

Investment Update

Gold tracks the dollar as rates take a back seat

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Investors often use the direction of the US dollar as a bellwether for gold's performance. However, over recent years, short-term movements in gold have been more heavily influenced by US interest rates and expectations of policy normalisation. Our analysis shows that the correlation between gold and US rates is waning and that the US dollar is again a stronger indicator of the direction of price (Table 1). And, in our view, this will continue over coming months – even while the dollar won't explain gold's movements entirely. Furthermore, the analysis shows that higher real rates have not always resulted in negative gold returns.

Linking gold, the US dollar and interest rates

There is no one single driver of the price of gold. Generally, gold's price drivers can be grouped into four categories: 1) wealth and economic expansion; 2) market risk and uncertainty; 3) opportunity cost; and 4) momentum and positioning (see page 3).

Table 1: The influence of US rates on gold has fallen behind that of the dollar

Correlations between gold, the US dollar, and various interest rate benchmarks*

	DXY Index	12-month T-bill	10-year Treasury	10-year TIPS
2016	-0.34	-0.28	-0.32	-0.25
2017	-0.27	-0.31	-0.32	-0.28
2018**	-0.58	0.02	0.04	-0.08

*Correlations computed using daily percentage changes (returns) for gold and the US dollar DXY index, and basis point changes (yield differentials) for interest rates.

**As of 13 April 2018.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

In the short and medium term, two variables attract investors' attention most: the US dollar and interest rates.

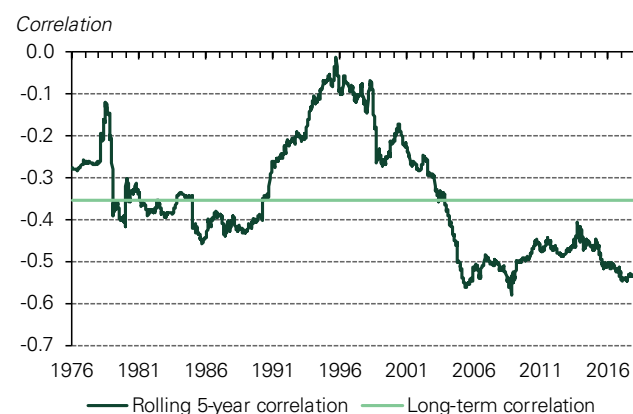
Historically, gold has had a consistently negative correlation to the US dollar (**Chart 1**). Gold's relationship with the dollar is determined by US-based gold supply and demand, as well as by the status of the dollar as *the* reserve currency globally (*Gold and currencies*, Gold Investor, October 2013). And while the US dollar is often a good bellwether of gold's price performance, in recent years, gold has seemingly reacted more to the behaviour of US rates.

Yet, gold continues to trend higher – increasing by 8.5% since the Federal Reserve rate hike in December 2017 – despite interest rates rising at an accelerated pace. A key question for investors is therefore, what matters more – the direction of the US dollar or the direction of interest rates?

The answer is, generally, the US dollar. But there are exceptions to this rule.

Chart 1: There is a consistently negative correlation between gold and the US dollar

Correlation between gold (US\$/oz) and the US dollar real exchange rate*

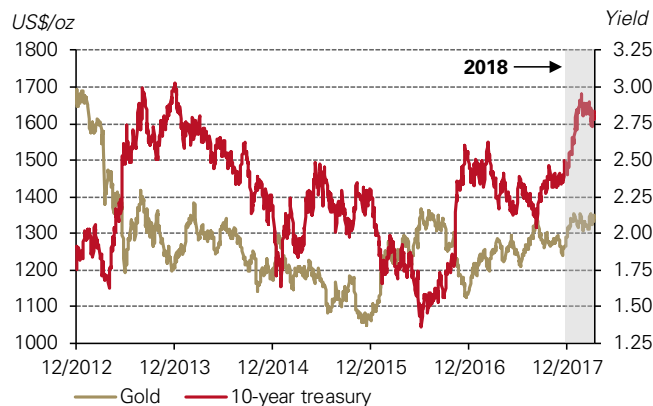


*Based on weekly returns between January 1971 and March 2018.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Chart 2: Gold and rates have been negatively correlated

Gold price (US\$/oz) and US interest rates*



*As of 13 April 2018.

