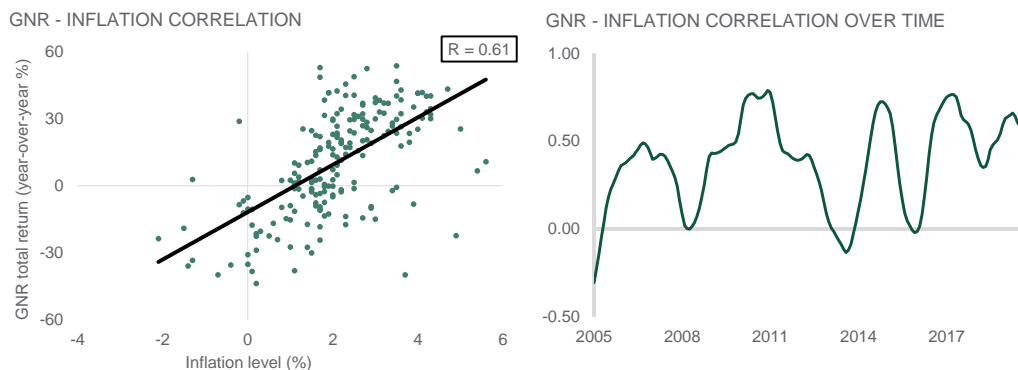
Source: Northern Trust Asset Management, Bloomberg. Bloomberg Barclays U.S. Treasury TIPS 0-5 Years Index used as proxy for TIPS. Monthly data from 9/30/2002 through 6/30/2020.

The highest correlation with inflation comes from global natural resources, specifically the public equities of commodities producers. Historically, many investors utilized a futures-based strategy for commodities exposure, but we have shown that an equities-based approach generates a superior outcome. Natural resources have provided the best protection against inflation as the underlying

companies within the index frequently benefit from rising prices and profitability during periods of broad inflation. They also hold an advantage to gold through broader diversification across many different commodity types which have different economic exposures.

**EXHIBIT 6: GLOBAL NATURAL RESOURCES VERSUS INFLATION**

The highest correlation, but a little more volatile than inflation-protected securities.



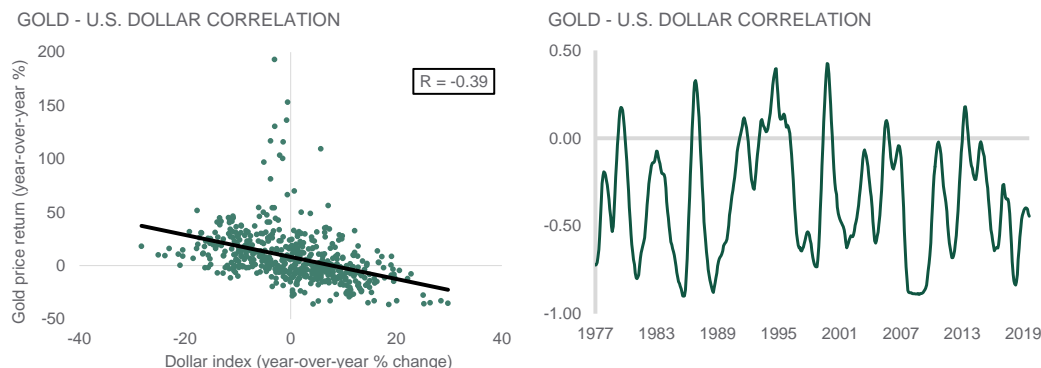
Source: Northern Trust Asset Management, Bloomberg. S&P Global Natural Resources Index used as proxy for Global Natural Resources. Monthly data from 11/29/2002 through 6/30/2020.

**GOLD AS A CURRENCY DEBASEMENT HEDGE**

Another frequent thesis for gold investors is protection against the debasement of their home currency (in this example the U.S. dollar). Gold has historically been negatively correlated with the dollar, rising in value when the dollar depreciates. But, as shown on the right, this is the most volatile of all the correlation tests we ran. We have never been big believers in currency debasement hedging for U.S. investors, as we aren't bearish long-term on the world's reserve currency. We also find that some investors do not give enough thought to the reality that currency values are a zero-sum game. For the dollar to be significantly impaired long-term against world currencies, you need to bet that the growth and inflation outlook for the U.S. is going to materially deteriorate against the other major currency issuers — including Europe, Japan, the U.K. and China. Our longer-term growth outlook for the U.S. stacks up well, as does our relative outlook for inflation against these other economies.

**EXHIBIT 7: GOLD VERSUS THE U.S. DOLLAR**

Gold is a very volatile hedge against dollar weakness.



Source: Northern Trust Asset Management, Bloomberg. Monthly data from 1/31/1975 – 6/30/2020.

