WORLD GOLD COUNCIL

Gold mid-year outlook 2022

Balancing inflation, rate hikes and political uncertainty

About the World Gold Council

We're the global experts on gold.

Leveraging our broad knowledge and experience, we work to improve understanding of the gold market and underscore gold's value to individuals, investors, and the world at large.

Collaboration is the cornerstone of our approach. We're an association whose members are the world's most forward-thinking gold mining companies. Combining the insights of our members and other industry partners, we seek to unlock gold's evolving role as a catalyst for advancements that meet societal needs.

We develop standards, expand access to gold, and tackle barriers to adoption to stimulate demand and support a vibrant and sustainable future for the gold market. From our offices in Beijing, London, Mumbai, New York, Shanghai, and Singapore, we deliver positive impact worldwide.

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Contents

Gold Mid-Year Outlook 2022 2
Higher rates in 2022 outweighed inflation risks 2
Looking ahead: investors walking a tightrope 4
Monetary policy uncertainty will likely ramp up volatility 4
Inflation may linger even if it peaks 4
Amid opposing forces, real rates will likely remain low 5
Investors are facing difficult choices in terms of asset allocation 5
Consumer demand will likely face hurdles 6
Gold's behaviour will depend on which factors tip the scale 6

Gold Mid-Year Outlook 2022

Investors face a challenging environment during the second half of 2022, needing to navigate rising interest rates, high inflation and resurfacing geopolitical risks. In the near term, gold will likely remain reactive to real rates, driven by the speed at which global central banks tighten monetary policy in an effort to control inflation. Yet, in our view:

- rate hikes may create headwinds for gold, but many of these hawkish policy expectations are priced in
- concurrently, continued inflation and geopolitical risks will likely sustain demand for gold as a hedge
- underperformance of stocks and bonds in a potential stagflationary environment may also be positive for gold.

Higher rates in 2022 outweighed inflation risks

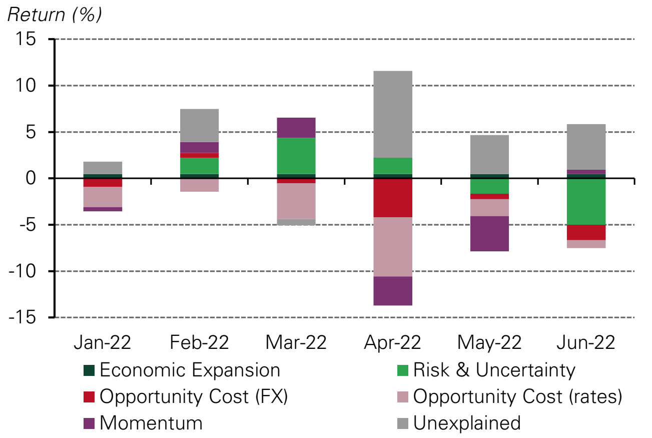
Gold finished H1 0.6% higher, closing at US$1,817/oz.[1] The gold price initially rallied as the Ukraine war unfolded and investors sought high-quality, liquid hedges amid increased geopolitical uncertainty. But gold gave back some of those early gains as investors shifted their focus to monetary policy and higher bond yields. By mid-May, the gold price had stabilised in response to the tug of war between rising interest rates and a high-risk environment. The latter was a combination of persistently high inflation as well as likely support from the extended conflict in Ukraine and its potential knock-on effects on global growth.

This was also reflected in both COMEX net long positioning and gold ETF flows. The latter saw strong investment early in the year before giving back some gains in May and June. Yet, by the end of June, gold ETFs had amassed US$15.3bn (242 tonnes) of inflows year-to-date.

Our Gold Return Attribution Model (GRAM) corroborates this. Rising opportunity costs – both from higher rates and a stronger dollar – were key headwinds to gold's performance y-t-d, while rising risks – from inflation as well as geopolitics – pushed gold higher for much of the period (**Chart 1**).

