

Stop wasting gold! A review of efficient ways to invest in gold

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When investors look to invest in gold, they have 2 main avenues, they can buy physical gold, or they can gain exposure to gold through derivatives usually futures contracts. In this blog, we aim to compare the performance and overall cost of ownership of those two investments through the two main investment vehicles used by institutional investors: physically backed exchange traded products (“ETPs”) and gold futures contracts.

Looking at the historical behaviour of both investments over that last 9 years¹ or so, we observe that:

- Investments in physically backed gold ETPs tend to deliver predictable performance in all market scenarios with typically limited costs of holding, limited transaction costs and minimal operational constraints.
- Investments in gold futures contracts tend to deliver unpredictable medium to long term performance due to unpredictable costs of holding despite very competitive transaction costs. Bimonthly rolling and margin management also create an elevated operational burden.
- Investments in physically backed gold ETPs would have historically outperformed in most cases investments in gold futures contracts for holding periods longer than one month even when considering estimated transaction costs.

How to invest in gold? Physically backed ETPs and futures contracts-based investments are the 2 main choices

Physical investment in gold can be done directly or through an investment vehicle like a physically-backed ETP. However, buying physical gold directly can be challenging with investors facing issues due to the delivery, storage, insurance of the metal or even illiquidity of the medium itself. So, for the purpose of this blog, we will focus on physically-backed ETPs that can provide pre-packaged, liquid, cost-effective physical gold exposure to investors.

Those ETPs are backed by gold bullion held in secure vaults. Each share entitles the holder of the share (the investor) to a defined amount of physical gold, and shares in the ETP can be bought or sold on exchanges just like stocks making them convenient and liquid. They, therefore, offer a cost-efficient and a secure way to participate in the Gold market without having to take physical delivery of the Gold itself.

When gaining exposure to gold through derivatives, investors can choose a multitude of investment vehicles, from directly buying futures contracts on exchange to investing in a swap-based ETP or mutual fund. Whatever the choice, the ultimate financial exposure and therefore the performance remains the same for derivative-based investments, but of course, by adding layers, costs will increase. Therefore, for the purpose of this blog, we will consider the investment with the fewer layers, i.e. direct investment in futures contracts.

Gold futures contracts are an agreement to purchase gold at an agreed price, with delivery and payment to take place at a specified point in the future. By investing in gold futures contracts, investors gain exposure to the movement of gold. However, futures contracts differ from physically backed ETPs in 4 important ways:

1. Futures contracts are not fully physically backed. An exchange does not hold enough gold to back every single futures contract issued at all times.
2. Futures contracts are unfunded i.e. investors do not need to invest the full cash amount to invest in one. Usually, the margin is between 5 and 10% of the total amount.
3. Because futures are unfunded, the performance delivered by the futures contract is the “excess return” of gold or the performance above and beyond the interest that an investor could have earned on cash.
4. Futures contracts have a maturity (physical gold and physically backed ETPs do not). So, to ensure a continuous investment, investors need to “roll” from one contract to the next on a regular basis incurring transaction costs each time.

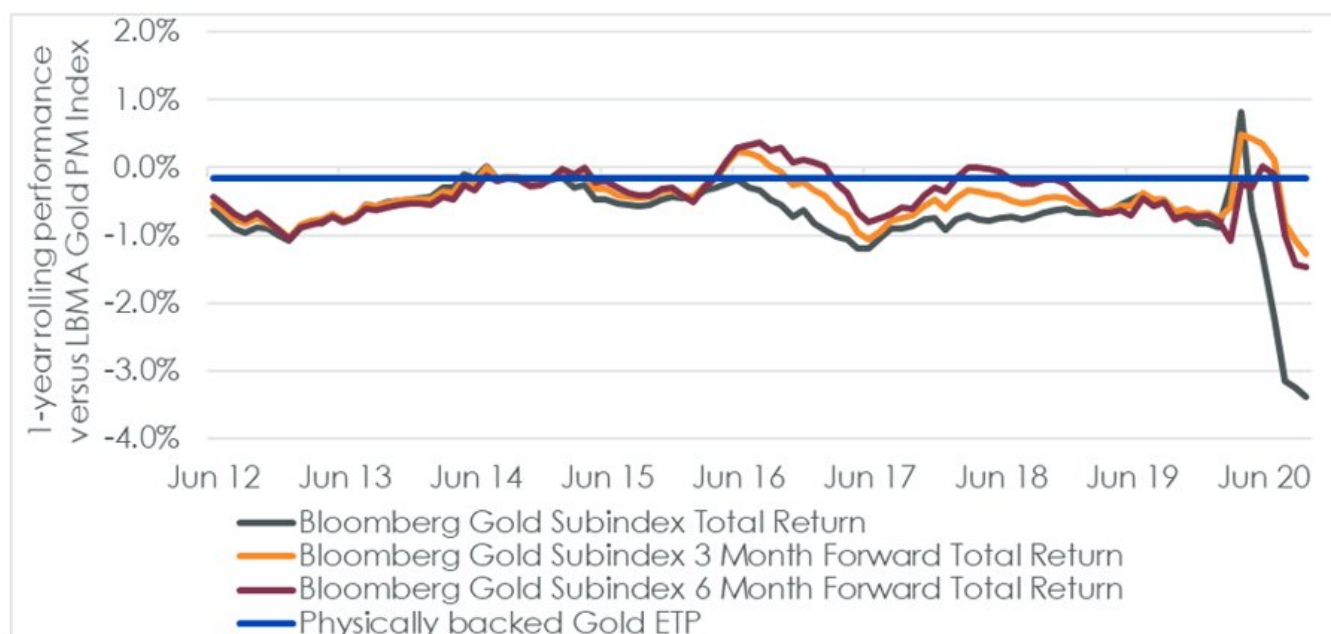
In the following, we aim to compare the efficiency of investing in gold using either physically-backed ETPs with an annual Total Expense Ratio (“TER”) of 0.15%² or a fully collateralised investment in gold using futures contracts (i.e. an investment in gold futures contracts plus the associated investment of the remaining cash in short-term US money market instruments). We will proxy the investment in futures contracts using 3 flavours of the Bloomberg Gold Subindex total return:

