WORLD GOLD COUNCIL

What drives gold?

Factors that influence gold and its role in a portfolio

About the World Gold Council

The World Gold Council is the market development organisation for the gold industry. Working within the investment, jewellery and technology sectors, as well as engaging with governments and central banks, our purpose is to provide industry leadership, whilst stimulating and sustaining demand for gold.

We develop gold-backed solutions, services and markets based on true market insight. As a result we create structural shifts in demand for gold across key market sectors.

We provide insights into international gold markets, helping people to better 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, Europe and the US, the World Gold Council is an association whose members comprise the world's leading gold mining companies.

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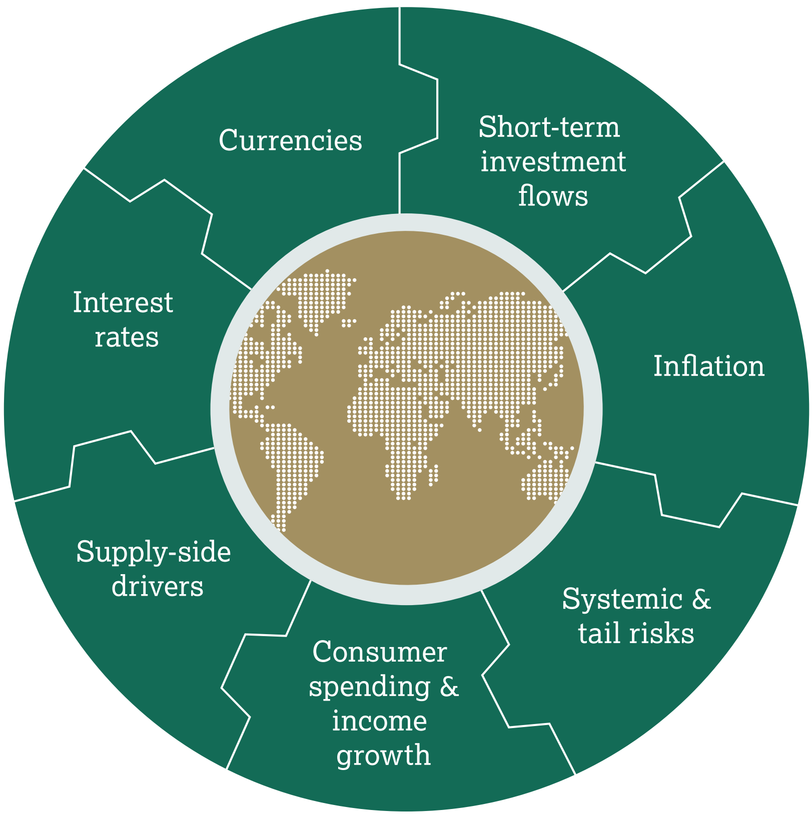
Other articles featured:

– Gold and US interest rates: a *real*ity check

– The role of gold in defined-contribution plans: Mexico case study

What drives gold?
Factors that influence gold and its role in a portfolio

To some investors, gold seems arcane: a non-productive asset that is simply extracted and stored. To many others, gold plays an important role as a store of wealth and portfolio risk management vehicle. To most, a key challenge is finding an appropriate framework of reference: what gold does, what it does not do, how and why it responds to various economic environments. Gold's performance can be understood in the context of seven primary interrelated global themes: its relation to currencies, global inflation and interest rates, consumer spending and income growth, market risks, short-term investment flows and supply-related drivers.



Market commentators tend to link gold to a few US-driven factors. Such an approach falls short.

When market commentators discuss gold, they typically use only one of a few recurring factors in evaluating gold's price performance. US-specific factors have historically received a preeminent focus. Such an approach, however, over-simplifies and often leaves investors under-informed, given gold's global market and the numerous components that can affect its performance in different economic environments.

A comprehensive framework can help investors become comfortable with gold.

This does not mean that gold's performance is unexplainable or that gold's investment characteristics are difficult to understand. A comprehensive but simple framework can provide investors with a deeper understanding of this asset and ensures they have the appropriate expectation for gold's role in a portfolio.

Influencing factors affect gold through four channels of demand and two channels of supply.

