Commodity Strategist

The Fed can't print gold

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Global Commodity Research
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Gold prices have performed well in the recent period

As the ultimate store of value, gold prices have performed well during the past 15 months, posting a rally of over 10% since the Federal Reserve did a monetary policy U-turn in January 2019. Gold has also delivered a strong performance against other asset classes YTD. Of course, it has not been a straight line up, and gold did sell off hard for a brief period in March. The swing in gold prices mirrored the down and then up move in real interest rates. Now our CTA models suggest gold positioning is light, likely because of the spike in volatility and the mechanical drop in the gold Sharpe ratio. But this constraint could change as volatility keeps falling quickly across financial markets.

Now, significant monetary, fiscal easing around the world…

Due to the Covid-19 lockdowns, US GDP could go down by 30% YoY in 2Q20, the steepest drop in modern history. Other countries like Japan will likely experience a 21.8% decline in output in 2Q20, while China just reported a contraction of 6.8% in 1Q20. As central banks rush to expand their balance sheets and backstop asset values and consumer prices, a lot of risks could end up being socialized. The size of major central bank balance sheets has been stable at around 25% of GDP for the last decade or so, just like the gold price. As economic output contracts sharply, fiscal outlays surge, and central bank balance sheets double, fiat currencies could come under pressure. And investors will aim for gold. Hence, we mark-to-market our forecasts and now project an average gold price of $1,695/oz in 2020 and $2,063/oz in 2021.

…lifts our 18m gold target from $2000/oz to $3000/oz

True, a strong USD backdrop, reduced financial market volatility, and lower jewelry demand in India and China could remain headwinds for gold. But beyond traditional gold supply and demand fundamentals, financial repression is back on an extraordinary scale. Rates in the US and most G-10 economies will likely be at or below zero for a very long period of time as central banks attempt to push inflation back above their targets. Beyond real rates, variables such as nominal GDP, central bank balance sheets, or official gold reserves will remain the key determinants of gold prices, in our view. As central banks and governments double their balance sheets and fiscal deficits respectively (see Fed balance sheet likely to double this year), we have also decided to up our 18m gold target from $2,000 to $3,000/oz.

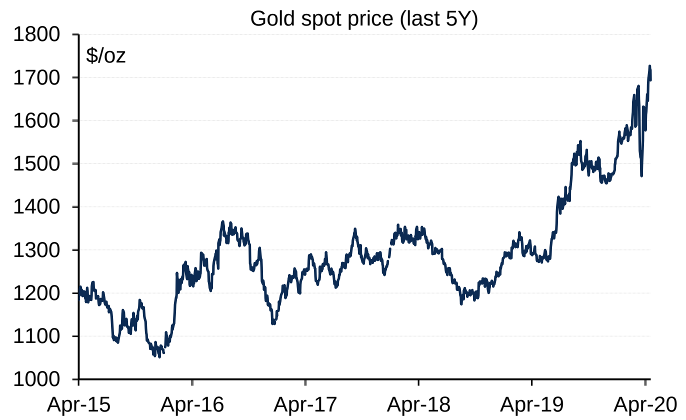
Timestamp: 20 April 2020 05:00PM EDT

The Fed can't print gold

Gold prices have performed well during the recent period…

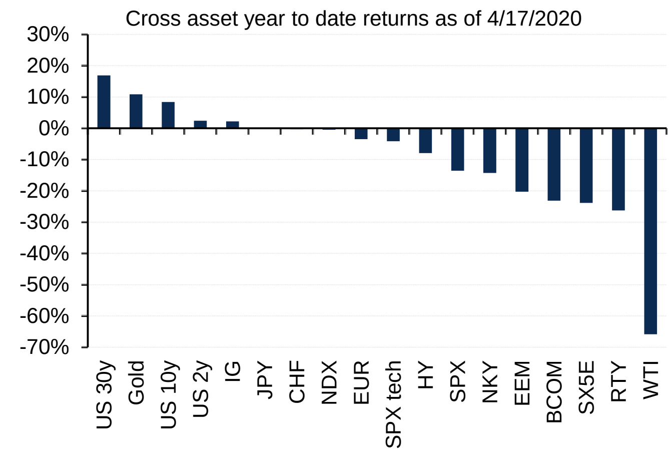
As the ultimate store of value, gold prices have performed well during the past 15 months, posting a rally of 12% since the Federal Reserve did a monetary policy U-turn in January 2019 (Chart 1). More recently, gold prices have continued to post a robust run, with returns broadly outpacing other major asset classes year-to-date (Chart 2). Only long duration bonds and high quality tech stocks have delivered comparable performance, with 30 year Treasury yields posting 16.9% and the S&P Tech Sector delivering flat returns YTD.

Chart 1: Gold prices have risen significantly over the last 5 years despite brief periods of lackluster performance



Source: BofA Global Research, Bloomberg

Chart 2: Gold has outperformed every asset class except 30y US treasuries year-to-date

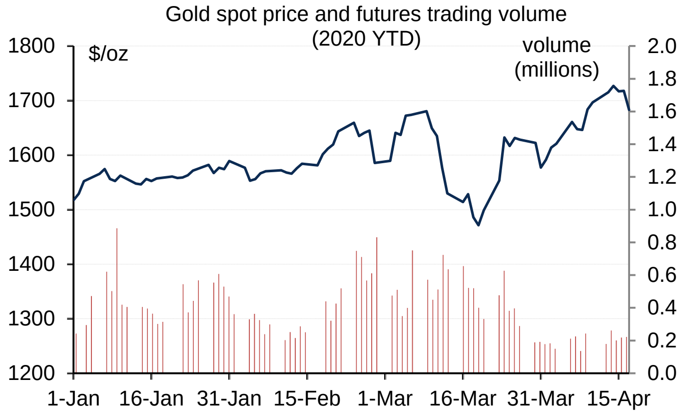


Source: BofA Global Research. Data comprises of total return indices from 1/1/2020 to 4/17/2020.

…except over a brief window where liquidation occurred

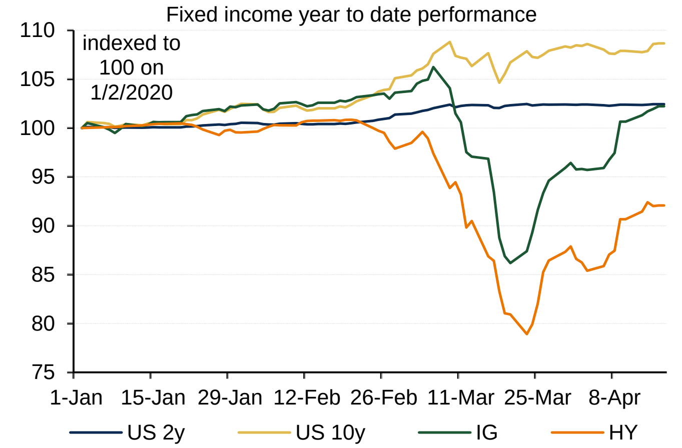
Of course, it has not been a straight line up for the yellow metal. In fact, gold prices sold off very hard with close to 5 million futures trading volume during the March 9th to March 19th window (Chart 3) on the back of a major liquidity crunch. The move was not unique to the gold market, with fixed income assets also experiencing a big spike in volatility around that time (Chart 4). The pre-March 19 peak to trough decline for gold was 12% compared to an 8% drop in the US Treasury Inflation Protected Securities (TIPS) ETF or a 22% decline in investment grade ETF values such as LQD.

Chart 3: Gold prices sold off very hard with 5 million in volume during the March 9th to March 19th window



Source: BofA Global Research, Bloomberg. Data from 1/1/2020 to 4/17/2020.

