

THE INVESTMENT CASE FOR GOLD

DECEMBER 2020

The objective of this paper is to provide investors with a better understanding of the benefits and potential risks of owning gold within an investment portfolio. We look at the key features of gold, explain how investors can gain exposure to gold, and also provide insight into the structure of gold exchange traded products (ETPs).

GOLD'S JOURNEY TO BECOMING AN ESTABLISHED ASSET CLASS

For thousands of years, gold has been considered an object of beauty, a currency, a commodity, and an investment. In the past, the alluring metal has motivated entire societies, determined the fate of kings, driven explorers to extraordinary lengths to obtain it, and inspired some of mankind's greatest achievements. Yet as financial markets developed rapidly in the late 20th century, gold receded into the background, and many investors lost touch with the precious metal. Between 1933 and 1974 it was illegal for US citizens to own gold in the form of bullion. Similarly, in China from 1950, private ownership of bullion was prohibited until a series of reform started to take place in the 1990s. Access to the metal as an investment was very restricted for many people across the world. Today, however, bullion investing is largely democratised. A key catalyst for this has been the development of Exchange Traded Products (ETPs) in 2003, created by ETF Securities (now WisdomTree). Physical backed ETPs now have close to US\$211 billion¹ assets under management from 0 in 2003.

During the various Gold Standards and the Bretton Woods monetary regimes², gold's natural behaviour was constrained by the monetary construct, and hence we have less data on gold's behaviour in an unconstrained environment than we do for equities and bonds. Points of access and liquidity have rarely been as high as they are today. Also, it is still a relative niche investment. As such, its investment characteristics are poorly understood by the market at large. In this piece, we explore some of gold's investment traits and see how it can fit into an investors' portfolio.

¹ Source: WisdomTree, Bloomberg. As of 3 November 2020, based on 110 million troy ounces of gold held in gold ETPs and spot price of gold at US\$1907/oz.

² Monetary regimes, where currencies were fixed to the gold price. The Bretton Woods System started to break down in 1971.

COMMODITY OR CURRENCY?

One factor that separates gold from other precious metals is that there are large above-ground stocks which can easily be mobilised. As a result of gold's liquidity, it often acts more like a currency than a commodity. But unlike most fiat currencies, its supply cannot be increased at the click of a few buttons following a monetary policy meeting. As such, it has a "super-haven" status. While central banks may expand their monetary base in the face of economic turbulence, gold cannot be debased in the same way. This makes gold an excellent hedge against geopolitical and financial market turbulence.

WEALTH PRESERVATION

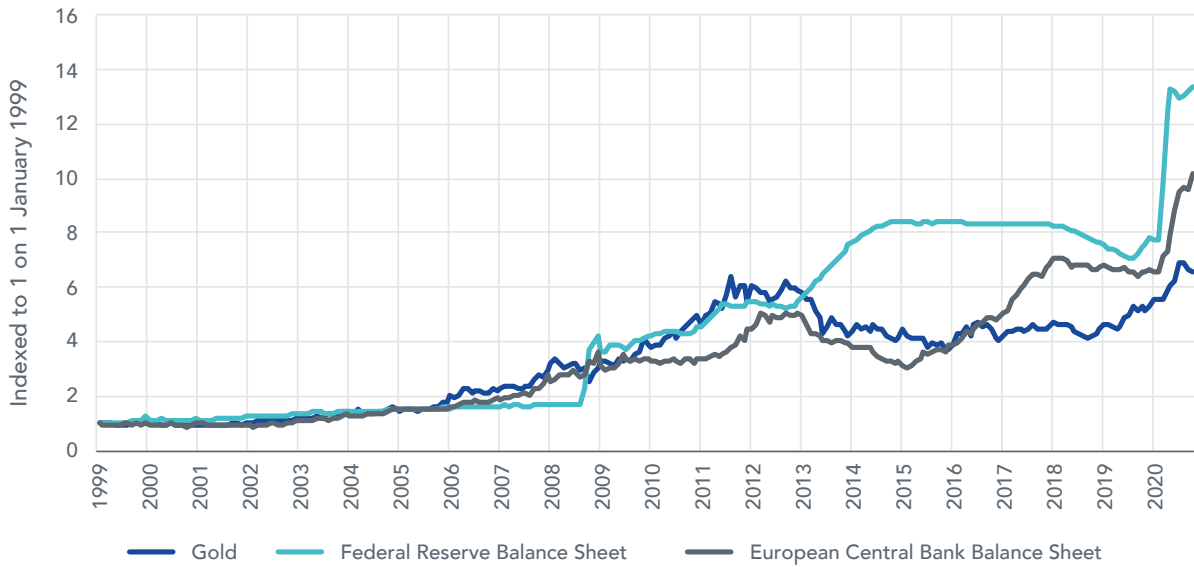
One of the fundamental attractions of gold is that it is considered to be an excellent 'store of value'. For much of recorded history, the precious metal has been viewed throughout the world as an asset with real inherent value due to the fact that it is physically attractive, durable, easily exchangeable, yet also quite scarce. Today, its legacy as a store of value lives on.

This store of value appeal of gold has become particularly relevant in the wake of the Global Financial Crisis, as central banks have expanded their balance sheets substantially, and this has resulted in concerns that 'fiat' currencies³ were being devalued. Today, in the wake of the Covid-19 pandemic, the growth in central bank balance sheets is even larger. As a result, many investors have turned to gold in order to hedge themselves against currency devaluation and preserve their purchasing power over time. Whereas central banks can increase fiat currency at will, new gold can only be created from mining activity, meaning that the precious metal cannot be debased or manipulated in the same way that currencies such as the US Dollar, the Euro and the Japanese Yen can be.

Figure 1 below shows that gold rose in line with the Federal Reserve (Fed) and the European Central Bank (ECB) balance sheets until 2012, when the ECB began deflating its balance sheet. The fact that the Fed's balance sheet continued to grow did not arrest gold's decline, as inflation (a key driver of the gold price) failed to materialise. The failure of inflation to rise as a result of the balance sheet growth from these central banks indicates that it is not central bank activity on its own that impacts gold price movements. The purpose of the central bank balance sheet expansion is to fuel monetary growth. We have seen historically, with a lag, that inflation tends to rise when monetary growth accelerates. Figure 2 highlights that this lag has been approximately three years. In periods of monetary largess like in the 1970s and early 1980s we witnessed elevated levels of inflation.