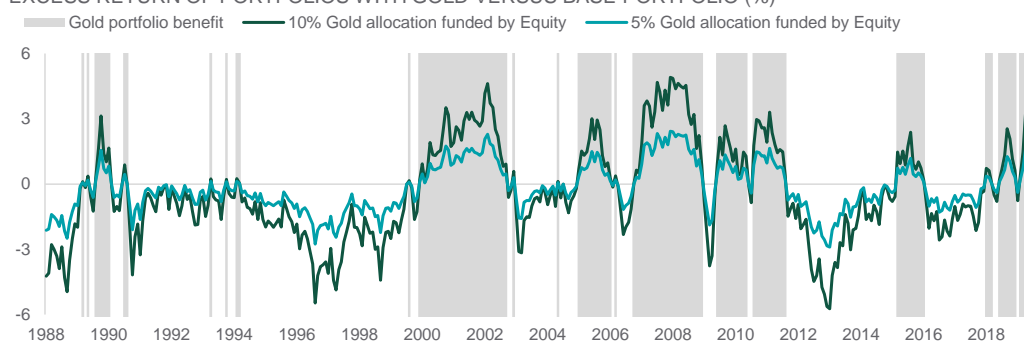
## GOLD AS AN ARMAGEDDON HEDGE

To assess the portfolio implications of an allocation to gold, we utilize Northern Trust’s Portfolio Construction Desk (PCD). Using risk modeling software that includes both historical and projected return, risk and correlation data, PCD assessed the portfolio impact of varying levels of exposure to gold and also conducted scenario analyses showing how portfolios behaved during various historical stress events. Those events included the 1987 stock market crash and the market decline in the wake of the Lehman Brothers bankruptcy, as examples. Exhibit 8 shows the marginal positive or negative contribution to a base balanced portfolio from a gold allocation of either 5% or 10%, funded by equities. During the stock bull market of the 1990s, the gold allocation detracted from performance — but earned its stripes during the most recent bear markets.

### EXHIBIT 8: THE VALUE-ADD OF GOLD IN THE PORTFOLIO

Benefits during rough patches, but long dry spells also.

EXCESS RETURN OF PORTFOLIOS WITH GOLD VERSUS BASE PORTFOLIO (%)



Source: Northern Trust Asset Management, MSCI. Base portfolio composed of 60% MSCI ACWI Index and 40% Bloomberg Barclays U.S. Aggregate Index. Data from 12/1/1988 through 6/30/2020.

Of the 50 market events PCD evaluated, 34 were negative stress events – an allocation to gold (drawn from equities) hurt the performance of the portfolios in only seven of these 34 instances. In other words, the batting average of gold being either neutral or positive to portfolio performance during periods of market stress is 79% – but the contribution in some market downturns was fairly nominal. Exhibit 9 shows the portfolio impact of 5% and 10% portfolio allocations to gold in certain high profile market declines, with the allocation sourced through a reduction in equities.

### EXHIBIT 9: STRESS TESTS

Gold generally provides downside protection during market declines.

SELECT STRESS TESTS					
Allocations	1987 Market Crash	1998 Russian Financial Crisis	2000-2003 Tech Crash/Recession	2008-2009 Global Financial Crisis	COVID-19 Drawdown
Base portfolio	-10.3%	-7.3%	-22.1%	-26.6%	-20.4%
<b>Reallocating:</b>					
5% from Equity to Gold	-9.3%	-6.5%	-18.9%	-23.8%	-18.8%
Value added	1.0%	0.8%	3.2%	2.8%	1.6%
10% from Equity to Gold	-8.3%	-5.6%	-15.6%	-21.1%	-17.2%
Value added	2.0%	1.7%	6.5%	5.5%	3.2%

Source: Northern Trust Asset Management, MSCI. Returns simulated through factor-based analysis using position exposures as of 6/30/2020. Actual returns shown for COVID-19 drawdown from 2/20/2020 through 3/23/2020. Value added/detracted relative to base portfolio. Base portfolio composed of 60% MSCI ACWI Index and 40% Bloomberg Barclays U.S. Aggregate Index.

**CONCLUSION: THE BENEFITS OF GOLD CAN BE FLEETING**

In this report, we have assessed the potential role of gold in portfolios, showing when it works and when there are better alternatives. We believe its most clear benefits are derived during periods of low real short-term interest rates and/or market stress events. With nominal short rates unable to fall much more, a significant further fall in real rates will require a sustained jump in inflation — which we don't expect. Even if that were to occur, we have demonstrated that inflation-protected securities and natural resource equities are superior hedges compared to gold. We also aren't bearish enough on the overall risk taking environment to suggest a tactical gold hedge. The price of gold is inherently unpredictable, as it lacks the traditional economic fundamentals for forecasting fair value. So, its course over the next year is anyone's guess. But as we focus on being compensated for the risks we are taking during portfolio construction, we find other asset classes that more clearly fulfill a well-defined purpose in helping overall portfolio return and risk characteristics.

*Special thanks to Tom O'Shea, Investment Strategist, and Colin Cheesman, Investment Analyst, for data research.*

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