Chart 4: The move was not unique to the gold market, with fixed income assets experiencing a big spike in volatility around the same time

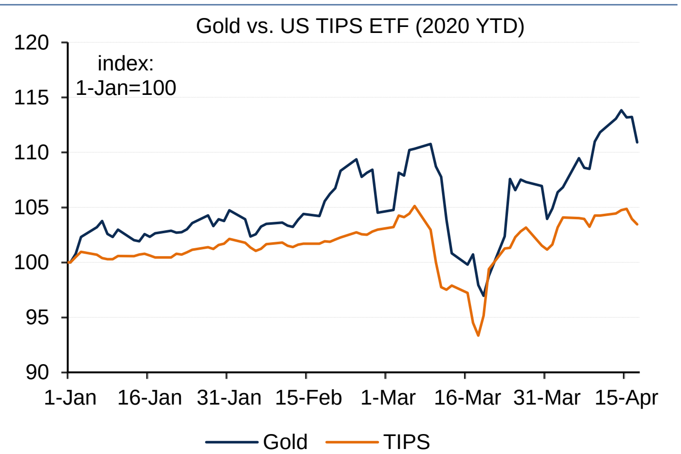


Source: BofA Global Research. Data from 1/2/2020 to 4/17/2020.

The sell-off in gold prices mirrored the move in real rates

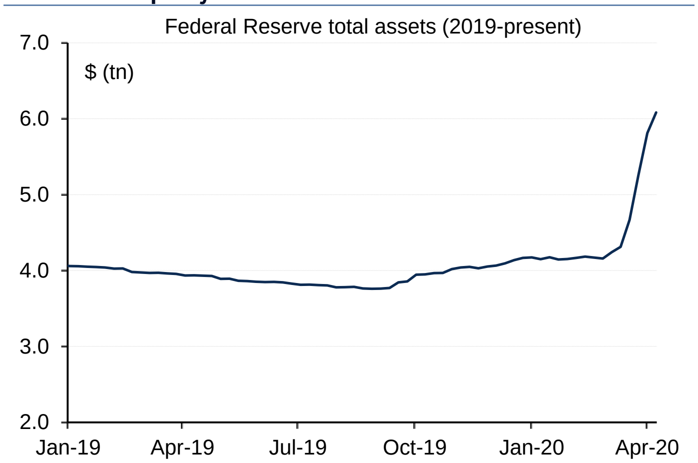
It is worth noting too that the drop in gold prices mirrored the move in real interest rates during the past two months (Chart 5). As investors feared the extension of the China lockdown to the US and the rest of the world economy, asset values and consumer price expectations collapsed faster than nominal interest rates, triggering fears of an economic depression. Having learned the lessons of the Global Financial Crisis (GFC), the Federal Reserve raced to expand its balance sheet (see the recent piece from our Rates team, Fed balance sheet likely to double this year) to increase fixed income liquidity and reflate US asset values, ultimately supporting a sharp recovery in gold prices (Chart 6).

Chart 5: Gold prices mirrored the move in real interest rates during the past two months



Source: BofA Global Research, Bloomberg. Data from 1/1/2020 to 4/17/2020.

Chart 6: Federal Reserve raced to expand its balance sheet to increase fixed income liquidity and reflate US asset values

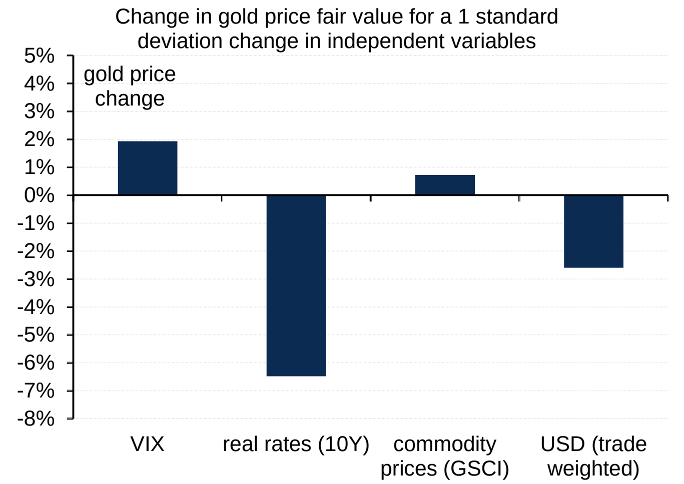


Source: BofA Global Research, Bloomberg

Gold is a function on real rates, USD, commodities and risk…

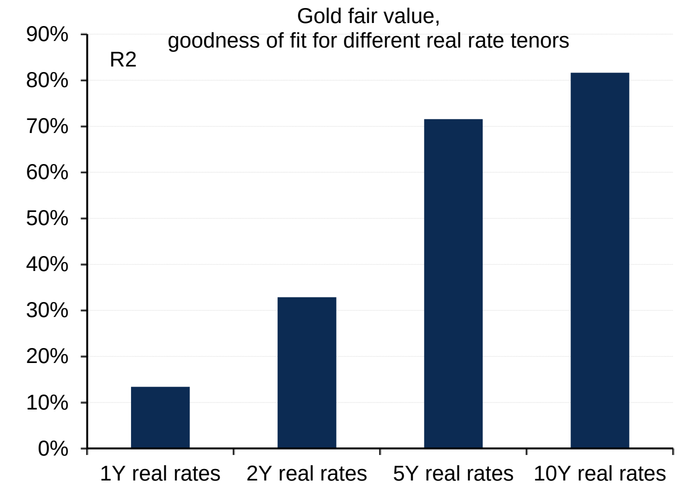
As explained above, the selloff and subsequent recovery in gold prices during March was somewhat mechanical in nature. As the ultimate store of value, gold is a reflection of market movements across all major financial and physical assets. In the past we have argued that gold volatility is a function of real interest rates, USD, commodities and risk (Chart 7). Swings in these four variables alone can help explain up to 80% of variation in weekly gold price changes (Chart 8), providing an important template to understand the direction of future gold prices.

Chart 7: We have argued that gold volatility is a function of real interest rates, USD, commodities and risk...



Source: BofA Global Research, Bloomberg

Chart 8: ... and swings in these four variables alone can help explain up to 80% of the variation in weekly gold price changes

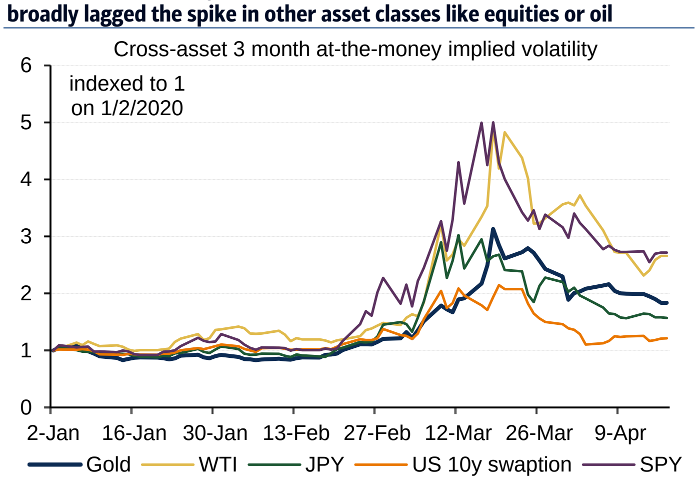


Source: BofA Global Research, Bloomberg

...and gold volatility tends to follow moves in other markets

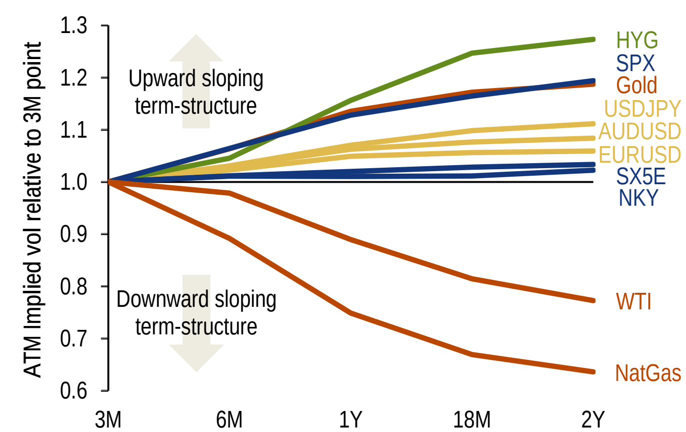
Another factor to think about in precious metals is volatility. Specifically, gold volatility increased with market turbulence, but it has broadly lagged the spike in other asset classes like equities or oil (Chart 9). On our estimates, gold volatility more or less tracked G10 currency vol in the past two months, particularly mirroring perceived safe haven currencies like JPY and CHF. Unlike other commodity markets, the term structure of gold volatility is more aligned with that of paper assets (Chart 10). In contrast to oil or natural gas, gold is not constrained by storage dynamics and its price is not necessarily mean-reverting to the marginal cost of production over the long run.