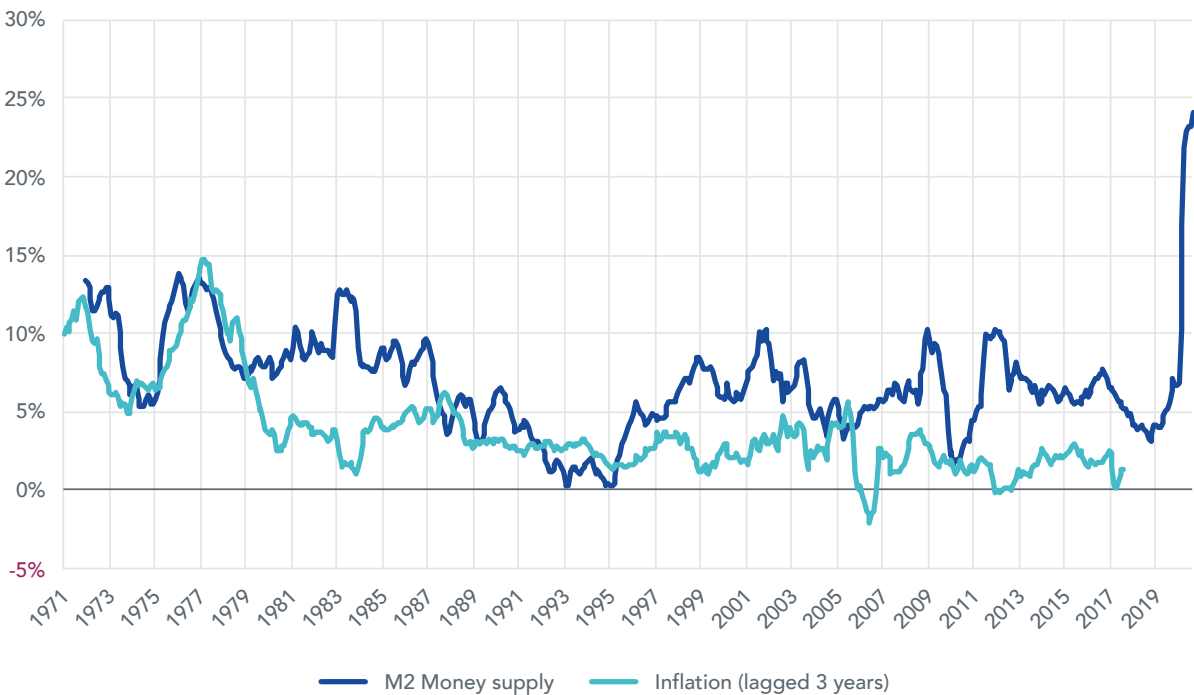
³ Fiat refers to currency that a government has declared to be legal tender, but it is not backed by a physical commodity.

FIGURE 1: GOLD AND CENTRAL BANK BALANCE SHEETS



Source: Bloomberg, WisdomTree. From January 1999 to November 2020. **Historical performance is not an indication of future performance and any investments may go down in value.**

FIGURE 2: US M2 MONEY SUPPLY AND INFLATION



Source: Bloomberg, WisdomTree. January 1971 to November 2020. **Historical performance is not an indication of future performance and any investments may go down in value.**

SAFE-HAVEN STATUS

Gold is also viewed as a 'safe-haven' asset, meaning that during periods of economic uncertainty or heightened geopolitical risk, investors have historically turned to the precious metal for protection, pushing its price up. As such, gold can act like a form of portfolio insurance and help provide downside protection during market turmoil. Our analysis shows that when the Geopolitical Risk (GPR Index) has risen 2 standard deviations above its historic average (indicating heightened geopolitical tension), gold has risen 6.6% on average, while the S&P 500 Equity Index has fallen 11.2% in those months⁴. Figure 3 shows how gold has performed after a range of key financial and geopolitical events.

FIGURE 3: GOLD'S PERFORMANCE AFTER FINANCIAL AND GEOPOLITICAL EVENTS				
	Event date	Gold Price Change 1 year forward	World Equities Price Change 1 year forward	Relative gold outperformance
Greece government deficit announcement	20/10/2009	26.5%	4.4%	22.1%
Global financial crisis	15/09/2008	31.6%	-12.7%	44.3%
9/11 Terrorist Attack	11/09/2001	16.9%	-15.1%	32.0%
Dotcom bubble	11/03/2000	-6.0%	-17.5%	11.5%
Desert Storm (First Gulf War)	02/08/1990	-3.5%	-2.9%	-0.5%
Junk bond crash	13/10/1989	6.9%	-16.0%	22.9%
Black Monday	19/10/1987	-11.6%	-0.7%	-10.8%
Nixon's Resignation	09/08/1974	14.9%	4.4%	10.5%
Yom Kippur War	06/10/1973	47.4%	-42.0%	89.4%
	Average	13.7%	-10.9%	24.6%

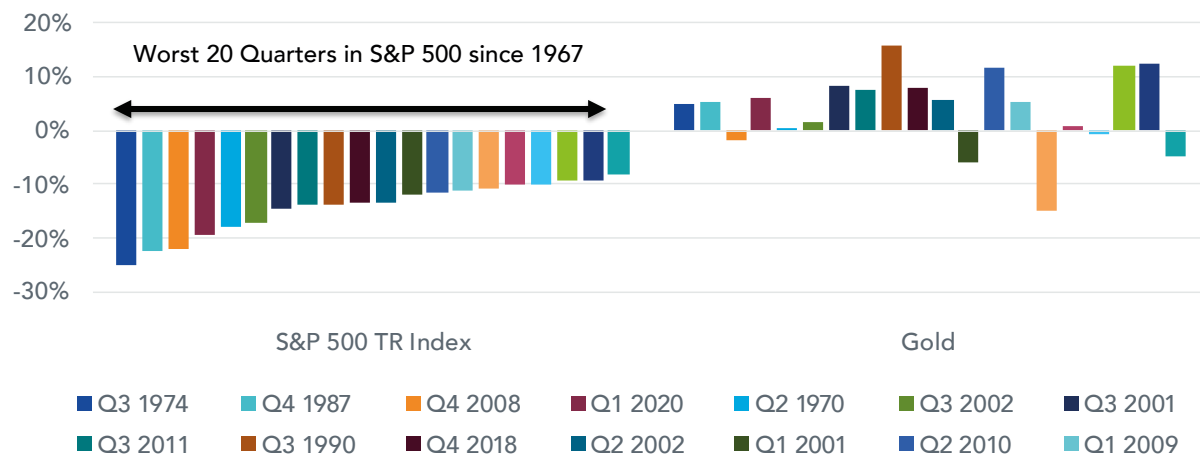
Source: Bloomberg, WisdomTree. January 1971 to November 2020. Gold is based on Bloomberg spot prices and Equities are based on the S&P 500 Index. **Historical performance is not an indication of future performance and any investments may go down in value.**

The shocks that send equity prices lower can often trigger a rise in the gold price, as investors rush to buy into the safe-haven aspect of the metal. For example, during the Global Financial Crisis, the price of gold rose to its highest level in 30 years while stock markets plummeted. Several months after the Covid-19 pandemic started, gold reached a new high surpassing US \$2000/oz for the first time. As such, gold is often considered a 'defensive' asset, and is typically used by investors as a hedge against financial system risk, extreme events and market turbulence.

