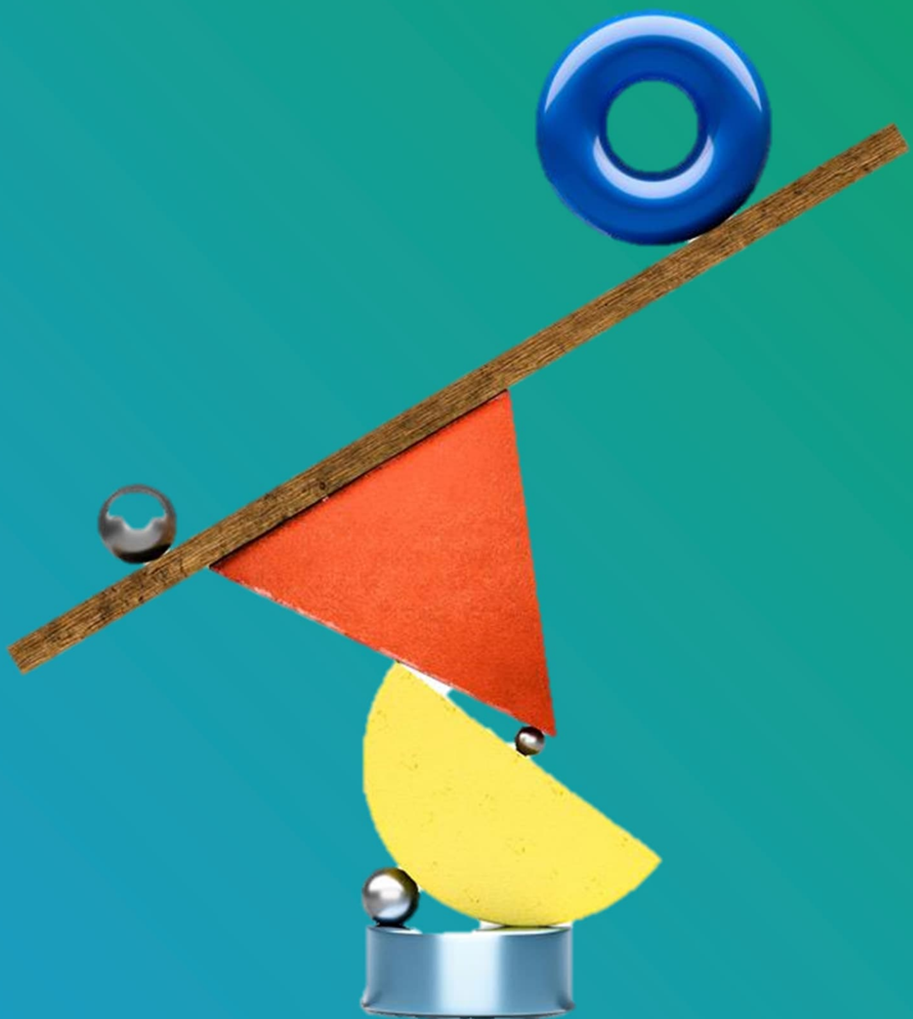
Commodities in an inflation-aware portfolio



Introduction

Rising inflation levels in the US and other developed markets have had everyone asking whether the trend is transitory or something more structural? Although we do not have stagflation as our base case, we believe the risk of a return to a higher inflation environment has increased and the range of outcomes investors need to consider has widened.[1] As we explain in our main inflation protection paper[2], we recommend asset owners reassess whether their portfolios are positioned for such a scenario and consider exposure to asset classes that can help with this. Such a process should inevitably consider commodities, in our view.

Commodity investments have historically been viewed as inflation-hedging assets, given their structural linkage to the inputs to inflation. In the past commodity futures returns have magnified changes in inflation expectations, particularly in periods of strong economic growth. Although they lack a contractual link to inflation (as would be found in an inflation-linked bond or inflation swap, for example), this strong sensitivity has made them a credible candidate for inclusion in inflation-hedging portfolios, in our view.