Chart 9: Gold volatility has increased with market turbulence, but it has broadly lagged the spike in other asset classes like equities or oil



Source: BofA Global Research. Data from 1/2/2020 to 4/17/2020.

Chart 10: The term structure of gold volatility is more aligned with that of paper assets rather than physical

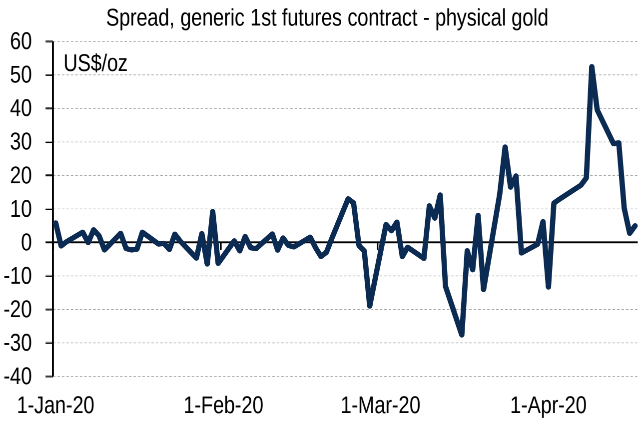


Source: BofA Global Research, Bloomberg. Data: Jun-08 to Oct-19 (Mar-14 to Oct19 for HYG).

Covid-19 has also triggered physical market dislocations...

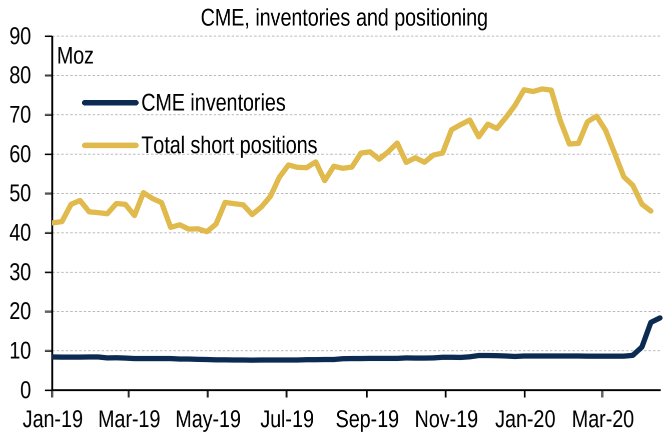
Still, the physical settlement of paper contracts means that gold has unique features compared to other perceived safe havens. In normal times, when the CME delivery mechanism functions smoothly, differences between gold futures and the physical gold market are usually quite small. Yet the margin between futures and physical prices has blown out as of late (Chart 11). In part, there have been concerns over disruptions of shipments to the US over recent travel restrictions, as the London market typically provides liquidity to New York. While futures contracts are relatively rarely held to expiry, Chart 12 shows that inventory levels in CME warehouses are well below open interest.

Chart 11: CME futures have spiked relative to physical gold...



Source: Bloomberg, BofA Global Research

Chart 12: ... partially over concerns of deliveries into physically settled contracts



Source: Bloomberg, BofA Global Research

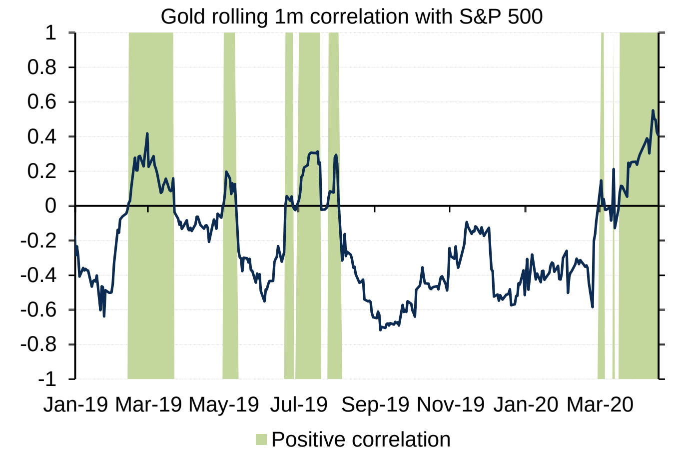
...leading to the launch of a new CME gold futures contract

Also, the CME contract trades in 100koz, while a London Good Delivery Bar is 400koz. This matters because around one-third of global refining capacity has been shuttered over Covid-19, which made the conversion of bars into shapes suitable for delivery into the CME challenging. Tackling these issues, CME has since launched new futures, which also accept 400oz bars. This should ultimately help alleviate liquidity concerns, although it may take some time for open interest to switch to the new contract. Beyond that, and perhaps more importantly, the Swiss refineries have been resuming operations again, while insurers now also accept charter flights to ship gold to New York, rather than just commercial connections. Not surprisingly, the differential between futures and physical gold has been narrowing.

Gold interacts with all financial markets in different ways

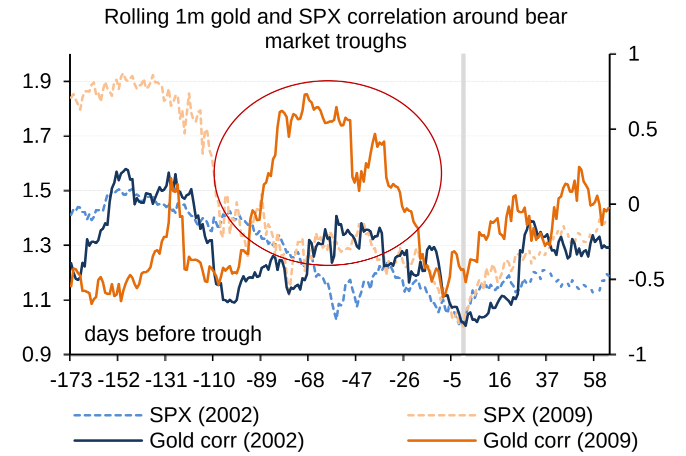
Beyond the volatility, physical and price change drivers discussed above, gold interacts with various financial markets in different ways. For instance, we recently noted (see Embrace the bear) that the correlation between gold and equities has recently turned positive (Chart 13). The positive equity/gold correlations are a possible sign that equity markets may not have fully bottomed (Chart 14) and that the gold market has further room to run, in our view. The trigger here could be an extension of lockdown restrictions over the next few weeks.

Chart 13: The correlation between gold and equities has recently turned positive...



Source: BofA Global Research. Data from 1/2/2020 to 4/17/2020.