⁴ Based on annual growth data from January 1986 to September 2020. Gold based on spot prices from Bloomberg, S&P 500 data from Bloomberg and Geopolitical Risk (GPR Index) from <https://www.matteoiacoviello.com/gpr.htm>

If we look at the worst 20 quarters of equity performance since 1968, gold has outperformed equities in 19 of them. Moreover, gold has had a positive return in 15 of those quarters. In fact, on average, gold has outperformed equities by 18% in those 20 quarters.

FIGURE 4: GOLD RETURNED POSITIVE PERFORMANCE IN 15 OF THE 20 WORST QUARTERS FOR S&P 500



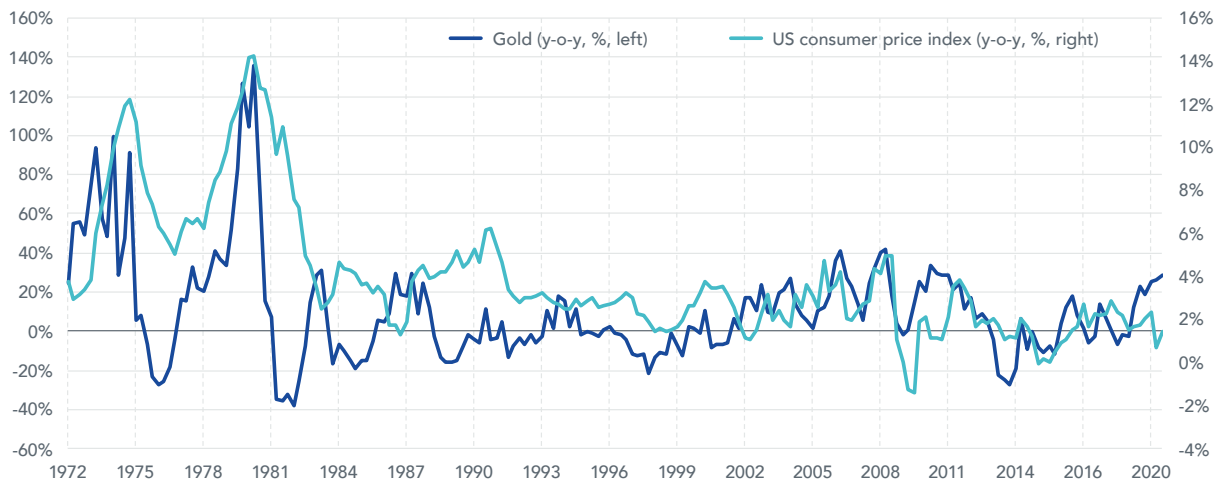
	S&P 500 TR Index	Gold	Difference		S&P 500 TR Index	Gold	Difference
Q3 1974	-25.16%	4.85%	30.0%	Q2 2002	-13.4%	5.7%	19.1%
Q4 1987	-22.53%	5.35%	27.9%	Q1 2001	-11.9%	-6.1%	5.8%
Q4 2008	-21.94%	-1.67%	20.3%	Q2 2010	-11.4%	11.5%	22.9%
Q1 2020	-19.60%	6.22%	25.8%	Q1 2009	-11.0%	5.4%	16.4%
Q2 1970	-18.03%	0.59%	18.6%	Q3 1975	-11.0%	-15.0%	-4.1%
Q3 2002	-17.28%	1.63%	18.9%	Q3 1981	-10.2%	0.6%	10.9%
Q3 2001	-14.68%	8.31%	23.0%	Q3 1998	-9.9%	-0.8%	9.1%
Q3 2011	-13.87%	7.61%	21.5%	Q1 2008	-9.4%	12.0%	21.4%
Q3 1990	-13.76%	15.96%	29.7%	Q4 1973	-9.2%	12.3%	21.4%
Q4 2018	-13.52%	7.73%	21.3%	Q3 2008	-8.4%	-4.9%	3.5%

Source: WisdomTree, Bloomberg. In USD. From December 1967 to October 2020 using quarterly data. Gold is proxied by the LBMA Gold Price PM Index and S&P 500 is proxied by the S&P 500 Gross Total Return Index. **Historical performance is not an indication of future performance and any investments may go down in value.**

INFLATION HEDGE

As we alluded to earlier, gold tends to rise with inflation. Sometimes, inflation is generated through a monetary impulse in reaction to a negative economic shock. Other times inflation is just created through strong demand for goods and services that occurs in a period of economic strength. Thus, gold is not just “doomsday asset”: in times of economic strength when inflation is generated, gold can do well. Therefore, gold does not have to be a drag on a portfolio in the “good times”. Introducing gold into a portfolio can help immensely during “bad times” but doesn’t have to be costly in “good times”. When inflation is high and the purchasing power of money is being eroded, investors tend to seek out ‘hard assets’ such as gold for protection, as these kinds of assets are considered to have intrinsic value due to their finite supply. As such, gold prices often rise when inflation is rising, as shown in Figure 5.

FIGURE 5: GOLD PRICE vs. US INFLATION



Source: Bloomberg, WisdomTree. January 1971 to November 2020. Gold is based on Bloomberg spot prices and inflation based on US consumer price index. **Historical performance is not an indication of future performance and any investments may go down in value.**

PORTFOLIO DIVERSIFICATION

Another key attraction of gold from an investment perspective is that the asset has a low correlation to other asset classes such as equities, fixed income and property. As such, it can provide diversification benefits, and potentially improve the risk-return characteristics of investor portfolios. Figure 6 shows how its returns tend to differ from those of other asset classes. Note that in 2008, when equities and real estate fell significantly during the Global Financial Crisis, gold produced a positive return.

FIGURE 6: ASSET CLASS PERFORMANCE FROM 2007 TO 2018

		Year													
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 YTD	12 Yrs
Performance Ranking	1	Gold 5.1%	Real Estate 38.3%	Gold 29.4%	Gold 10.1%	Real Estate 28.7%	Equities 20.3%	Real Estate 15.9%	Cash 0.2%	Gold 8.0%	Equities 21.6%	Cash 1.7%	Equities 24.0%	Gold 23.4%	Gold 6.2%
	2	Cash 2.1%	Equities 31.5%	Real Estate 20.4%	Bonds 4.5%	Equities 13.4%	Real Estate 4.4%	Bonds 5.6%	Real Estate 0.1%	Equities 5.6%	Gold 13.5%	Gold -1.6%	Real Estate 23.1%	Bonds 6.3%	Real Estate 5.8%
	3	Bonds -1.9%	Gold 25.5%	Equities 10.4%	Cash 0.2%	Bonds 13.4%	Cash 0.2%	Equities 2.1%	Bonds -2.8%	Real Estate 5.0%	Real Estate 11.4%	Bonds -2.4%	Gold 18.8%	Cash 0.4%	Bonds 5.6%
	4	Equities -43.5%	Bonds 13.5%	Bonds 4.9%	Real Estate -5.8%	Gold 7.1%	Bonds -4.0%	Cash 0.2%	Equities -4.3%	Bonds 3.6%	Bonds 10.3%	Real Estate -4.7%	Bonds 13.6%	Equities -2.5%	Equities 3.4%
	5	Real Estate -47.7%	Cash 0.5%	Cash 0.2%	Equities -9.4%	Cash 0.3%	Gold -28.1%	Gold -1.4%	Gold -10.6%	Cash 0.5%	Cash 0.9%	Equities -11.2%	Cash 1.7%	Real Estate -21.8%	Cash 0.9%