There are many aspects of the relationship between commodities and inflation, each of which we discuss below:

- As part of the cost structure, a commodity investment can naturally hedge against the effects of cost-push inflation.
- Economic transformation drives demand for commodities – urbanization and decarbonisation are structural forces that could impact prices over the longer term.
- Commodities are not homogenous – both short- and long-term dynamics may favor some commodities over others, particularly when ESG considerations are factored in.
- Gold[3], in particular, is very different from the rest – it is a “fear asset”, and has performed most strongly when markets are either very weak or very nervous about high and rising inflation, or monetary expansion.

[1] See Mercer’s hub, The return of Inflation?: https://www.mercer.com/our-thinking/wealth/inflation.html

[2] See Mercer’s paper, Inflation protection — Hope for the best, but build robust portfolios: https://insightcommunity.mercer.com/research/615bd8fc933b5e002186e73d/Mercer_Inflation_protection

[3] And to a lesser extent other precious metals (gold, silver, platinum and palladium all have currency ISO codes and can be considered monetary metals)

Are commodities your best bet for managing short-term cost-push inflation?

Commodities have a clear role to play in protecting against inflation risk as they represent part of the cost structure for industry. Figure 1 highlights the strong relationship between 5-year break-even inflation performance and commodity returns.[4] Due to this high inflation beta, commodities have tended to provide substantially more inflation protection per dollar invested than inflation-linked bonds such as Treasury Inflation-Protected Securities (TIPS), although this linkage is not contractual. We discuss TIPS in more detail in a separate paper.[5]

Given the high amount of per dollar exposure, and because commodities have typically been strongly linked to inflation volatility, we believe a commodity futures strategy may be an efficient investment for investors worried about inflation shocks in the short term. Figure 1 shows the Bloomberg Commodities ex-Agriculture commodity futures index versus breakeven inflation – this index exhibits the highest correlation of a variety of inflation indices in Figure 2. (We have excluded agricultural futures for two reasons: some investors do not want exposure to soft commodity futures for reputational reasons[6]; agricultural futures exhibit the lowest correlation with inflation of the major commodity groups – energy exhibits the highest, which is perhaps not surprising given energy commodities have always accounted for a large part of inflation[7]).

[4] Breakeven inflation is the inflation implied by government bond markets. 5-year breakeven inflation is the difference between 5-year nominal and real yields. Both breakeven inflation and futures returns are forward-looking measures that respond to realized pricing. We do not use either Consumer Price or Producer Price indexation here as they are backward-looking indicators of inflation. Breakeven Inflation: Bloomberg Barclays US 5-year; Breakeven Inflation Index based on earliest available data. Cash is removed from the performance stream in order to isolate the impact of changes in inflation expectations.

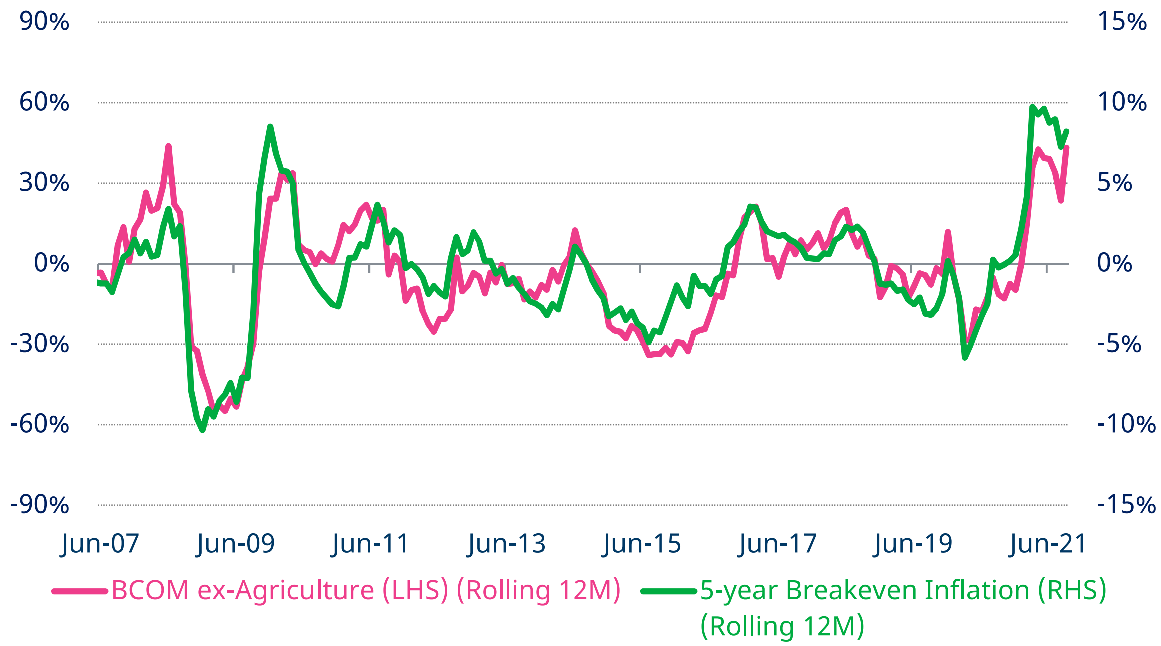
[5] https://insightcommunity.mercer.com/research/615d5d2c5778e80020204226/Mercer_Inflation_linked_bonds_A_real_dilemma