Chart 14: ... possibly a sign that equity markets (and equity vol) may not have fully bottomed

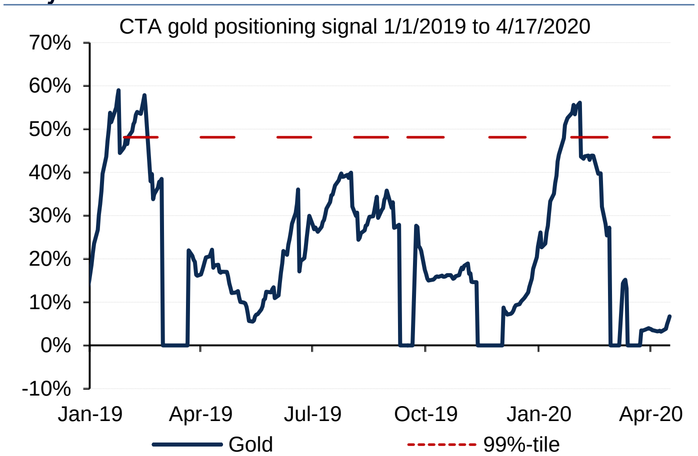


Source: BofA Global Research

Despite the rally, gold positioning has been surprisingly weak

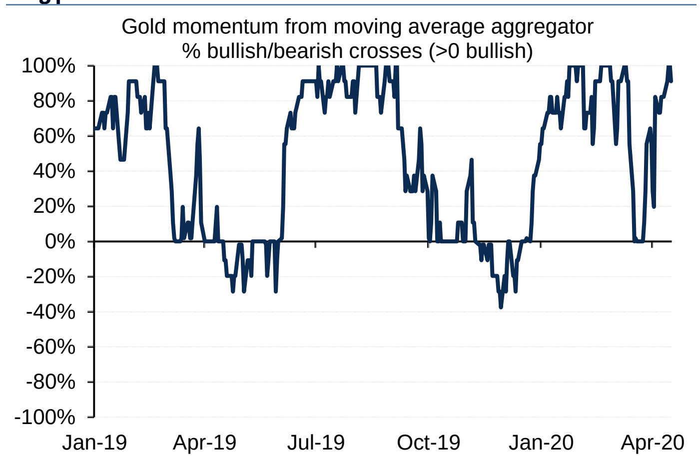
Another reason to be particularly constructive on gold is that our CTA gold positioning signal suggests that momentum players are only slightly long gold (Chart 15). Having peaked at 56% of their maximum length in the month of January, our models suggest that momentum players are currently holding 5.7% of their maximum allocations, well below the historical 99th percentile in history of 48%. While gold momentum is in full force following a brief collapse mid-March (Chart 16), our CTA model has only slowly crept into a long position due to the prevailing high volatility regime, a feature that is also likely prevalent in the broader class of vol targeting funds.

Chart 15: Our CTA gold positioning signal suggests that momentum players are only slightly long gold, a far cry from their positions earlier this year...



Source: BofA Global Research. Data from 1/1/2019 to 4/17/2020.

Chart 16: ... despite gold momentum returning in full force, implying that high volatility is constraining vol targeting funds' entry into larger long positions

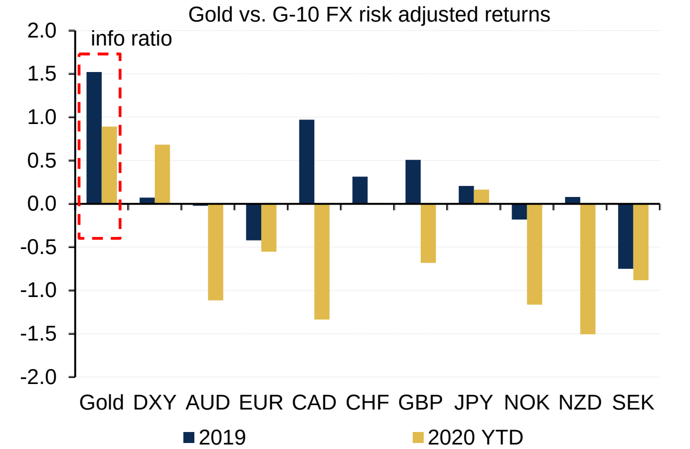


Source: BofA Global Research. Data from 1/1/2019 to 4/17/2020.

From a macro viewpoint, a strong USD will likely hurt gold

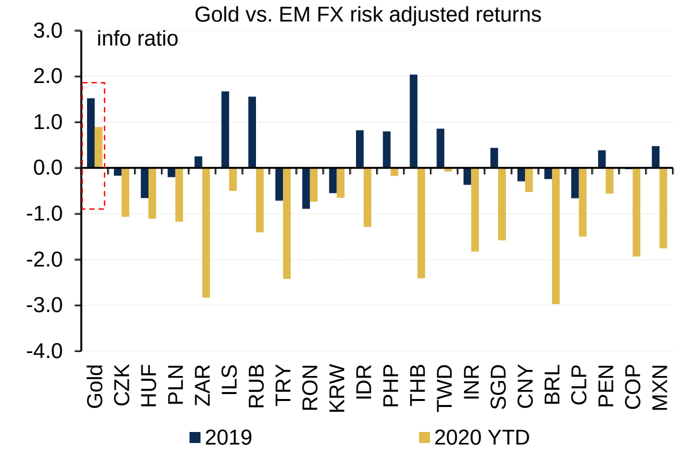
So gold has had a good run, physical supply has experienced disruptions, positioning is relatively light, and the global economy is facing the worst recession in 90 years according to the International Monetary Fund. What could hurt gold? For starters, a strong dollar backdrop is not helpful. True, gold has outperformed every G-10 currency so far this year and also in 2019 (Chart 17). Similarly, we have seen gold outpacing all major EM currencies in 2019 and 2020 (Chart 18). However, the US trade weighted dollar has held up firm. Historically, strong USD periods have held gold back and our FX strategists see the EURUSD cross at 1.05 by 4Q20.

Chart 17: Gold has outperformed every G-10 currency so far this year and also in 2019



Source: BofA Global Research, Bloomberg

Chart 18: Similarly, we have seen gold outpacing all major EM currencies in 2020 and almost all in 2019

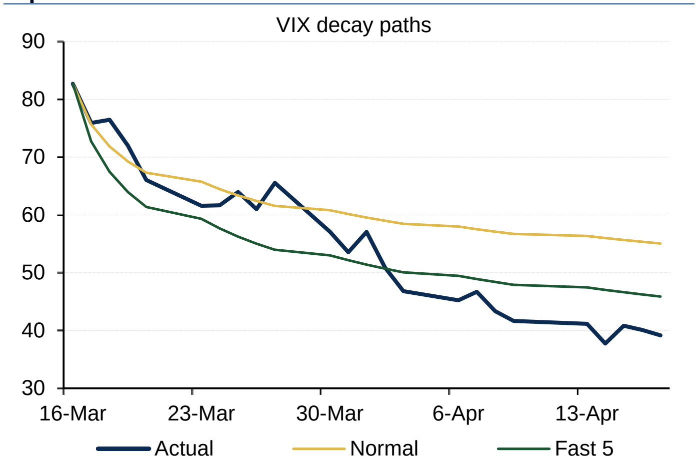


Source: BofA Global Research, Bloomberg

Meanwhile, the recent drop in the VIX will not help either

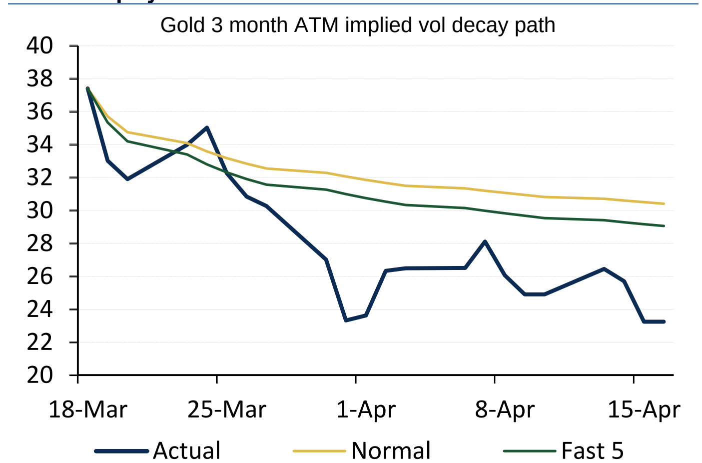
Another factor that could cap a rally in gold prices is the relative stability in equity markets. Helped by Fed easing, the VIX has been falling a lot faster than in previous episodes during the past few weeks (Chart 19). Our equity derivatives team argued back on March 24th that we were past peak panic (see Peak panic precedes peak pessimism), although warned that equity market lows could come later if the bear market extends. Dragged down by monetary balm, gold volatility has followed equity vol down too (Chart 20). To the extent that uncertainty dissipates, we see a modest headwind for gold prices.