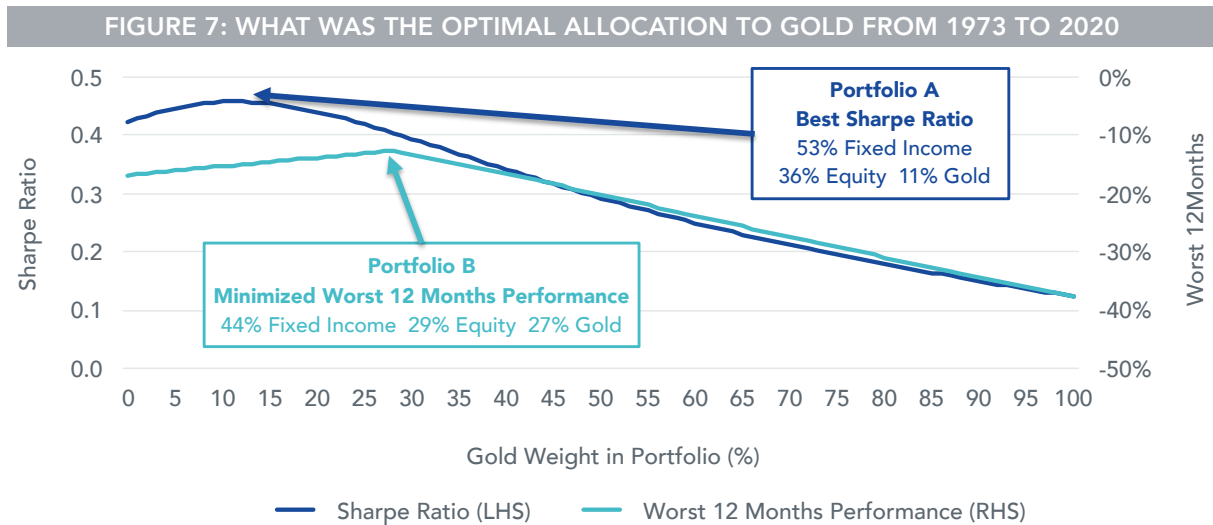
Source: WisdomTree, Bloomberg. Data until October 31, 2020; All returns are in USD; YTD returns are from 31 Dec 19 to 31 Oct 20; 12 Yrs returns are annualised from 31 Dec 07 to 31 Dec 19. Data: **Equity** – MSCI World Index, **Bond** – Bloomberg Barclays Agg Sovereign Total Return Index Unhedged, **Real Estate** – FTSE EPRA/NAREIT Developed Total Return Index, Cash – ICE LIBOR USD 3-month Index. **Historical performance is not an indication of future performance and any investments may go down in value.**

THE STRATEGIC CASE FOR GOLD IN NUMBERS

Geopolitical or financial crises are hard to predict. The coronavirus-driven performance that has helped gold to its highest level ever in August 2020⁵ could not have been predicted. This means that it is hard to be invested in gold during crisis without being invested in gold on a longer-term basis.

In order to highlight the advantages and drawbacks of a strategic asset allocation to gold, we consider in Figure 7, a hypothetical 60/40 fixed income/equity portfolio (“the 60/40 Portfolio”). Our objective is to monitor the change in Sharpe Ratio, i.e. the average return earned in excess of the risk-free rate per unit of volatility, as well as the change in the worst 12 months performance, i.e. the performance of the portfolio over the worst 12 month period. As a starting point we invest 60% in fixed income (US Treasuries) and 40% in equities (Global Developed Equities). That can be read in the chart at gold = 0 on the horizontal axis, where the long-term Sharpe Ratio (from January 1973 to December 2019) is 0.42 and the performance of the worst 12 months is -17%. We then studied the effect of adding gold to the portfolio on the long-term Sharpe ratio and on the worst 12 months performance. When gold is added to the portfolio, equities and bonds are reduced in a manner that leaves the ratio of bonds to equities 60:40.

⁵ As of 06 August 2020, source Bloomberg spot price.



	60/40 Portfolio	Portfolio A	Portfolio B
Return	7.6%	7.8%	8.0%
Vol	6.7%	6.7%	7.9%
Sharpe Ratio	42.3%	45.8%	41.0%
Max Drawdown	-24.9%	-27.1%	-30.1%
Worst 12 Month	-16.8%	-15.1%	-12.8%

Source: WisdomTree, Bloomberg. Period January 1973 to October 2020. Calculations are based on monthly returns in USD. The portfolio is rebalanced semi-annually. Equities are proxied by the MSCI World Gross Total Return Index and Fixed Income is proxied by the Bloomberg Barclays US Treasury Total Return Index. **You cannot invest directly in an index. Above numbers include backtested data. Historical performance is not an indication of future performance and any investments may go down in value.**

In Figure 7, we observe with the dark blue line that adding gold benefits the Sharpe ratio (by improving the return of the portfolio) up to an 11% allocation to gold (The "Portfolio A"). The Sharpe ratio rises from 0.42 to 0.46. Above 11% gold, the Sharpe ratio starts to decrease. That acknowledges that gold is not in of its own a low-volatility asset. It just behaves differently to other assets and hence complements a portfolio. Looking at the worst 12-month performance (light blue line) for each portfolio, it is clear that adding gold significantly reduces the downside risk of the portfolio. Adding 10% gold to the conservative portfolio reduces the worst 12 months performance from -17% to -15%. Adding 27% gold (The "Portfolio B") can cushion the bad times further, with the worst 12 months performance narrowing to -13%.

Coming back to gold as a hedge, we mentioned earlier that gold tends to cushion equity losses in financial crises or geopolitical shocks but that such tactical use is very tricky because of the uncertainty around the timing of such events. Hypothetical Portfolio A and Portfolio B illustrate very clearly that a strategic investment in gold did not in fact create performance drag in the portfolio. On the contrary, it even improved return and risk metrics. It means that over the last 45 years, investors could have held on their hedge (in this case gold) without having to pay any premium for that hedge and in fact would have benefitted financially from that hedge over the long term. For example, in 2008, Portfolio A would have lost 7.9% compared to 9.2% for the 60/40 Portfolio highlighting the benefits of gold as downside protection. But astoundingly in 2009, Portfolio A also outperformed the 60/40 Portfolio 11.1% to 9.6% i.e. even in an early recovery/rebound year, gold did not create a drag on the portfolio.