[6] Please see our paper "Investing responsibly – The Use of Commodities"

[7] The link between inflation and renewable energy prices is less evident, although we would expect a relationship between the two to become established in the future if global reliance on fossil fuels decreases and subsidies disappear.

Figure 1. Commodities Ex Agriculture vs Breakeven Inflation Performance

(Mar 2007 - Sep 2021)



Source: Bloomberg. Data as of September 30, 2021.

Figure 2. Correlation between Commodities and Breakeven Inflation Performance

(Mar 2007 - Sep 2021)

Commodity Index	Correlation
Commodities ex agriculture	0.87
Energy	0.83
Broad commodities	0.84
Commodity equities	0.75
Agriculture	0.59

Source: Bloomberg, Thomson Reuters Datastream. Commodity equities represented by MSCI ACWI Commodity Producers. Other indices are BCOM commodity futures indices.

The strong positive relationship between commodities and inflation holds up under both demand-pull and cost-push dynamics. Both have been in play since the depths of the COVID crisis, as rapidly recovering economies put too much pressure on supply chains disrupted by the pandemic and various idiosyncratic events (for example, severe winter weather in the US and the temporary closure of the Suez Canal in early 2021, COVID-related restrictions in China and Vietnam later in 2021). During this period commodities performed strongly as US inflation accelerated. In the year to 30 June 2021, US inflation was 5.4% and the Bloomberg Commodities index return hit 45.6%. However, in the same period equities also performed strongly – MSCI ACWI (net) returning 39.3%.[8] From a portfolio construction and diversification standpoint, we do not need commodities to provide inflation 'protection' in strong, demand-driven markets. The real value-add that commodities bring to portfolios is realized when inflation "surprises" off the back of cost-push dynamics, at times when demand is low and equities do not perform. As we discuss in the next section, the long-term environment may be such that cost-push inflation scenarios are more likely going forward.

Economic transformation drives demand for commodities – urbanization and decarbonisation are structural forces that could impact prices over the longer term.

A case can be made for increased demand for certain commodities[9] in the long term arising from trends like urbanization, the rise of the middle class on a global level and the infrastructure requirements for climate transition. According to the Global Infrastructure Hub, the world is facing a $15 trillion shortfall between projected investment and the amount needed to provide adequate global infrastructure by 2040.[10] Even this number may not fully factor in the cost of climate transition – each of Europe, Japan, China and North America will need to undergo huge economic transformation if they want to deliver on their recent net zero commitments. This level of investment could drive the next commodity super cycle in the required natural resources.