Chart 19: Helped by Fed easing, the VIX has been falling a lot faster than expected in recent weeks…



Source: BofA Global Research. Decay path is obtained by averaging 63 day paths following implied vol spike and estimating an exponential decay. Fast 5 indicates the decay path estimated by using the 5 fastest decays measured by percentage decline from peak to 63 days later.

Chart 20: … and dragged down by monetary balm, gold volatility has followed equity vol down

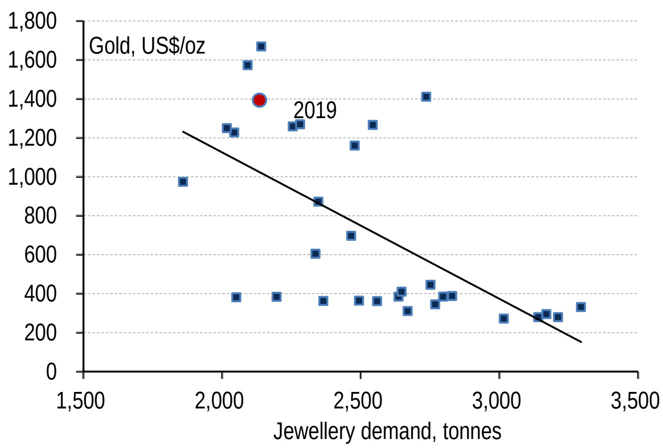


Source: BofA Global Research. Decay path is obtained by averaging 63 day paths following implied vol spike and estimating an exponential decay. Fast 5 indicates the decay path estimated by using the 5 fastest decays measured by percentage decline from peak to 63 days later.

Fundamentally, EM gold demand should continue to be soft…

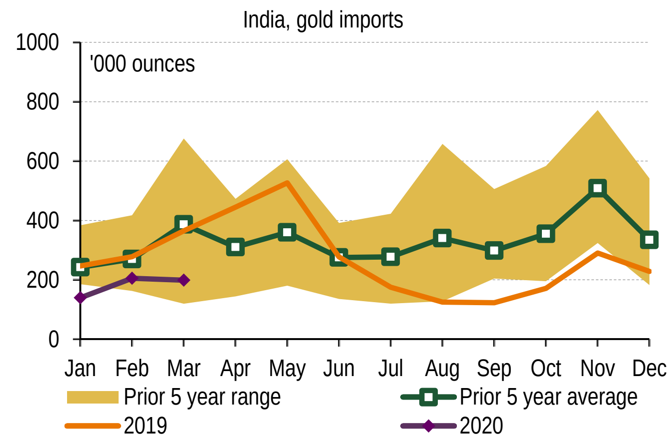
Also, jewelry demand usually declines when prices rally (Chart 21), as buyers in emerging markets like India often purchase on a budget. With jewelry often referencing spot market prices, this means that fewer ounces can be bought as gold rallies. Indeed, gold imports from India have been quite low (Chart 22), although this has also been influenced by low foot traffic in stores due to the recent lockdown over Covid-19.

Chart 21: Looking at gold from a fundamental standpoint, we note that global jewelry demand has remained soft



Source: World Gold Council, Bloomberg, BofA Global Research

Chart 22: India's gold imports have been very low

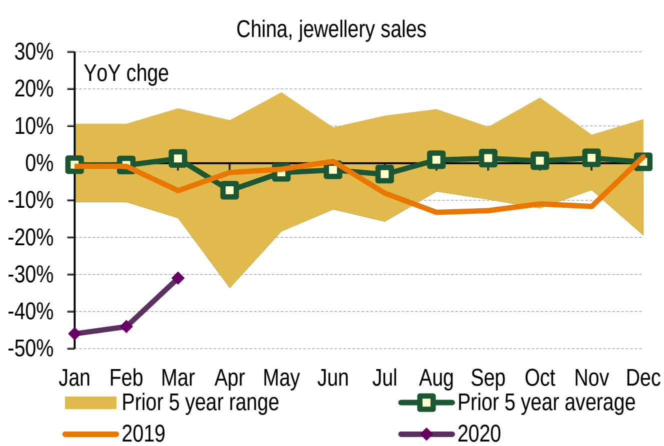


Source: Bloomberg, Bloomberg, BofA Global Research

…as purchasing power in India and China is suffering

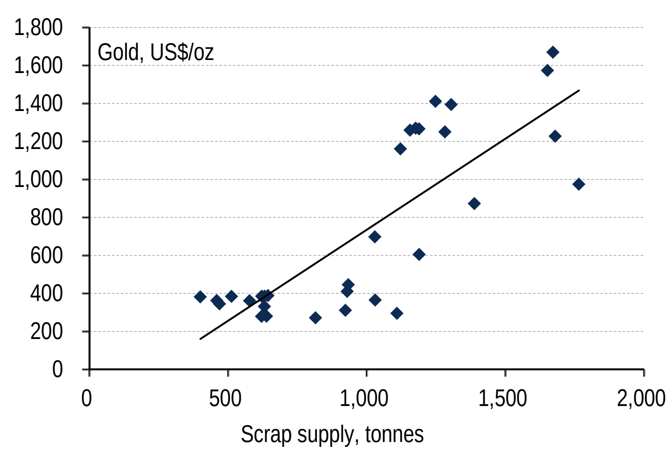
Similarly, sales of jewelry in China, the second largest physical market, have been subdued for a while, as Chart 23 suggests, on persistent headwinds to growth which have been exacerbated by the health emergency in the first quarter. Meanwhile, the scrap market correlates positively with gold quotations, with owners of old metal often incentivized to monetize the gold as prices increase (Chart 24). Of course, the dynamic in the jewelry and scrap markets highlight the importance of investors: as the yellow metal rallies, non-commercial market participants need to pick up more ounces just to keep further price upside intact.

Chart 23: China's jewelry sales have been subdued too



Source: Bloomberg, BofA Global Research

Chart 24: … while scrap supply increases

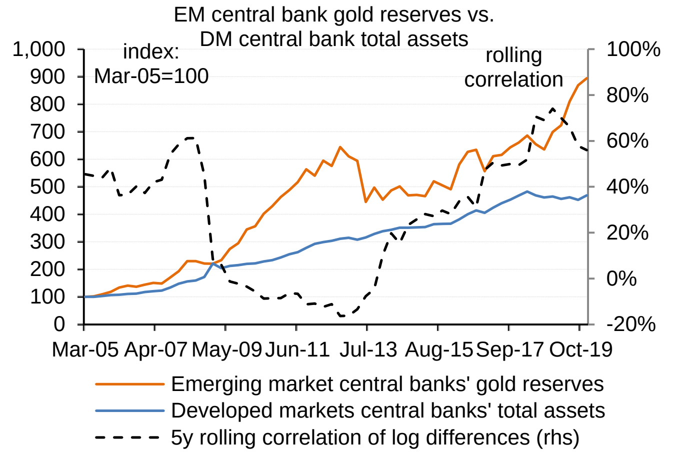


Source: World Gold Council, Bloomberg, BofA Global Research

…although we expect central banks to buy some gold bars…

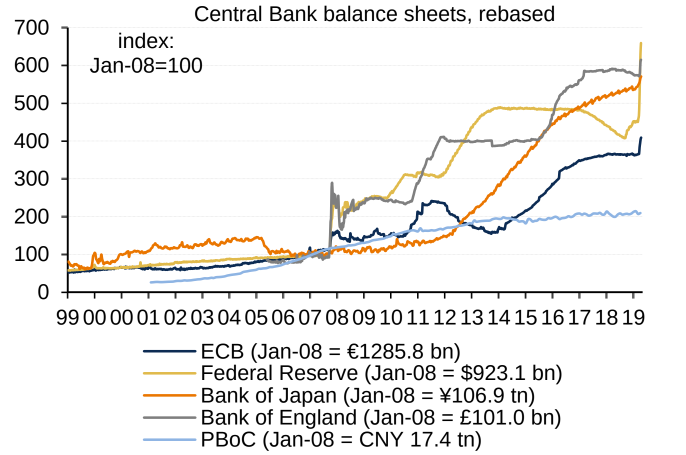
So physical demand in traditional gold markets like jewelry looks soft and could be a drag on precious metals prices. However, central banks across major emerging markets have been avid buyers of gold for their reserve portfolio (Chart 25). As central banks in developed markets have expanded their balance sheets to support domestic asset and consumer prices (Chart 26), some EM central banks have become more proactive buyers of precious metals. In particular, Russia, China and India have opted to increase gold holdings in the past 5 years to diversify away from G-10 sovereign bond positions.