Such impact on a portfolio can be explained by the diversifying behaviour of gold. In figure 8, looking at long term correlations, we observe that gold is uncorrelated to equities (through MSCI World TR Index here) but it is also very uncorrelated from fixed income (through US Treasuries). These correlations explain quite clearly why there are numerous advantages to adding gold strategically to a portfolio, trying to leverage the uncorrelated behaviour of gold as an asset.

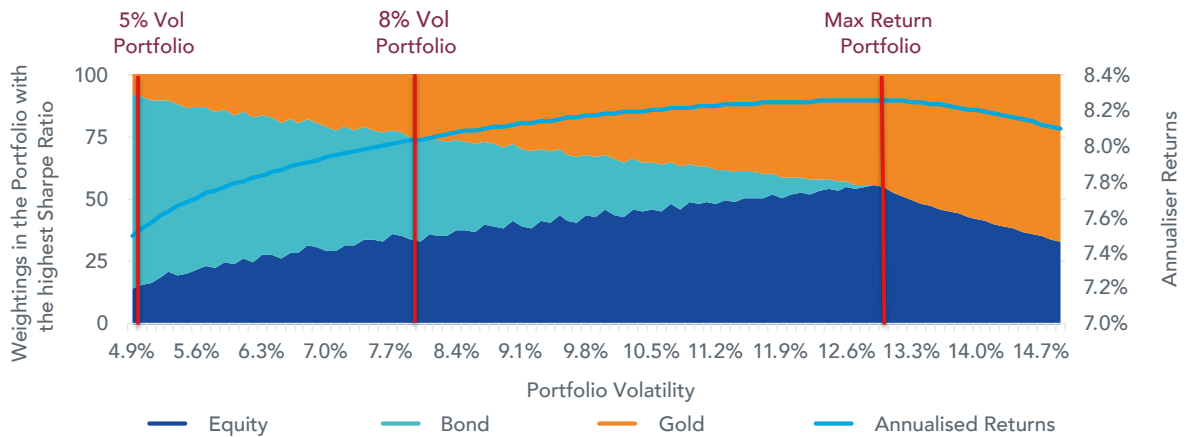
FIGURE 8: CORRELATIONS OF RETURNS FROM 1973 TO 2020

	MSCI World TR Index	Bloomberg Barclays US Treasury TR Index	Gold
MSCI World TR Index	100.0%	2.1%	11.8%
Bloomberg Barclays US Treasury TR Index		100.0%	5.5%
Gold			100.0%

Source: WisdomTree, Bloomberg. Period January 1973 to October 2020. Calculations are based on monthly returns in USD. Equities are proxied by the MSCI World Gross Total Return Index and Fixed Income is proxied by the Bloomberg Barclays US Treasury Total Return Index. **You cannot invest directly in an index. Above numbers include backtested data. Historical performance is not an indication of future performance and any investments may go down in value.**

Continuing to look at the long-term impact of strategic investment in gold, we look for portfolios with the highest historical returns for each given level of volatility i.e. all the efficient portfolios. In Figure 9 we observe that gold is held strategically by all those efficient portfolios. What that means is that, for any level of volatility, the portfolios with no gold allocation would have underperformed a portfolio with gold. Efficient portfolios with a volatility of around 5% held around 5% gold. For example, the "5% Vol Portfolio", i.e. the portfolio with 5% volatility that performed the best over the period had an 8% investment in Gold (with 14% Equity and 78% Fixed Income). Efficient Portfolios with higher volatility invested in an even higher proportion of gold. The 8% Vol Portfolio, for example, would have held 20% of Gold. In fact, in hindsight, the portfolio that would have delivered the highest returns over the 45 years (the "Max Return Portfolio") is composed of 63% equities and 37% gold.

FIGURE 9: ASSET ALLOCATION OF THE PORTFOLIOS ON THE EFFICIENT FRONTIER FOR THE PERIOD 1973 TO 2020



	5% Vol Portfolio	8% Vol Portfolio	Max Return Portfolio
Return	7.5%	8.0%	8.3%
Vol	5.0%	8.0%	13.0%

Source: WisdomTree, Bloomberg. Period January 1973 to October 2020. Calculations are based on monthly returns in USD. The portfolio is rebalanced semi-annually. Equities are proxied by the MSCI World Gross Total Return Index and Fixed Income is proxied by the Bloomberg Barclays US Treasury Total Return Index. **You cannot invest directly in an index. Above numbers include backtested data. Historical performance is not an indication of future performance and any investments may go down in value.**

Figures 7, 8 and 9 really highlight the strategic case for holding gold on a long-term basis in a portfolio. At the end of the day, gold is a strongly diversifying asset which can perform well in both “bad” times and “good” times. Historically, its addition clearly translates into a better risk return profile for a portfolio while providing some defensiveness in financial and geopolitical crisis.

WHAT ARE THE DRAWBACKS TO INVESTING IN GOLD?

While gold can offer investors a number of benefits, there are several downsides to investing in the precious metal, as there are with any asset class. We examine some of the drawbacks to investing in gold below.

No cash flows

A well-documented downside of gold is that the asset does not generate any cash flows. Therefore, unlike other asset classes such as equities, bonds and property, it does not pay investors any income. This means that for investors to profit from gold, its price must increase. However, in an age when other defensive assets like government bonds are providing negative yield-to-maturities, gold's zero yield is looking very attractive.

Hard to value

Gold's lack of cash flows also means that it is hard to place an intrinsic value on the price of the precious metal. Whereas other assets can be valued based on the present value of all future cash flows, gold cannot be valued this way. While gold lacks traditional valuation techniques, WisdomTree has developed models to characterise its behaviour and provide guidance on how gold will progress in different macroeconomic environments.

Price volatility and negative returns

Gold can be volatile. It makes a great diversifier to a portfolio because it behaves so differently to equities and bonds, not because it has a low volatility. In some years the metal has posted close to 30% gains (2010), while in other years it has posted close to 30% losses (2013).

As always, investors should ensure that they understand, and are comfortable with, the risks of an asset before investing.

WHAT INFLUENCES GOLD PRICES?