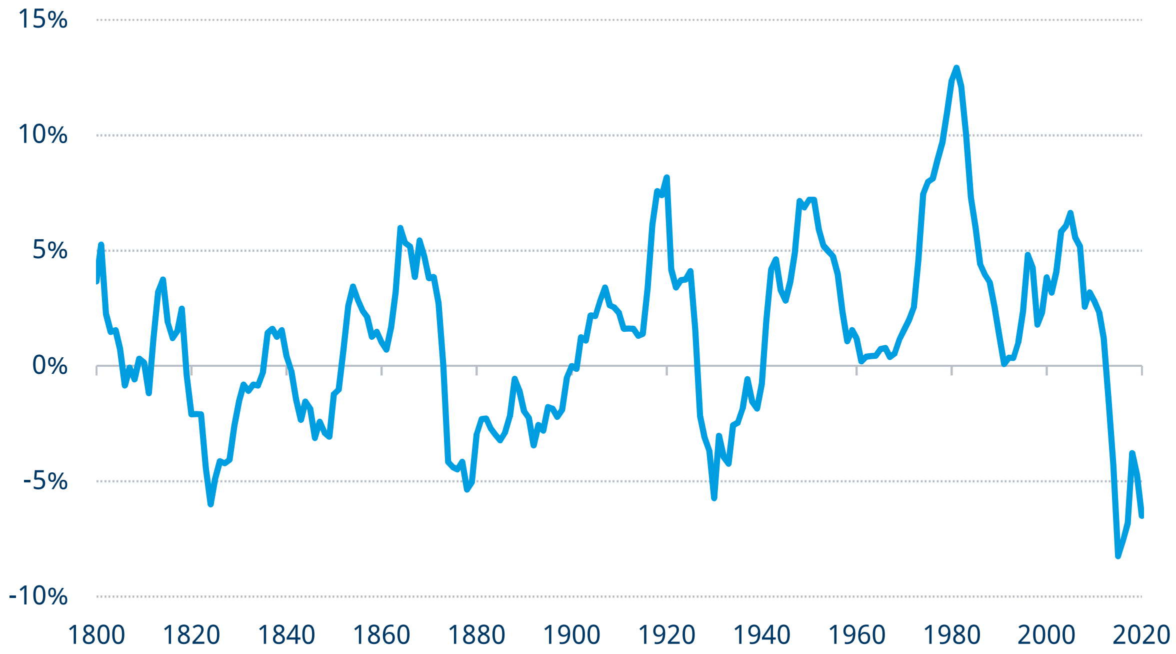
Figure 3 shows historical super cycles in commodity prices since the nineteenth century. Super cycles, or periods of sustained, above-average returns for commodities, happen during periods of transformational structural development of economies. The last super cycle was driven by the modernization of China; the next could be based on the transition to a low carbon economy or modernization in other large/populous nations such as India.

[8] Sources: Bureau of Labor Statistics for inflation, Thomson Reuters Datastream for equities and commodities. Figures in US dollars.

[9] While the world may hope we can reduce our reliance on commodities without an adverse impact on living standards, the rate of growth of developing countries would suggest an increased use of finite resources.

[10] Global Infrastructure Outlook, June 2018, available here

Figure 3. Commodity supercycles (1800–2020)



Source: Aether Investment Partners. Rolling 10-year annual commodity returns

Commodities are not homogeneous

Both short- and long-term dynamics could result in very different returns from different commodities. The transition to a sustainable future is expected to lead to huge increases[11] in demand for lithium, nickel, cobalt, manganese and graphite (batteries); rare earth elements (wind turbines and electric motors); copper, silicon and silver (solar panels); copper and aluminium (grid). Whilst dollar demand for these items is currently much lower than for oil and coal, under a sustainable development scenario the IEA expects that dollar demand for these transition elements will be higher than for coal by 2040.

There is likely to be a tension between how different commodities work either side of a transition to a low carbon economy. Traditional energy sources will continue to be used for a considerable time, but other commodities will benefit over the longer term as reliance on fossil fuels is gradually reduced. Trend strategies could potentially be beneficial in a transitioning world as demand for different commodities waxes and wanes.

[11] For example, the IEA expects a 42 times increase in lithium demand under its Sustainable Development Scenario (SDS) between 2020 and 2040, with cobalt demand increasing by 21 times, and rare earth element demand increasing by 7 times. It should be mentioned that the SDS scenario is on the more ambitious side. The above numbers would be lower under more conservative scenarios.

Gold is different …

Gold is a special case commodity. Historically it has done well when investors fear inflation, specifically inflation driven by monetary expansion, having a high sensitivity to inflation when inflation is on a runaway trajectory. Gold may outperform broader commodities in a stagflation scenario (high inflation during a period of stagnating growth), being largely decoupled from industrial demand, and typically it has underperformed broader commodities in an inflationary environment that comes with economic growth.