Source: Bloomberg, World Gold Council

The increased negative correlation of US rates and gold between 2013 and 2017 (**Chart 2**) was likely a result of the strong influence that US monetary policy was exerting across global markets. This period coincided with a shift in investor expectations of US monetary policy from being very accommodative to moving towards normalisation.

It also seems that, historically, periods when real rates had higher influence on gold coincided with shifts in monetary policy – either when it was very restrictive or very accommodative. This makes sense, as marginal changes to monetary policy during such periods would generally have larger effects on the global economy (**Chart 3**).

Higher rates are not always linked to falling gold prices

Intuitively, gold returns should be higher in periods of negative rates, given the low opportunity cost of holding. Conversely, higher real rates should push gold prices lower.

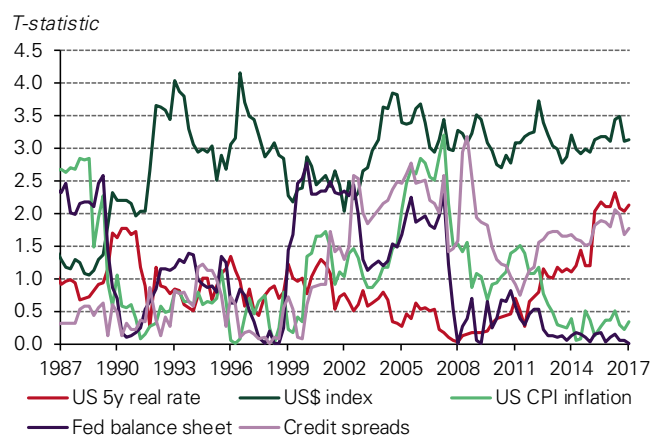
But US interest rates do not necessarily influence the behaviour of global consumers of gold jewellery or of technology demand. Nor do they affect the behaviour of investors outside the US for whom local interest rates matter more than US rates (*The market may be wrong about gold and interest rates*, Gold Investor, March 2015).

A historical analysis of gold returns shows that (**Table 2**):

- when US real rates are negative, gold returns tend to be twice as high as the long-term average
- even if real rates are positive, so long as they are not significantly high (2.5% in our analysis and far higher than they are today), average gold returns remain positive
- falling rates are generally linked to higher gold prices; yet rising rates are not always linked to lower prices.

Chart 3: The influence of US real rates varies over time

Significance of key explanatory variables based on a price model developed by Oxford Economics*



*Based on the methodology developed by Oxford Economics in the paper entitled *The effect of inflation and deflation on the case for gold*, July 2011. The chart shows the T-statistics for the model based on estimates using a 10-year rolling window. It shows that the effect of the US real rate may be negligible once the effect of the dollar, the Fed balance sheet, credit spreads, and CPI are considered. It also shows that the significance of real rates in explaining gold increased in recent years.

Source: Bloomberg, Oxford Economics, World Gold Council

Table 2: Gold returns remain positive in periods of moderate real rates

Gold performance in various real rate environments*

	Long term	Real rate environment		
		Low (<0%)	Moderate (0%–2.5%)	High (>2.5%)
Avg. monthly return	0.6%	1.3%	1.0%	-0.4%
Standard error	0.2%	0.5%	0.4%	0.3%
Significantly different from 0? **	Yes	Yes	Yes	No

*Based on *nominal* gold returns between January 1971 and March 2017. Real rate regimes based on the 12-month constant maturity T-bill minus the corresponding year-on-year CPI inflation.