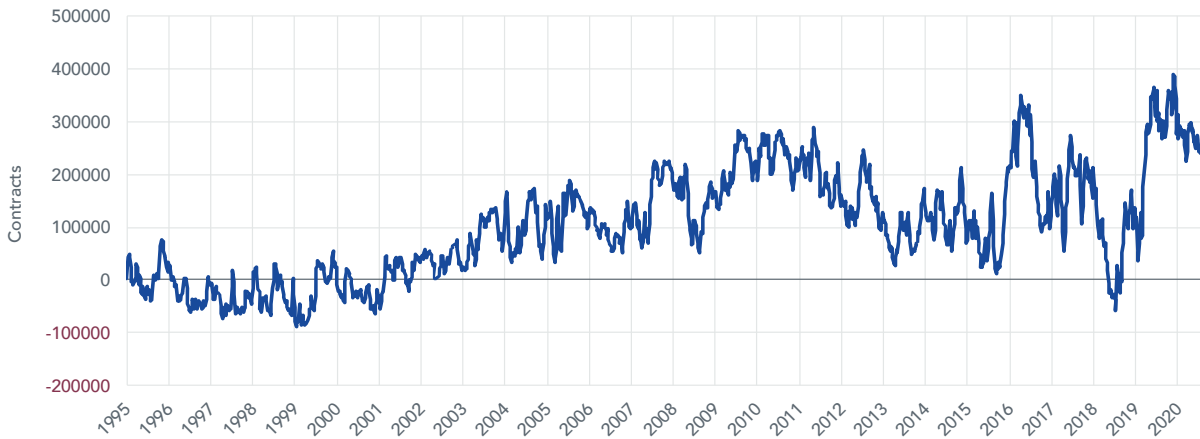
Gold is a unique asset and its price can be affected by a number of factors, including investor sentiment, monetary policy, inflation and central bank demand. Below, we explore some of the factors that influence gold prices in more detail. For a detailed description on how WisdomTree models gold prices and a look at our gold framework please see [Gold: how we value the precious metal](#).

Investor sentiment

One of the main drivers of gold prices is investor sentiment. Because gold is viewed as a safe-haven asset, it often performs well during periods of uncertainty. If investors have concerns over systemic risks, political turmoil, or stock market volatility, they will often turn to gold, and this can push its price up.

One way of measuring investor sentiment towards gold is to look at speculative positioning in gold futures. We saw a spike in this measure around the Global Financial Crisis and resulting sovereign debt crisis, and then another spike around the time the UK voted to leave the European Union. We also saw a spike in this measure around the time the Covid-19 pandemic was unfolding.

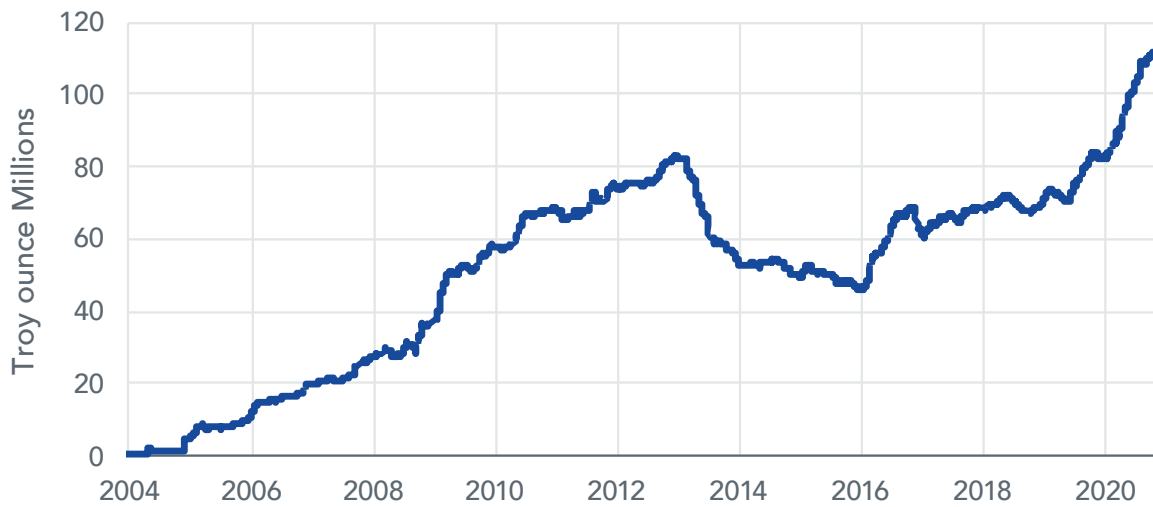
FIGURE 10: NET SPECULATIVE POSITIONING IN GOLD FUTURES



Source: Bloomberg, WisdomTree. January 1995 to November 2020. **Historical performance is not an indication of future performance and any investments may go down in value.**

However, the fact that the positioning in futures fell when gold was marching to its all-time high in August 2020 indicates that futures markets alone do not reflect investor sentiment towards gold. Increasingly flows into gold exchange traded products are a useful gauge (figure 9):

FIGURE 11: GOLD HELD IN EXCHANGE-TRADED PRODUCTS



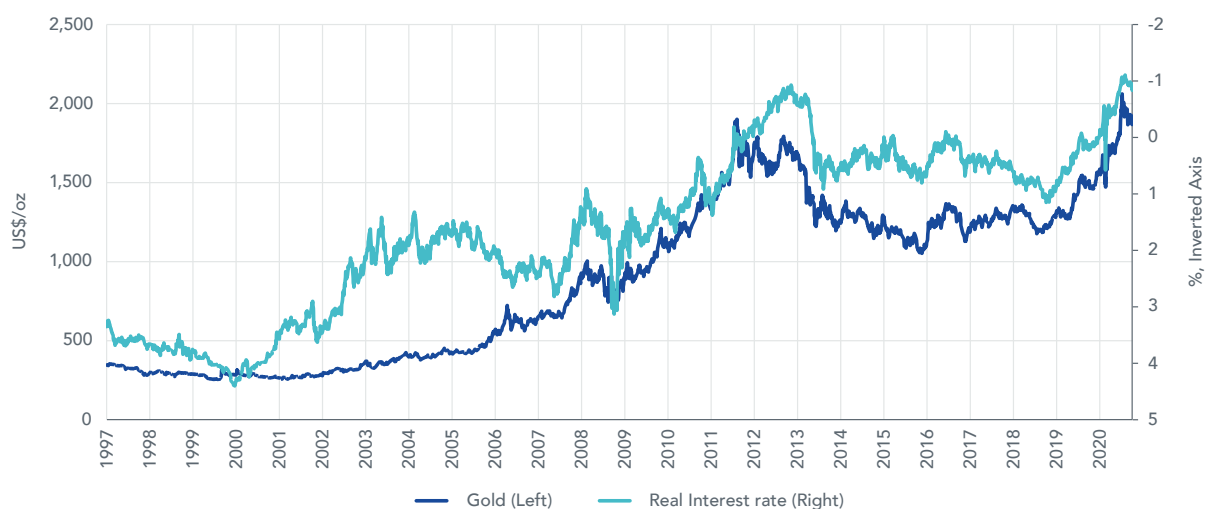
Source: Bloomberg, WisdomTree. January 2004 to November 2020. **Historical performance is not an indication of future performance and any investments may go down in value.**

Monetary policy and interest rates

Many people consider gold to be a monetary asset, rather than a commodity, as for several millennia it has played a role as a form of currency. Therefore, it is unsurprising that gold is highly influenced by monetary factors and this features heavily in our model framework.