Chart 1: Rates and inflation were two of the most important contributors to gold's performance in 2022

Contributions from key drivers to monthly gold returns*



*As of 30 June 2022. Our short-term model is a multiple regression model of monthly gold price returns (based on XAU), which we group into the four key thematic driver categories of gold's performance: economic expansion, market risk, opportunity cost, and momentum. These themes capture motives behind gold demand; most saliently, investment demand, which is considered the marginal driver of gold price returns in the short run. 'Unexplained' represents the percentage change in the gold price that is not explained by factors currently included in the model. Results shown here are based on analysis covering an estimation period from February 2007 to June 2022. On Goldhub, see: GRAM.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

1 Based on the LBMA Gold Price PM as of 30 June 2022.

Table 1: Gold's price performance was positive across major currencies

Gold price and annual return in key currencies*

	USD (oz)	EUR (oz)	JPY (g)	GBP (oz)	CAD (oz)	CHF (oz)	INR (10g)	RMB (g)	TRY (oz)	RUB (g)	ZAR (g)	AUD (oz)
H1 2022 return	0.6%	9.4%	18.7%	12.2%	2.8%	5.7%	6.9%	5.7%	26.5%	-26.6%	3.3%	6.4%
30 June price	1,817.0	1,738.0	7,936.4	1,496.2	2,343.8	1,739.5	46,134.0	391.1	30,337.5	3,198.4	957.0	2,642.3
H1 high	2,039.1	1,874.6	8,135.2	1,555.3	2,623.8	1,894.3	50,417.4	413.9	31,989.3	9,648.9	1,003.3	2,806.9
H1 low	1,788.2	1,570.1	6,621.7	1,317.1	2,271.8	1,645.4	42,708.4	365.9	23,543.8	3,124.0	880.1	2,493.6

*As of 30 June 2022. Based on the LBMA Gold Price PM in local currencies: US dollar (USD), euro (EUR), Japanese yen (JPY), pound sterling (GBP), Canadian dollar (CAD), Swiss franc (CHF), Indian rupee (INR), Chinese yuan (RMB), Turkish lira (TRY), Russian rouble (RUB), South African rand (ZAR), and Australian dollar (AUD).

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Chart 2: Gold was supported by heightened risk: real rates and the USD alone suggest gold would have been lower in H1

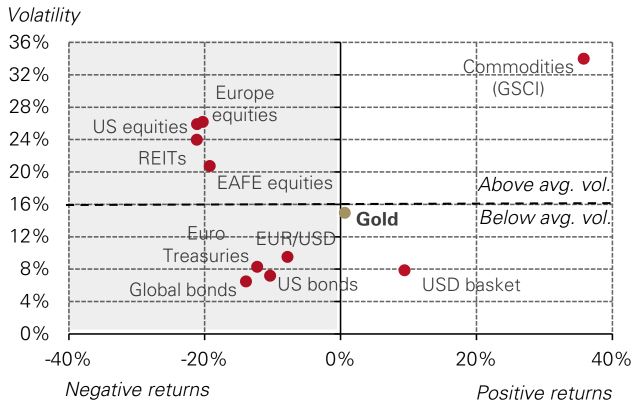
Simple model of gold price explained using US 10-year TIP yield and Broad US dollar index*

*As of 30 June 2022. Model estimated using OLS, in levels, using data from January 2007 to June 2022.

Source: Bloomberg, World Gold Council

Chart 3: Gold has held up well so far in 2022

Y-t-d nominal asset returns and annualised volatilities in USD*



*As of 30 June 2022. Shaded area denotes negative y-t-d returns. Dash line represents the average of y-t-d annualised volatility across all assets shown. Return and volatility computations for 'US bonds': Bloomberg US Agg Total Return Value Unhedged USD; 'EAFE equities': MSCI EAFE Gross Total Return USD Index; 'Gold (US$/oz)': LBMA Gold Price PM USD; 'EUR/USD': EURUSD Spot Exchange Rate – Price of 1 EUR in USD; 'Global bonds': Bloomberg Global-Aggregate Total Return Index Value Unhedged USD; 'Commodities (GSCI)': S&P GSCI Total Return CME; 'USD basket': Dollar Spot Index; 'Europe equities': MSCI Daily Gross TR Europe Euro; 'US equities': MSCI Daily TR Gross USA USD; 'Euro Treasuries': Bloomberg EuroAgg Treasury Total Return Index Value Unhedged EUR; 'REITs': Dow Jones US Select REIT Total Return Index.

Source: Bloomberg, World Gold Council

We believe that the geopolitical risk premium is also represented in the larger than normal 'unexplained' element of our GRAM model in recent months, which has made a strong positive contribution to gold's price performance in tandem with the prolonged Russia–Ukraine war. For example, an often-used simple model based solely on US real rates and the dollar suggests that gold would normally be significantly lower, contrasting with its actual marginally positive performance (**Chart 2**).