Chart 25: Central banks across major emerging markets have been avid buyers of gold for their reserve portfolio



Source: BofA Global Research, Bloomberg

Chart 26: Central banks in developed markets have expanded their balance sheets to support domestic asset and consumer prices

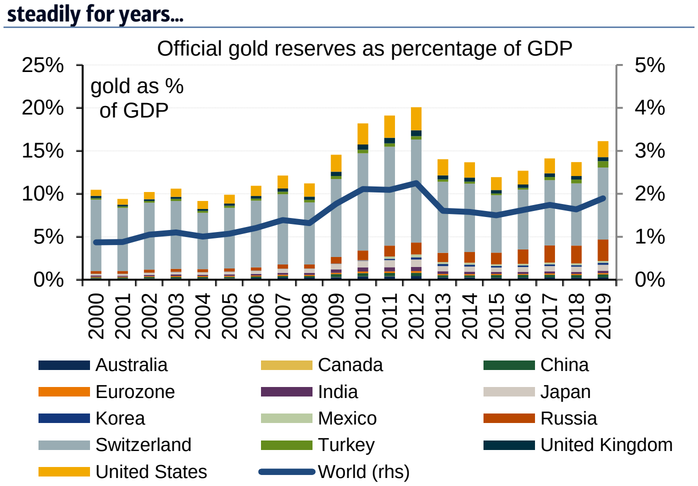


Source: BofA Global Research, Bloomberg

…even if gold holdings as a % of CB assets have been falling

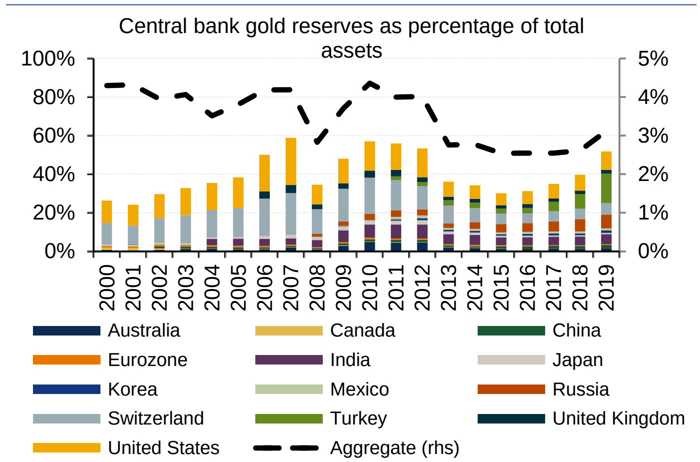
At any rate, we would argue that central bank gold purchases have been rather modest considering the performance. Mostly driven by price appreciation, official gold reserves as a % of global GDP have been rising steadily for years (Chart 27), begging the question as to why we have not seen more buying. After all, gold as a % of global central bank assets has been on a downward trend (Chart 28), mostly a result of their massive balance sheet expansions in recent years. In our view, it is precisely this relationship between central bank assets as a share of GDP and gold assets as a share of GDP that makes gold a very attractive asset at a time like this. A recent survey by the World Gold Council outlined other motives for central banks to add gold to their reserves, arguing that 76% of central banks value gold's role as a safe haven asset, while 59% acknowledge its effectiveness as a portfolio diversifier.

Chart 27: Official gold reserves as a % of global GDP have been rising steadily for years…



Source: BofA Global Research, Bloomberg

Chart 28: …whereas gold as a % of global central bank assets has been on a downward trend



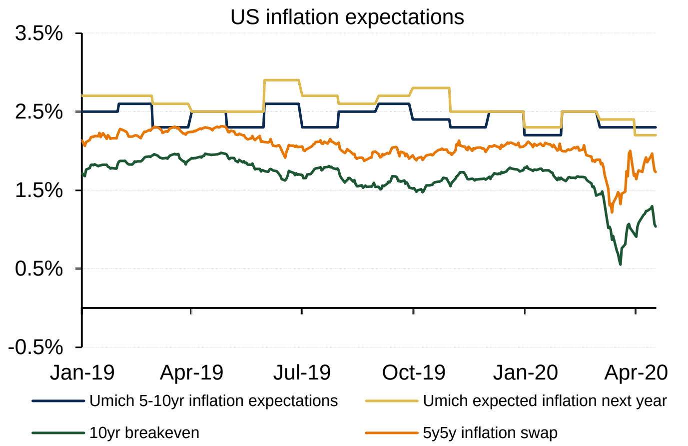
Source: BofA Global Research, Bloomberg

Still, gold may take comfort on rising inflation expectations…

We have previously argued that inflation expectations embedded in US TIPS collapsed and then rose again as the Fed acted to backstop fixed income asset values (Chart 29) and consumer prices. Now, with the Fed committing to do whatever it takes to prevent widespread bankruptcies across the US, Congress injecting a $2tn fiscal stimulus plan, and economic growth on standstill until there is a cure or a vaccine, inflation could rise even if GDP does not. This backdrop should prove very positive for gold, in our view.

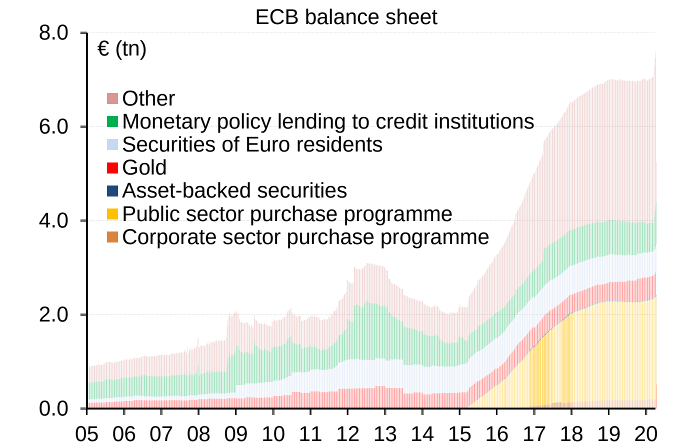
Similarly, the sharp increase in the ECB balance sheet in recent years, coupled with the likely massive expansion ahead, should provide strong support to gold (Chart 30).

Chart 29: Inflation expectations collapsed and then rose again as the Fed acted to backstop asset values



Source: BofA Global Research, Bloomberg

Chart 30: The sharp increase in the ECB balance sheet, coupled with the likely massive expansion ahead, should provide strong support to gold