- The Bloomberg Gold Subindex Total Return (BCOMGCTR) itself which represents the return of gold futures contracts at the front of the curve rolled every two months plus the interest gained on cash using 3M US Treasury Bills.
- The Bloomberg Gold Subindex 3 Month Forward Total Return (BCOMGC3T) which uses gold futures contracts with maturity 3 months away from the front of the curve.
- The Bloomberg Gold Subindex 6 Month Forward Total Return (BCOMGC6T) which uses gold futures contracts with maturity 6 months away from the front of the curve.

In Figure 1, we compare the rolling 1-year returns of those 4 investments using the performance of the LBMA Gold PM Index as the benchmark. We observe that over the last 9 years, the ETP has delivered a very predictable underperformance to the benchmark of 15bps (i.e. the TER). It is clear that the cost of holding the ETP is 15bps per year, year in, year out. The performance of the 3 futures

contracts-based indices, however, is a lot harder to predict. It ranges from outperformance north of 0.8% to underperformance south of -3% on a given year.

Figure 1: Performance of 4 investments in Gold versus the LBMA Gold PM Index over rolling 1-year periods



Source: WisdomTree, Bloomberg. From 31st May 2011 to 30th November 2020. physically-backed gold ETP performance is proxied by the performance of the LBMA Gold PM Index minus 0.15% Total Expense Ratio. 0.15% is the lowest level for Total Expense Ratio currently observed in the market. Each ETP will have their own pricing and charging structure depending on their investment proposition. The Performance of the Bloomberg Gold Subindices is adjusted to consider the fact that those indices are calculated at 1.30 PM Eastern Time while the LBMA Gold PM index is calculated at 3 PM London Time.

You cannot invest in an Index. Historical performance is not an indication of future performance and any investments may go down in value.

It is worth noting that 2020 has been a particularly poor year for futures contracts-based investments. With the issues around the movement of gold between London vaults and the COMEX vaults in New York, the price of gold futures contracts on the COMEX has been extremely disrupted in Q1 and Q2, leading to a decoupling between the price of gold futures contracts and physical gold.

However, even before 2020, the Bloomberg indices had exhibited costs of holding that were high, with 72bps average underperformance for the Bloomberg Gold Subindex versus the LBMA physical Gold over a year, 46bps average underperformance for the Bloomberg Gold Subindex 3 Month Forward and 42bps average underperformance for the Bloomberg Gold Subindex 6 Month Forward. In fact, in 90% of the 1-year periods, the physically-backed gold ETP would have delivered a better performance than the Bloomberg

Commodity Gold Index. In 73% of the cases, the physically-backed gold ETP would have delivered a better performance than the Bloomberg Commodity Gold Subindex 6 Month Forward.

In conclusion, in most cases longer dated futures contracts have exhibited lower cost of holding than shorter dated futures contracts and in most cases, physically-backed ETPs have exhibited lower cost of holding than any futures contracts-based investments.

When considering holding periods longer than 1 month, physically-backed gold ETPs have historically delivered better results than futures contracts-based investment despite higher transaction costs.

On top of the cost of holding, both ETPs and fully collateralised investments in gold using futures contracts suffer from transaction costs. On average, the most liquid European gold ETPs suffer from a bid-offer cost intraday of around 3 or 4 bps on entry and exit which means that an investor would tend to pay 3 or 4 bps when buying the ETP and 3 or 4 bps when selling the ETP. This would sum up to around 7 bps trading costs on average for any investment period being 1 day or 10 years.

Gold futures contracts not only suffer from bid-ask on entry and exit but also from bid-ask on each of the regular roll that is necessary to maintain the position. Futures contracts are very liquid so the average bid-ask to buy or sell a futures contract is pretty tight around 0.5bps and the cost of rolling is around 0.25bps.

As discussed previously, historically ETPs have benefitted from better costs of holding when futures contracts-based investments have benefitted from lower transaction costs. So, when deciding which investment vehicle is the most efficient, the expected duration of the investment or the holding period will be critical.