Notably, even though the appreciation of the US dollar against a wide variety of currencies has been a headwind to the gold price (when measured in US dollar terms), it has at the same time propped up gold's performance in many other currencies, including the euro, yen and pound sterling (**Table 1**).

Further, at first glance, gold's flat y-t-d performance may seem dull, but gold was nonetheless one of the best-performing assets during H1. It not only delivered positive returns, but it did so with below-average volatility (**Chart 3**).

As such, gold has actively helped investors mitigate losses during this volatile period. Especially considering that both equities and bonds, which usually make up the largest portion of investors' portfolios, posted negative returns during the period.

Looking ahead: investors walking a tightrope

We believe that investors will continue to face significant challenges during the second half of the year. As such, they will need to balance several competing risks compounded by a fair degree of uncertainty about their magnitude.

Monetary policy uncertainty will likely ramp up volatility

Most central banks were expected to lift policy rates this year, but many have stepped up their actions in response to persistently high inflation.[2] The Fed hiked its funding rate by 1.5% so far this year, the Bank of England has increased its base rate five times since November 2021, to 1.25%, and the Swiss National Bank hiked rates for the first time in 15 years. And although the European Central Bank hasn't yet raised rates, it has indicated it is prepared to do so. Among developing economies, the Reserve Bank of India is also expected to considerably increase its repo rate by the end of the year.

These actions have had a significant impact on financial markets, including gold. Indeed, data suggests that investor expectations of future monetary policy decisions – expressed through bond yields – have historically been a key influence on gold price performance. And as we discussed in our *Gold Outlook 2022*, historical analysis shows that gold has underperformed in the months leading up to a Fed tightening cycle, only to significantly outperform in the months following the first rate hike (**Chart 4**). Contrastingly, US equities had their strongest performance ahead of a tightening cycle but delivered softer returns thereafter.

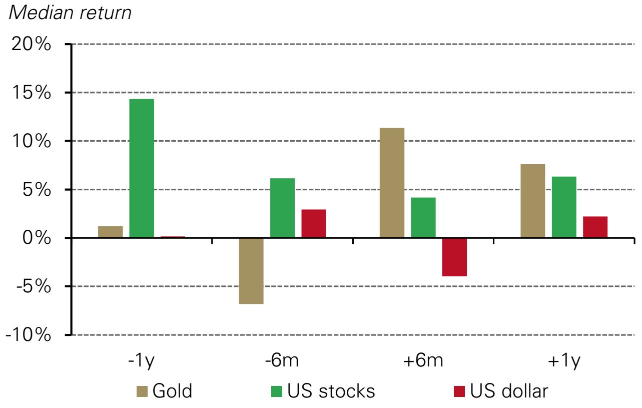
It's also worth noting that, while most market participants still expect significant policy rate increases, some analysts argue that central banks may not tighten monetary policy as much as expected. Their reasons include potential economic slowdowns that may result in contractions, but also in some cases a switch from supply constraints to supply surpluses in non-commodity consumer sectors.

Inflation may linger even if it peaks

Inflation remains at historically high levels, and while investors expect inflation to cool down eventually, we believe it will remain high.

Chart 4: Gold has typically outperformed following the first rate hike of a Fed tightening cycle

Median return of gold, US stocks and the US dollar over the past four Fed tightening cycles*



*Median returns based on the past four tightening cycles starting in February 1994, June 1999, June 2004, and December 2015. US dollar performance based on the Fed trade-weighted dollar index prior to 1997 and the DXY index thereafter, due to data availability.

Source: Bloomberg, ICE Benchmark Administration, World Gold Council

In particular, this is due to:

- lingering commodity-related supply-chain disruptions from the pandemic and the Ukraine war, which have caused a surge in key energy and commodity prices [3]
- tight labour markets, causing concerns that wages/labour costs may rise further.