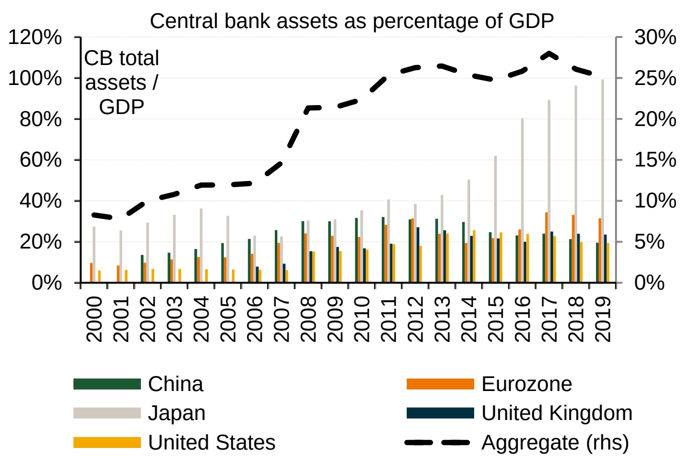


Source: BofA Global Research, Bloomberg

…driven by massive monetary easing plans around the world…

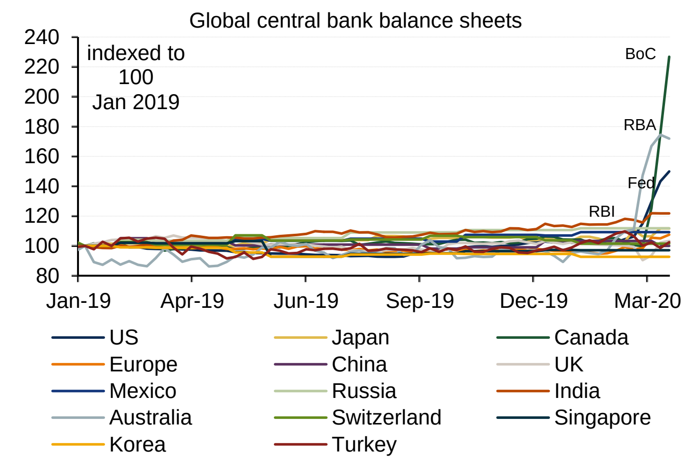
One of the most intriguing developments ahead is that US GDP could drop by 30% YoY in 2Q20, the steepest collapse ever in modern history. Other countries like Japan will likely experience a 21.8% decline in output, while China just reported a contraction of 6.8% in 1Q20 (see [A second wave]). As central banks rush to expand their balance sheets and backstop the economy, a lot of risks could effectively be socialized, boosting the appeal of gold. In aggregate, major central bank balance sheets have been stable at around 25% of GDP for the last decade or so (Chart 31). But clearly Covid-19 has started a race to increase balance sheets and save domestic asset values (Chart 32).

Chart 31: In aggregate, major central bank balance sheets have been stable at around 25% of GDP for the last decade…



Source: BofA Global Research, Bloomberg

Chart 32: … but now COVID-19 has started a race to increase balance sheets and save domestic asset values

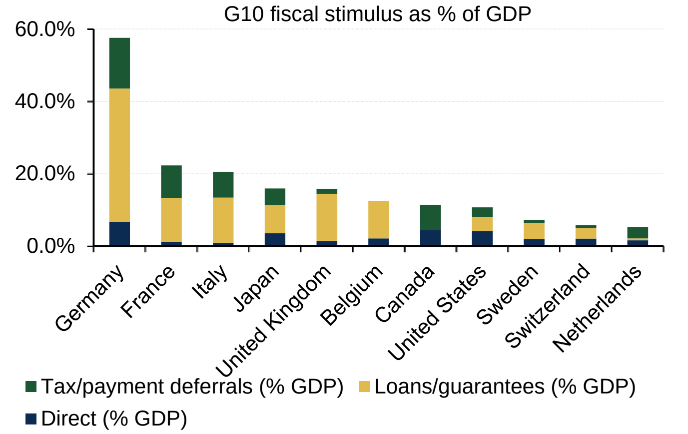


Source: BofA Global Research, Bloomberg

…and also by unprecedented fiscal deficits and government borrowing

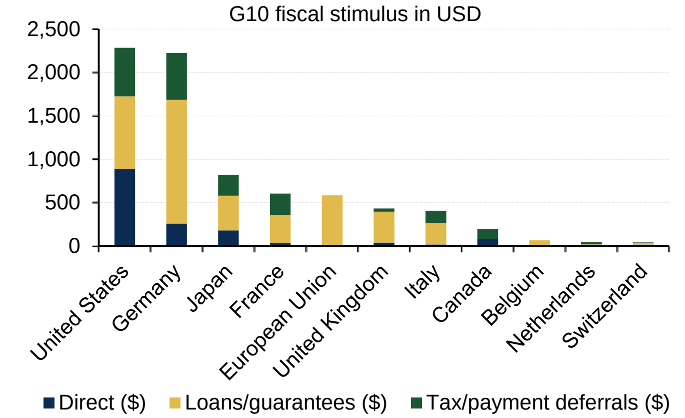
Another important point to remember is that, just as central banks are socializing risk in financial markets, governments are increasing their spending like never before during peacetime. Fiscal spending plans across developed economies are nothing short of breathtaking whether we look at them in dollar terms (Chart 34) or as a percentage of each nation's GDP (Chart 33). Of course, emerging economies do not have the domestic savings base to attempt such an extraordinary feat, but their central banks may opt to reduce DM sovereign bonds in favor of gold.

Chart 33: Fiscal spending plans across developed economies are nothing short of breath taking...



Source: BofA Global Research, Bruegels, IMF

Chart 34: ... with the US and Germany leading the way through a combination of direct stimulus, credit lines and loan guarantees, and payment deferrals with more likely to come

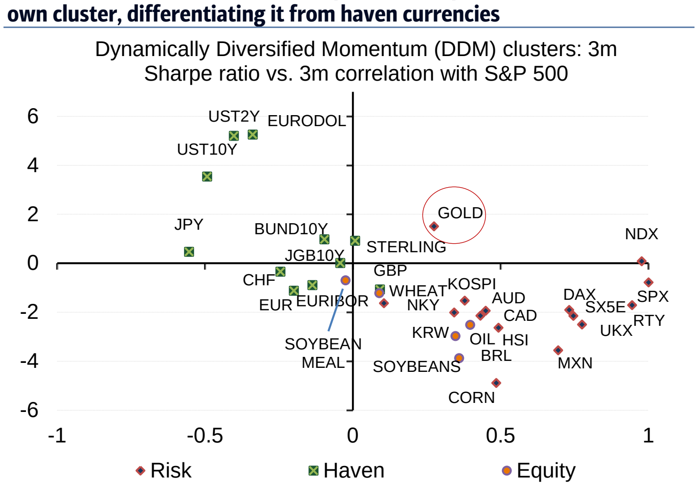


Source: BofA Global Research, Bruegels, IMF

Cross-asset portfolios should increase exposure to gold…

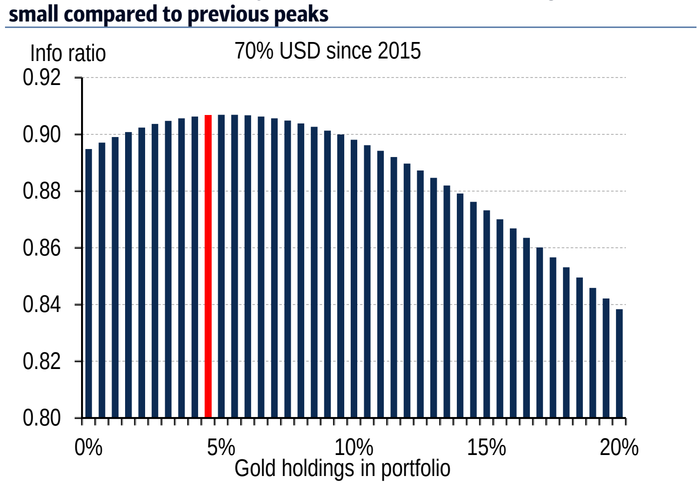
Our Dynamically Diversified Momentum portfolio allocation tool (see DDM Performance Update – 2020 Q1) uses a combination of clustering and Sharpe ratio momentum indicators to either add or reduce exposure to a broad range of asset classes (Chart 35). This allocation technique is representative of what some systematic cross-asset portfolios would use. In DDM, gold has generally been classified in the haven cluster, but has recently switched to the equity cluster and our tool has held a long gold position since mid-March. Also, traditional equal risk contribution portfolios, whether balanced or fixed income geared, should keep adding exposure to the yellow metal over the coming months to increase efficiency (Chart 36).