**An average monthly return that is not significantly different from zero implies that there is too much variability in the available data to determine the direction of price with sufficient certainty. For this analysis, we use a 95% confidence level.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Drivers of the gold price

The dual nature of consumer and investment demand for gold makes it a useful asset for investors as it may complement other holdings and enhance portfolios.

Broadly speaking, drivers of the gold price can be grouped into four categories:

- **Wealth and economic expansion:** periods of growth are very supportive of jewellery, technology, and long-term savings
- **Market risk and uncertainty:** market downturns often boost investment demand for gold as a safe haven
- **Opportunity cost:** the price of competing assets such as bonds (through interest rates), currencies and other assets influence investor attitudes towards gold
- **Momentum and positioning:** capital flows and price trends can ignite or dampen gold's performance.

While gold's performance is the result of interactions between these categories, drivers related to wealth and economic expansion are generally more relevant for gold's long-term trend. And drivers linked to the other three categories play a significant role in gold's countercyclical behaviour.

A weak dollar and higher uncertainty on the horizon

As we look forward, we believe that variables such as the US dollar, inflation expectations, market uncertainty, and positioning will play a significant role in gold's performance.

In our view, one of the reasons the dollar will overtake rates to explain the direction of the gold price, is that movements in the dollar already reflect inflation expectations of monetary policy in the US. At the same time, they also reflect expectations of interest rate differentials between the US and major economies, as well as investors' views on trade imbalances – all factors that are currently relevant for gold.

And, generally, the dollar is expected to weaken as the ECB and other central banks move towards monetary policy normalisation. Concerns about the effect of potential trade wars have also dampened the dollar's ascent.

Table 3: Gold prices rise twice as much during weak dollar periods than they fall when the dollar strengthens

Average monthly gold returns under different dollar environments*

	Long term	US dollar environment		
		Weakening	Flat	Strengthening
Avg. monthly return	0.6%	1.5%	0.9%	-0.7%

*Based on monthly returns from January 1971 to March 2018. A flat US dollar environment is defined as a 12-month rolling window when the US Dollar Index (DXY) return is between -4.5% and 4.5%; a weakening dollar is when DXY falls by more than 4.5%; and a strengthening dollar is when it rises by more than 4.5%. Each environment contains approximately 180 monthly observations.

Source: Bloomberg, ICE Benchmark Authority, World Gold Council

It is important to note that the correlation between gold and the dollar is not symmetrical (*Gold in a rising dollar environment*, Gold Investor, March 2015). Historically, a weak dollar tends to provide a stronger boost to gold's performance than the drag created by a strong dollar (**Table 3**).

The rationale for this asymmetric correlation is that the price paid for gold in local currency matters most to consumers and investors outside the US. Thus, gold's behaviour is best understood as a broad fiat currency hedge rather than simply a dollar hedge. This is apparent in periods when major currencies weaken, and investors buy gold to hedge that risk – for example, during the European sovereign debt crisis. In such instances, gold and the dollar have tended to move in sync, with both benefiting from safe haven inflows.

A period of heightened geopolitical risk with the potential to impact the global economy could, thus, be supportive of gold even if the dollar were to strengthen.

As such, we believe that investors benefit from holding a strategic allocation to gold as a source of returns, diversification, liquidity, and portfolio impact (*The relevance of gold as a strategic asset*, January 2018).

About the World Gold Council

The World Gold Council is the market development organisation for the gold industry. Our purpose is to stimulate and sustain demand for gold, provide industry leadership, and be the global authority on the gold market.

We develop gold-backed solutions, services and products, based on authoritative market insight, and we work with a range of partners to put our ideas into action. As a result, we create structural shifts in demand for gold across key market sectors. We provide insights into the international gold markets, helping people to understand the wealth preservation qualities of gold and its role in meeting the social and environmental needs of society.

Based in the UK, with operations in India, the Far East and the US, the World Gold Council is an association whose members comprise the world's leading gold mining companies.

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