In Figure 2 we summarized the estimated total cost of ownership (estimated cost of holding plus estimated transaction costs) in the 4 instruments over different investment periods assuming that the market conditions are similar to the pre-2020 period.

We observe that for medium to long investment holding periods (i.e. longer than a month) the physically backed ETP has historically delivered better performance because its cost of holdings is on average lower. However, for short, tactical investment periods, their lower transaction costs, helps the futures contracts-based investments and in particular the investment in longer dated gold futures contracts.

Figure 2: Estimated Total Cost of Ownership of different investment in Gold over multiple holding periods

Holding Periods		Bloomberg Gold Subindex Total Return	Bloomberg Gold Subindex 3 Month Forward Total Return	Bloomberg Gold Subindex Total Return 6M Forward	Physically Backed Gold ETP
	Cost of Holding (bps)	165	117	87	45
3 Year	Transaction Costs (bps)	$0.5+18*0.25+0.5=5.5$	$0.5+18*0.25+0.5=5.5$	$0.5+18*0.25+0.5=5.5$	$3.5+3.5=7$
	Total Cost (bps)	170	123	92	52
	Cost of Holding	60	45	37	15
1 Year	Transaction Costs	$0.5+6*0.25+0.5=2.5$	$0.5+6*0.25+0.5=2.5$	$0.5+6*0.25+0.5=2.5$	$3.5+3.5=7$
	Total Cost (bps)	62	48.0	39.9	22
	Cost of Holding	15	11	10	4
3 Months	Transaction Costs	$0.5+3*0.25+0.5=1.75$	$0.5+3*0.25+0.5=1.75$	$0.5+3*0.25+0.5=1.75$	$3.5+3.5=7$
	Total Cost (bps)	17	13	11.4	10.8
	Cost of Holding	5	4	4	1
1 Month	Transaction Costs	$0.5+1*0.25+0.5=1.25$	$0.5+1*0.25+0.5=1.25$	$0.5+1*0.25+0.5=1.25$	$3.5+3.5=7$
	Cost of Holding	7	5	5	8

Source: WisdomTree, Bloomberg. From 31st May 2011 to 30th November 2020. physically backed gold ETP performance is proxied by the performance of the LBMA Gold PM Index minus 0.15% Total Expense Ratio. 0.15% is the lowest level for Total Expense Ratio currently observed in the market. Each ETP will have their own pricing and charging structure depending on their investment proposition. The performance of the Bloomberg Gold Subindices is adjusted to consider the fact that those indices are calculated at 1.30 PM Eastern Time, while the LBMA index is calculated at 3 PM London Time.

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Having said that, even for lower holding periods, market disruptions like we have observed in the first half of 2020 would also tend to favour the ETP to the detriment of the futures contracts-based investments. Looking at the Bloomberg Gold Subindex only, the average cost of holding over 1 month in 2020 is 30bps which would mean an estimated cost of ownership of almost 31bps just for one month when the cost of holding of the physically backed ETP would not change (around 1bps). It is worth pointing out though that in disrupted markets bid-ask of both futures contracts and ETPs will widen but at a different pace.

Figure 3. ETP and Futures contracts Comparison

	Physically Backed ETP	Futures contracts
Legal Structure	Listed Debt Instrument	Listed Derivative Contract
Funding Requirement	100%	Margin of 5 to 10%
Tracking Error	Effectively zero	Depends on market condition and supply and demand dynamics in the future markets
Trading	On exchange or Over the Counter (OTC)	On exchange or Over the Counter (OTC)
Transaction Costs	Commission and bid-offer spread on entry and exit	Commission and bid-offer spread on entry and exit as well as on roll every 2 months
Holding Costs	Total Expense Ratio	Depends on market condition and supply and demand dynamics in the futures markets
Operational Constraints	Similar to equity shares	Margin monitoring and rolling of contracts 6 times a year

Source: WisdomTree. November 2020

Having reviewed the advantages and drawbacks of both physically-backed gold ETPs and fully collateralized gold futures contracts investments, we observe, on one hand, that ETPs benefit from a low cost of holding, high liquidity, contained transaction costs and low operational requirements. Futures contracts-based investments, on the other hand, do benefit from high liquidity and very low transaction costs, but the cost of holding has proven historically both high, unpredictable and volatile. Also, futures contracts suffer from significantly higher operational requirements due to the management of margins and the rolling of contracts.

1 The longest period when all data was available and it was possible to run the full analysis.

2 0.15% is the lowest level for Total Expense Ratio currently observed in the market. Each ETP will have their own pricing and charging structure depending on their investment proposition.

3 It is worth noting here that these trading costs could be lowered further by at OTC NAV convention. In an OTC NAV trade, the client enters into an agreement with a market maker to trade a specified size for end of day NAV of an ETP. This means that the market maker is obligated to deliver the ETP shares to the client at a value reflective of that ETPs fair value NAV, plus trading costs. In this case, the bid ask can be lowered to around 1 bps on entry and exit.

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