All else being equal, the gold price and interest rates tend to have an inverse relationship, meaning that the price of gold often rises when interest rates are falling, and falls in price when interest rates are rising. The chart below shows the relationship between gold and real interest rates (measured by the yield on 10-year US inflation protected Treasuries). By using real rates we proxy for two of the measures in WisdomTree's framework (nominal interest rates and inflation).

FIGURE 12: GOLD vs. REAL RATES (TREASURY INFLATION-PROTECTED SECURITIES YIELD)



Source: Bloomberg, WisdomTree. January 1997 to November 2020. **Historical performance is not an indication of future performance and any investments may go down in value.**

This inverse relationship exists for a number of reasons.

First, many investors keep an eye on the Trade Weighted Dollar Index – which measures the purchasing power of the US Dollar – as the strength of the US Dollar has a significant impact on financial markets worldwide. If the US Dollar is being debased by loose monetary policy (lower interest rates), the price of gold tends to move higher as investors turn to the precious metal as an alternative currency.

Second, as interest rates fall, the 'opportunity cost' of forgoing interest-bearing assets is lower, and the idea of owning gold can become more appealing. Similarly, when interest rates rise and higher yields are obtainable from interest-bearing assets, gold loses some of its appeal as it offers no yield.

Third, periods of low real interest rates can be associated with systemic financial failures. Therefore, the inverse relationship between gold prices and interest rates may be related to gold's safe-haven status and the protection it can offer investors.

It's worth noting that economic data, such as GDP growth, manufacturing data, jobs reports and wage data can also influence gold prices in the short term, as this data tends to play a role in the Federal Reserve's monetary policy decisions.

Inflation

Inflation can also impact the price of gold. Gold has historically been a hedge against rising prices, and therefore, it tends to respond positively to CPI inflation. On the other hand, in a deflationary environment, gold sometimes declines in value.

"Significant increases in inflation will ultimately increase the price of gold. Investment in gold now is insurance."

– Dr Alan Greenspan, Chairman of the US Federal Reserve (1987 – 2006)

Central bank demand

Central bank demand is another factor that can influence the dynamics of the gold market and in recent years, demand from central banks has increased. For example, according to the World Gold Council⁶, central banks across the world sold 7,853 tonnes of gold between 1987 and 2009, yet between 2010 and 2019 central banks purchased 5,037 tonnes of gold, as attitudes towards the precious metal changed after the Global Financial Crisis. One source of increased demand has been emerging market central banks, who have bought gold to diversify their foreign-exchange reserves.

Jewellery demand

Finally, demand for gold jewellery is another factor that can influence gold prices. According to the World Gold Council, gold jewellery represents the largest source of demand for gold, at around 50% of total demand. In volume terms, China and India are the largest markets for gold, with demand in these countries driven by a cultural affinity for the precious metal, as well as economic growth and rising wealth. As with any commodity, increased demand with a constrained supply can lead to higher prices of that commodity.

HOW TO INVEST IN GOLD

There are a number of ways to add gold exposure to a portfolio and each approach has its advantages and disadvantages. Below, we look at three of the most popular ways to invest in gold.

Physical gold

One way to invest in gold is to purchase physical gold itself from a gold dealer in the form of gold bullion bars or gold coins. The advantage of this approach is that investors can take physical possession of their gold and store it outside the financial system, which reduces third-party risk. The disadvantage of this approach, however, is that gold bullion is often sold at a premium to the spot price, meaning that there are high transaction costs involved in acquiring physical gold.

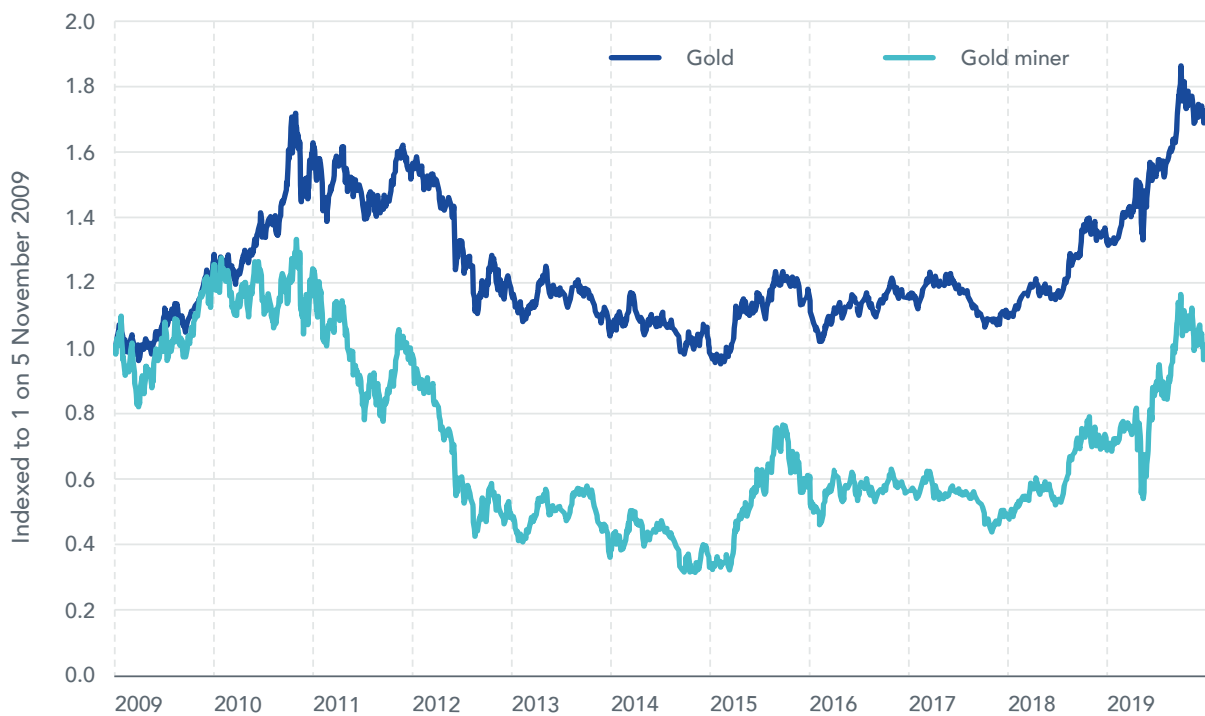
Furthermore, physical gold needs to be stored securely and insured, and the costs of storing and insuring gold can be significant.

⁶ <https://www.gold.org/about-gold/gold-demand/sectors-of-demand>

Shares in gold mining companies

An alternative approach to investing in gold is to purchase shares in gold mining companies. One advantage of this approach is that when the price of gold is rising, gold mining stocks can often rise faster than the price of gold, as they are essentially a leveraged play on the gold price. However, the downside to this approach is that gold mining stocks can be quite volatile at times and when the gold price is falling, gold mining stocks can decline more than the price of gold. Mining companies are also exposed to a number of other factors that can affect their share prices, therefore, the returns from gold mining stocks may not reflect the movements in the price of gold, as shown in Figure 9.