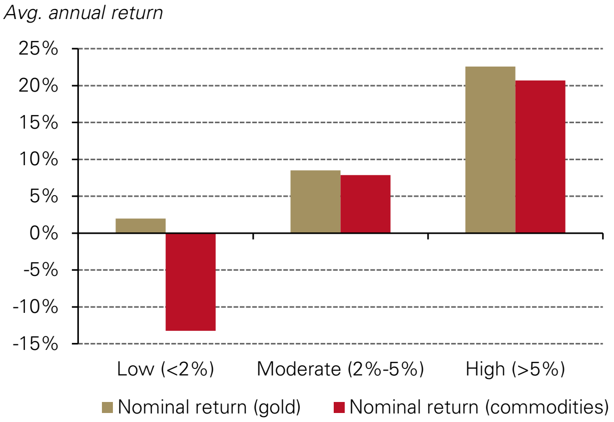
Gold has historically performed well amid high inflation. In years when inflation was higher than 3%, gold's price increased 14% on average, and in periods where US CPI averaged over 5% on a y-o-y basis – currently at ~8% – gold has averaged nearly 25% (**Chart 5**). Also, gold has outperformed other commodities in higher inflationary periods, which has yet to happen this time around. However, our analysis suggests that gold lags other commodities in commodity-led inflationary periods, and catches up and outperforms over the subsequent 12–18 months.

2 In contrast, the Bank of Japan has maintained its accommodative stance despite increased pressure on the yen, and the People's Bank of China has cut lending rates to provide support for the economic recovery on the back of COVID-led lockdowns in major cities.

3 Global Economic Prospects (worldbank.org)

Chart 5: Gold historically performs well in periods of high inflation

Gold and commodity nominal returns in US dollars as a function of annual inflation*



*Based on y-o-y changes of the LBMA Gold Price, Bloomberg Commodity Index and US CPI between 1971 and 30 June 2022. Number of observations for each tranche: Low = 12, Moderate = 27, High = 12. The buckets were determined based on a 2% Fed target rating, a recent CPI number above 5%, and a proportional amount of observations in each tranche.

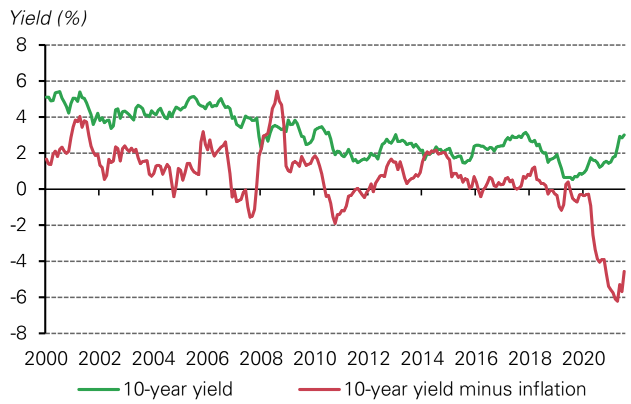
Source: Bloomberg, ICE Benchmark Administration, World Gold Council

Amid opposing forces, real rates will likely remain low

Despite forthcoming rate hikes by various central banks, nominal rates will likely remain low from a historical perspective (**Chart 6**). This is important for gold since gold's short- and medium-term performance often tends to respond to *real rates*, which combine two important drivers of gold performance: "opportunity cost" and "risk and uncertainty".

Chart 6: Both nominal and real interest rates are at or near historically low levels

US 10-year Treasury nominal and real yield*



*As of 30 June 2022. Real yield computed using US 10-year Treasury nominal yield minus seasonally adjusted US CPI y-o-y change.

Source: Bloomberg, US Bureau of Labor Statistics, World Gold Council

Investors are facing difficult choices in terms of asset allocation

Further stock market pullbacks are likely in the face of faltering economic growth combined with persistent high inflation against a backdrop of simmering geopolitical tensions. Similarly, the risk of a stagflationary environment has increased materially. And our analysis shows that while gold has tended to lag during reflationary periods, it has still performed well and it has also significantly outperformed in stagflationary periods (**Chart 7**).