This research note seeks to outline a more comprehensive framework for gold by discussing various factors that influence the gold market. Many of these factors can be categorised into themes, which in turn influence gold through one or more of the four sources of demand: jewellery, technology, central banks and investment, or one of two sources of supply: recycled gold and mine production.

This note is a segue to several research papers that explore the aforementioned themes, including *Gold and US rates: a reality check*. While this brief note provides only an outline, when combined with additional research it will provide investors with a comprehensive view of the asset including the benefits it brings to investment portfolios.

Common misconceptions about gold

Often, spurious correlations have led to erroneous conclusions about the relationship between gold and equities.

On various occasions during the past few years, some market participants focused on gold's increasing correlation to the stock market and falsely concluded that gold was becoming a risk asset. However, as shown in our Q1 2012 *Investment Commentary*, in the context of a statistically significant variable like the US dollar, gold's correlation to US equities became negligible. Interpreting this correlation as a causal relationship could lead to a false conclusion about gold's economic relationship to equities. Instead, it is prudent to view gold against all of its influencing factors simultaneously. Indeed, it is necessary to consider the bigger picture when evaluating a particular variable.

Traditional frameworks used for stocks and bonds also prove inadequate.

Applying common valuation models used for other financial assets to gold overlooks its unique components. Typical discounted cash flow valuation models that apply to equities and fixed income do not adequately adapt to gold. In addition, the approach of evaluating commodities on the basis of a supply and demand imbalance cannot readily be applied either because of its large and available stock; a by-product of gold's non–perishing qualities. An apparent lack of a framework for thinking about gold's value and returns is a commonly cited barrier to investment.

The exclusive use of US-driven factors is insufficient to encapture gold's global dynamics – increasingly influenced by emerging markets.

Additionally, the analyst community tends to use solely US-specific economic variables to explain changes in the gold price. This approach is overly limited, given the global nature of the gold market. The US represented 10% of physical gold demand in 2012, while emerging markets represented close to 70%. While the US represents a large portion of financial markets and US variables are indeed important in understanding macro-economic developments, exclusive reliance on them to explain fluctuations in the gold price is inadequate.

Key themes that help explain gold's performance

In this research note we outline the main themes that influence gold.

In the following section we discuss the general themes that influence gold in order to help investors develop a more comprehensive and accurate framework. These themes should be viewed as an interconnected set of factors. These themes include:

Gold has a negative relation to the US dollar, a positive relationship to the quantity of money supply, and is used as a diversifier for FX reserves.

Currencies. Gold is often thought of as a currency based on its widespread use as a store of value and a unit of exchange. In 1971, the world adopted a floating currency regime, and gold was no longer an official anchor of currencies. However, it retained some of its currency-related attributes. In particular, its negative correlation to the US dollar and other developed market currencies, as well as its use as a store of value in countries with volatile foreign exchange rates. In contrast to fiat currencies, the quantity of available gold stocks cannot be expanded at will, thus helping investors to protect against losses in purchasing power. See *Gold and currencies: hedging foreign-exchange risk* and *Gold and currencies: protecting purchasing power,* included in previous editions of *Gold Investor.*

Gold is a global inflation hedge, and investor inflation expectations influence flows.

Inflation. Variables such as inflation have a profound impact on how investors and consumers view gold. Global inflation and inflation expectations dictate consumers' purchasing power, driving the decisions of whether we buy something today or save it for tomorrow. High inflation is fairly disruptive, and expectations of such an environment have a significant influence on gold's demand. However, gold's hedging qualities need to be analysed in the context of global – not local – inflation. See *The impact of inflation in the case for gold* and *Gold and currencies: protecting purchasing power.*

Interest rates affect the opportunity cost of investing.

Interest rates. Interest rates are a key component in the valuation of financial assets because they measure the opportunity cost of keeping money in cash (and high-quality short term bonds) relative to any other asset. High interest rates can increase the opportunity cost of investing in gold, but the economic environments in which they develop can also be supportive of gold as a consumption good. However, global interest rates (not only US ones) ought to be taken into consideration. See *Gold and US rates: a reality check*.

Consumer spending and income growth support demand, as well as gold-related savings.

Consumer spending and income growth. Jewellery, bars, coins and technological applications make up the majority of demand. Growth in disposable income and consumer spending promote purchases of these goods. In particular, as emerging markets (which account for the largest share of demand) expand further economically, higher levels of wealth increase demand for gold.