Chart 35: Gold offers the best Sharpe ratio compared to FX and forms its own cluster, differentiating it from haven currencies



Source: BofA Global Research

Chart 36: Relative to equity markets, asset allocations to gold are still small compared to previous peaks

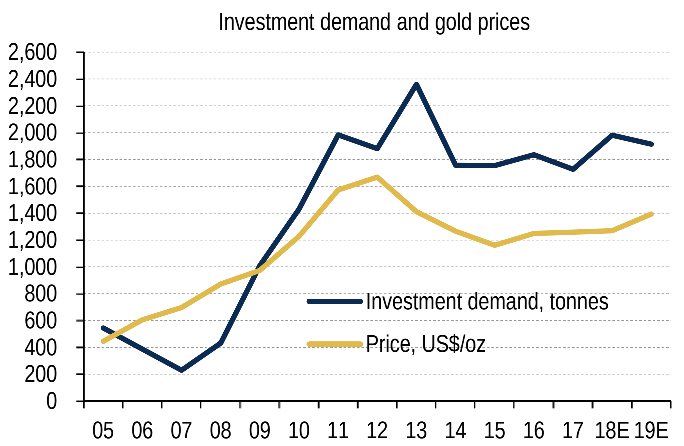


Source: Bloomberg, BofA Global Research

…and on our estimates investors are still underweight gold

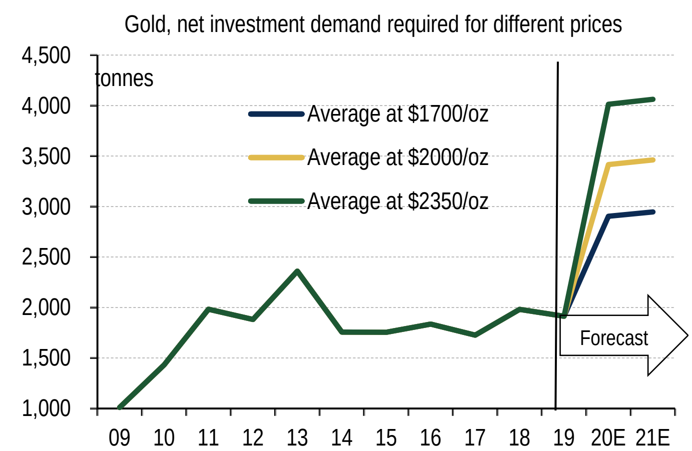
Investment demand has correlated strongly with gold prices in recent years, and we expect precisely this group of buyers to drive gold prices higher (Chart 37). In other words, different levels of non-commercial demand are required to sustain different average price levels. Indeed, for gold to average $2,000/oz next year, purchases need to rise by 73% YoY (Chart 38). Given the current macro-economic backdrop, we believe this figure is likely to be exceeded.

Chart 37: Investors tend to be the marginal buyers...



Source: World Gold Council, Bloomberg, BofA Global Research

Chart 38: ... so these market participants need to pick up more gold to sustain rallies



Source: World Gold Council, Bloomberg, BofA Global Research

We increase our average gold price forecasts from 2020 on...

We have been long-term gold bulls, maintaining our constructive forecast even through the recent volatility. That said, gold has now hit our average 4Q20 price forecast at $1,700/oz, Hence, we are marking-to-market expectations, while at the same time anticipating further upside, largely because central banks underwrite fiscal stimulus and financial markets through money printing, with fundamentals justifying a rally to $2,250/oz in 2021. Still, strong USD backdrop, reduced market volatility, and lower jewelry demand will likely remain headwinds to gold.

Table 1: New gold and silver price forecasts

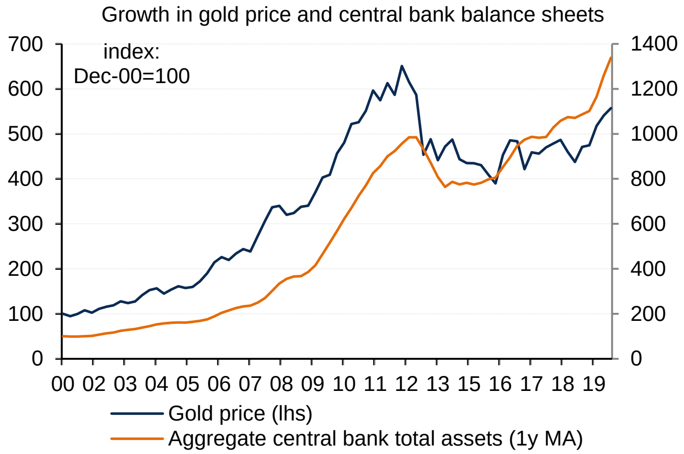
	2Q20E	3Q20E	4Q20E	1Q21E	2Q21E	3Q21E	2019E	2020E	2021E	2022E	2023E	2024E	LT price
Gold, nominal	1,750	1,650	1,800	2,000	2,000	2,250	1,392	1,695	2,063	1,900	1,873	1,843	1,810
Previous forecast	1,550	1,650	1,700	1,650	1,650	1,650	1,392	1,619	1,650	1,625	1,613	1,599	1,584
Change	13%	0%	6%	21%	21%	36%	0%	5%	25%	17%	16%	15%	14%
Gold, real	1,750	1,650	1,800	1,951	1,951	2,195	1,392	1,695	2,012	1,808	1,739	1,669	1,600
Silver, nominal	15.00	16.50	18.00	20.00	22.50	25.00	16.20	16.60	22.50	19.00	19.27	19.53	19.80
Previous forecast	12.50	18.33	18.89	18.33	18.33	18.33	16.20	16.56	18.33	18.06	18.62	19.20	19.80
Change	20%	-10%	-5%	9%	23%	36%	0%	0%	23%	5%	3%	2%	0%
Silver, real	15.00	16.50	18.00	19.51	21.95	24.39	16.20	16.60	21.95	18.08	17.89	17.69	17.50

Source: BofA Global Research estimates

...and we also up our 18m gold target from $2000/oz to $3000/oz

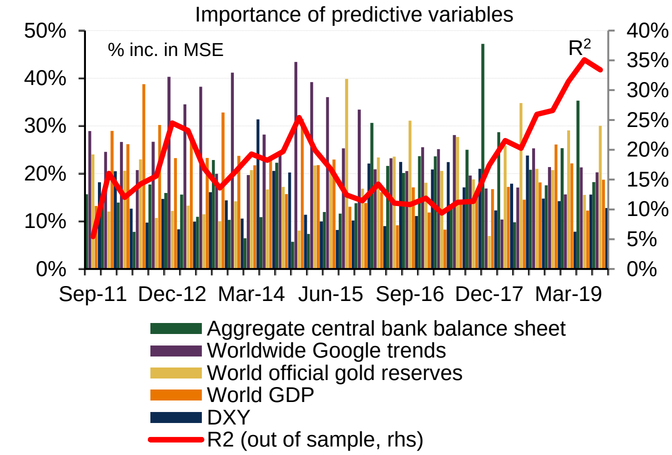
Beyond the supply/demand fundamentals, financial repression is back at an extraordinary scale. Rates in the US and most G-10 economies will likely end up at or below zero for a very long period of time, just as central banks attempt to push inflation back above their targets. Beyond flow variables such as real rates, the USD or market risk, variables such as nominal GDP, central bank balance sheets, or official gold reserves will remain key determinants of gold prices. If central banks double their balance sheet as GDP contracts, gold prices will push higher (Chart 39). Thus, we increase our 18m gold target from $2,000 to $3,000/oz. When will gold start to catch steam? Our work shows that Google trends (Chart 40) could be an early real-time indicator that broader interest is picking up.

Chart 39: If central banks double their balance sheet as GDP contracts, gold prices will push higher



Source: BofA Global Research, Bloomberg

Chart 40: Google trends could be a real-time indicator that broader interest is picking up



Source: BofA Global Research, Bloomberg. Variable importance metric is the percentage increase in MSE from excluding a given variable from the forecast of gold prices based on the random forest algorithm. Out of sample R^2 is based on a linear regression forecast using worldwide Google search trends for interest in gold over time, and growth rate of world GDP, aggregate central bank balance sheets, world official gold resets and DXY as the explanatory variables.

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