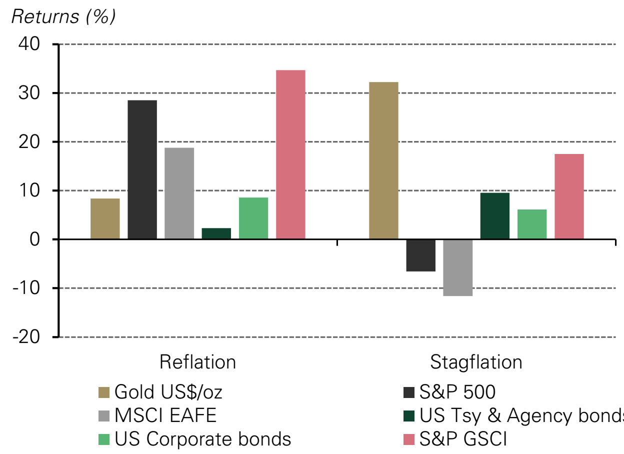
Further, questions remain on the ability of bonds to provide the diversification that investors need. High-quality government bonds have been a favoured safe-haven asset over the last 20 years because of low inflation and interest rates. But higher inflation weakens the appeal of government bonds as a diversifier, increasing both yields and the correlation to stocks.

At the same time, inflation-linked bonds, designed to track CPI, may not provide investors with the refuge they need. Since the start of the year inflation-linked bonds have fallen despite the rapid rise in CPI levels. The Bloomberg Global Inflation-linked Bond Index has declined 18% year-to-date (**Chart 8**).

As such, gold can be a valuable risk-management tool in an investor's arsenal.

Chart 7: Major asset returns per cycle phase since 1973: gold a clear winner in stagflation

AAAR % for major asset classes since Q1 1973*

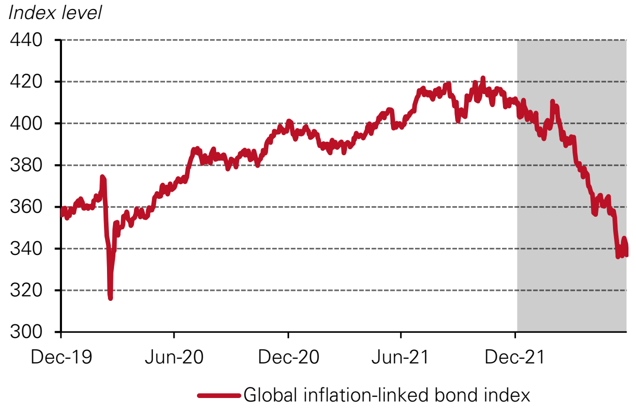


*As of Q2 2021. AAAR % – annualised average (stagflation) adjusted returns. Please see Appendix A.2 for AAAR definition.

Source: Bloomberg, World Gold Council

Chart 8: Inflation-linked bonds have underperformed y-t-d as rate increases have curtailed inflation-contributed gains

Bloomberg Global Inflation-Linked Total Return Index Value Unhedged USD*



*As of 30 June 2022.

Source: Bloomberg, World Gold Council

Consumer demand will likely face hurdles

The challenging environment also has implications for consumer demand for gold over the rest of the year. While many markets should continue to benefit from the post-COVID recovery, we expect widespread economic slowdown to put pressure on consumer demand for gold, particularly with many markets seeing notably higher local gold prices.

China is especially susceptible to weakness as the government pursues its zero-COVID policy, with possible mobility restrictions which cast a shadow over future growth.

Indian demand is also facing challenges, although to a lesser degree than those in China. High local inflation, uncertainty about the economic outlook, and the surprise increase of the import duty for gold – aimed in part to mitigate the impacts of rupee weakness – will likely weigh on the recovery of gold consumer demand.

Gold's behaviour will depend on which factors tip the scale

We believe that gold will face two key headwinds during the second half of 2022:

- higher nominal interest rates
- a potentially stronger dollar.

However, the negative effect from these two drivers may be offset by other, more supportive factors, including:

- high, persistent inflation with gold playing catch-up to other commodities
- market volatility linked to shifts in monetary policy and geopolitics
- the need for effective hedges that overcome potentially higher correlations between equities and bonds.

In this context, gold's both strategic and tactical role will likely remain relevant to investors, particularly while uncertainty stays elevated.

You can use Qaurum℠, our valuation tool, to analyse how the impact of some of these key drivers may influence gold's performance across various economic scenarios.[4]

4 Qaurum is a web-based quantitative tool powered by the Gold Valuation Framework (GVF). An academically validated methodology, GVF is based on the principle that the price of gold and its performance can be explained by the interaction of demand and supply. In turn, demand and supply are influenced by macroeconomic scenarios that can be customised to calculate gold's implied performance based on these hypothetical conditions over various time periods. See **Important information and disclosures** at the end of this report.

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