Gold investment typically increases during periods of systemic and tail risks.

Systemic and tail risks. Systemic market disruptions and tail risks impact global markets and have an influence on gold as crises tend to drive flight to high-quality, liquid assets. These types of events are difficult to predict but can have a devastating effect on investors' wealth, typically exacerbated by market momentum. Assets such as gold help to partly mitigate these losses. See *Gold: hedging against tail risk.*

Investment flows driven by momentum and technical factors can affect gold prices in the short run.

Short-term investment flows. There are incentives that propel short term investment flows, including momentum and technical drivers that are not always correlated with fundamental drivers of demand and supply. Many investors wishing to make purchases based upon momentum or technical indicators use the futures market because it is a liquid and highly marginable vehicle.[1] This is a natural consequence of capital markets but also a source of liquidity and price discovery.

Supply from mine production and recycled gold impacts its availability.

Supply-side drivers. The factors above look at the motivations for purchasing gold. The supply of gold that is used to meet demand for these purchases is a factor that could potentially influence the gold price. All else being equal, a short term decline in mine production could induce physical buyers to pay more for gold.

Taking a holistic approach to gold is paramount, as gold's drivers respond to various economic environments…

The aforementioned drivers have an influence on gold and interact with each other through various channels. For example, US interest rates and inflation have a large impact on the attractiveness of the US dollar. Interest rates and inflation have an impact on consumer spending and miners' decisions to expand production. The appearance of systemic risks can lead investors to change their risk management practices and allocate to diversifying assets like gold. These relationships are just a few examples that could potentially complicate investors' attempts to use individual variables when thinking about gold.

…calling for a dynamic framework.

Furthermore, gold is a global asset, and the changing nature of the gold market means that a static valuation framework will not account for changes in the importance or the mutual interaction of these variables.

1 A highly marginable security is one that allows an initial payment that is substantially smaller than the value of the security. Margining leads to increased leveraged which could amplify losses and gains.

Gold's role in a portfolio

As a by-product of the factors described above, gold has two primary functions in investors' portfolios:

As a result of those factors, gold provides risk management…

Gold as a risk-management vehicle

- **Gold provides portfolio diversification** through its lower correlation to other assets. Gold's correlation to equities and bonds is, on average, 0.1 and, as discussed in *Gold: a commodity like no other,* it has a correlation of 0.3 to the broader commodity complex.
- Gold provides **tail-risk protection** by consistently reducing portfolio losses during tail-risk events as summarised in *Gold: hedging against tail-risk.*
- **Gold is a high quality, liquid asset.** Gold traded an average of US$240bn per day in the first quarter of 2011,[2] higher than most liquid equities, German Bunds, UK gilts, US agencies and certain currency pairs (see *Liquidity in the gold market*). Gold lacks credit risk, helping investors to balance the risks present in their fixed income and equity allocations.

…and capital preservation to investors.

Gold as a source of capital preservation

- **Gold hedges against extreme inflation scenarios** like deflation and hyperinflation. In the paper *The impact of inflation and deflation on the case for gold,* Oxford Economics shows that both environments lead to gold's relative outperformance over other assets.
- **Gold protects against falls in developed market currencies.** Gold has a -0.5 correlation to the US dollar and a negative correlation against most other developed market currencies (see *Gold as a hedge against the US dollar*).

Conclusion

Investors often reduce gold's determinants to a handful of US-led variables...

Investors tend to analyse gold through the lens of a few US-driven variables, typically in isolation. This exercise is inadequate as it fails to consider all of gold's influencing factors as well as the global nature of the gold market and could lead to false conclusions about gold's investment characteristics.

…yet gold's drivers are global and interconnected. An understanding of these dynamics is critical in developing a framework for gold.

Instead, there are several globally interrelated factors that influence the gold market, including: currencies, interest rates, inflation, consumer spending, systemic factors, short-term investment flows, and supply-side drivers. Furthermore, the changing importance and mutual interactions of these themes reinforce the need for a dynamic framework in which to think about the gold market. Such a framework gives investors a tool to thoroughly analyse fluctuations in gold and truly understand the source of gold's portfolio attributes: portfolio risk management and capital preservation.

2 LBMA, *Gold turnover survey for Q1 2011,* August 2011.

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