FIGURE 13: GOLD vs. GOLD MINERS



	Gold	Gold miners
Standard Deviation	16%	31%
Average Return	5%	0%

Source: Bloomberg, WisdomTree. November 2009 to November 2020. **Historical performance is not an indication of future performance and any investments may go down in value.** Gold is spot price and gold miners is the DAXglobal Gold Miners Equity Index.

Gold Exchange Traded Products (ETPs)

The third way to invest in gold is through gold exchange traded products. These are financial instruments that are designed to track the price of gold and provide investors with exposure to the price performance of spot gold bullion. Gold ETPs offer a convenient way to invest in gold because they are listed on stock exchanges and can therefore be bought and sold just like regular stocks. The key advantage of gold ETPs is that they eliminate many of the issues associated with buying gold bullion, such as high transaction and storage costs. Gold ETPs have proven to be popular with investors as they offer a cost-efficient way to gain exposure to gold, without having to take physical delivery of the metal itself. As shown in figure 9, there are more than 10 million troy ounces of gold held in physically-backed gold ETPs globally.

PHYSICALLY-BACKED GOLD ETPS vs. SYNTHETIC GOLD ETPS

Those interested in investing in gold through an ETP should be aware that gold ETPs can take two distinct forms – physically-backed ETPs and synthetic ETPs. Here is a brief look at the differences between the two types of exchange traded products.

Physically-backed gold ETPs

The key feature of physically-backed gold ETPs is that these ETPs hold a certain quantity of gold bullion in a secure vault on behalf of investors. The advantage of this type of ETP is that investors can be assured that each ETP is backed by an entitlement to high-quality, securely stored physical metal. In terms of return, physically-backed ETPs generally attempt to provide investors with a return equivalent to the movements in the gold spot price, less management and storage fees.

Synthetic gold ETPs

Synthetic gold ETPs are different to physically-backed ETPs in that they do not own any physical gold. Instead, they invest in gold synthetically via futures, options and swap contracts. The advantage of synthetic gold ETPs is that they can sometimes be cheaper than physically-backed gold ETPs, as they don't have to pay the costs associated with storing physical gold. The downside to synthetic ETPs is that they are more complex than physically-backed ETPs and carry an extra level of risk due to their financial engineering and use of derivatives. Returns can also differ from spot price gold movements due to the way these ETPs are constructed. These risks have been highlighted in the Covid-19 pandemic, where we have seen the prices of gold in derivative instruments such as futures and options differ widely from the spot market price.

WISDOMTREE'S GOLD ETP OFFERING

At WisdomTree, we offer a broad range of gold ETPs that includes physically-backed, synthetic, hedged, short, and leveraged variants.

Gold ETPs – Physically backed

Securities are backed by physical bullion, and in the case of ETF Securities' physical gold ETCs the bullion is held by the custodian within a secure vault and inspected twice a year by an independent entity.

Product	Key Features	Currency hedged	Total Expense Ratio
WisdomTree Core Physical Gold	Backed by physical allocated gold held by HSBC Bank plc (the custodian) in London. Investors have the option to redeem securities directly for physical gold via Metalor.	No	0.15%
WisdomTree Physical Swiss Gold	Backed by physical allocated gold held by JPMorgan Bank, N.A. (the custodian) in Zurich, Switzerland. Investors have the option to redeem securities directly for physical gold via Metalor. Structured in a way that investors with unrestricted tax liability in Germany who bought the product on or after 28/12/2017 should benefit from Withholding Tax exemption (Kapitalertragsteuer) providing it has been held for at least 12 months from the date of purchase.	No	0.15%
WisdomTree Physical Gold	Backed by physical allocated gold held by HSBC Bank plc (the custodian) in London.	No	0.39%
WisdomTree EUR Daily Hedged Physical Gold*	Backed by physical allocated gold held by JP Morgan Chase Bank, N.A. (the custodian) in London. Enables EUR investors to gain exposure to the gold spot price with a daily currency hedge against movements in the EUR/USD exchange rate.	Yes	0.25%
WisdomTree GBP Daily Hedged Physical Gold*	Backed by physical allocated gold held by JP Morgan Chase Bank, N.A. (the custodian) in London. Enables GBP investors to gain exposure to the gold spot price with a daily currency hedge against movements in the GBP/USD exchange rate.	Yes	0.25%
Gold Bullion Securities	Backed by physical allocated gold held by HSBC Bank plc (the custodian) in London. Investors have the option to redeem securities directly for physical gold, in the form of unallocated gold. Investors may also request the Issuer deliver bullion in respect of redemption of their securities to the Royal Mint and request that the Royal Mint provide gold coins (Britannias or Sovereigns) directly to the investor.	No	0.40%

GOLD ETPS – COLLATERALISED

Synthetic gold ETPs do not hold the underlying assets (gold) that the ETPs are designed to track. Instead the issuer enters into a swap agreement with a counterparty that contracts to provide the return of the underlying gold.

Product	Description	Currency hedged	Total Expense Ratio
Delta-one range			
WisdomTree Gold	Designed to track the Bloomberg Gold Subindex and provide a collateral yield.	No	0.49%
WisdomTree GBP Daily Hedged Gold*	Designed to track Bloomberg Gold Subindex Pound Sterling Hedged Daily and provide a collateral yield.	Yes	0.49%
WisdomTree EUR Daily Hedged Gold*	Designed to track Bloomberg Gold Subindex Euro Hedged Daily and provide a collateral yield.	Yes	0.49%
Short and leveraged range			
WisdomTree Gold 1x Daily Short	Designed to enable investors to gain a 'short' exposure to a total return investment in gold futures contracts by tracking the Bloomberg Gold Subindex and provide a collateral yield.	No	0.98%
WisdomTree Gold 2x Daily Leveraged	Designed to enable investors to gain a 'leveraged' exposure to a total return investment in gold futures contracts by tracking the Bloomberg Gold Subindex and provide a collateral yield.	No	0.98%
WisdomTree Gold 3x Daily Leveraged	Designed to provide a total return comprised of three times the daily performance of the NASDAQ Commodity Gold ER index, plus a collateral yield.	No	0.99%
WisdomTree Gold 3x Daily Short	Designed to provide a total return comprised of three times the inverse daily performance of the NASDAQ Commodity Gold ER index, plus a collateral yield.	No	0.99%

*Currency hedged physical gold ETCs enable GBP or EUR investors to gain exposure to the gold spot price (or futures price in the case of synthetics products) with a daily currency hedge against movements in the GBP/USD or EUR/USD exchange rates. Such products may appeal to investors concerned about currency exposure, which will often be a consideration with commodity ETCs that are typically based in USD.

Product information is current as of November 2020. For more information on our full range of gold ETPs, including short and leveraged products, visit our website.

Reference

<https://www.gold.org/about-gold/gold-demand/sectors-of-demand>

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