That gold comes into its own in higher inflation scenarios is related to its close relationship to currency debasement. When the supply of money increases significantly, all else being equal, its purchasing power falls and gold, as a competitor currency with a low natural inflation rate, should perform well. Gold, then, can act as a monetary hedge. By this, we mean that it offers protection from a number of scenarios that lead to debasement. Quantitative easing has become an entrenched response to economic crisis in the wake of the global financial crisis, and since the onset of the COVID-19 pandemic, the Rubicon to monetary/fiscal coordination has been crossed by most large developed countries.

In any scenario where global currencies (particularly the US dollar) may see their value debased, or in scenarios of heightened global conflict, or a black swan event that derails global asset markets, gold is likely to resume its place as a global safe haven, as has happened during the COVID-19 shock. Due to gold's unique features, we have explored the asset class in a separate paper "Gold: You're Indestructible".

Implementation

Commodities can be accessed via futures (ETFs are a common vehicle in this regard), hedge fund strategies or natural resource equity (public or private). In this paper, we focus on investments that offer the most direct exposure to commodity prices, and therefore have the most direct inflation hedge characteristics – commodity futures. For longer-term exposure to commodities – to position for a possible super cycle – natural resource equity could have merit and offers the flexibility to tailor solutions to meet specific requirements – for example, ESG or reduced fossil fuel exposure. We discuss both public and private universes in separate papers.

Below we highlight the risks of investing in commodity futures[12], before discussing the merits of different futures strategies:

[12] Please see our paper "Investing responsibly – The Use of Commodities" for risks related to ESG considerations.

1) **Roll risk:** Futures are contracts for future delivery of a commodity, principally designed to offer commodity producers and users price stability for their future supply and demand respectively. In an investment mandate where an investor is looking to maintain an exposure to price movements indefinitely, instead of taking a futures contract to maturity and accepting delivery of the commodity, they recycle (or 'roll') the futures exposure. This is done by entering into futures contracts and selling close to expiry, then regaining exposure by entering new contracts. Roll yield – the amount of money you gain or lose by selling a short-dated future and buying a long one – can account for much of the return over both the short and long term. When long-dated futures are systematically priced higher than shorter-dated ones, the market is said to be in contango, and this is a headwind to long only commodity investors. This is the reason why commodity futures have underperformed spot markets by such a large margin over the last decade. Some active management strategies attempt to mitigate roll risk.

2) **Past performance:** While there has been a strong relationship between commodity returns and positive inflation shocks historically, past relationships should not be naively extrapolated on the future. For example, tight labour markets generating inflation through wage negotiations might create higher inflation, with only a second order consumption effect on the prices of underlying commodities, and price effects caused by investor actions.

3) **Volatility:** Commodity returns over the 21st century have had a similar level of volatility to equity markets (15.9% for commodities versus 15.5% for equities[13]). If higher inflation does not materialize, commodities could add a lot of volatility (i.e. downside risk) to portfolios without delivering much long-term expected return.

4) **Substitution:** Commodities can be substituted once a cheaper or more useful alternative becomes available. For example, if an efficient hydrogen battery were produced, lithium prices should fall.

Different futures strategies

1) **Commodity index strategies** offer long-only exposure to the basket of commodities traded in liquid futures markets and therefore provide exposure to commodity prices, and associated inflation protection. The major indices are heavily exposed to oil, however, which may not sit comfortably with required ESG criteria for some investors, and have little scope for roll yield management.

[13] Equities represented by the monthly returns on the MSCI World (Net) Index in US dollars, Commodities by the Bloomberg Commodities Index Total Return in US dollars. Period 1 January 2000 – 30 June 2021. Volatility represented as the annualized standard deviation of monthly returns.

2) **Active trend strategies** dynamically allocate to different commodity futures according to underlying trend drivers. Trend strategies vary in how long biased they are – strategies that can go short have a higher risk of being caught the wrong side of a sharp increase in commodity prices just when investors needed it. However, many are predominantly long biased, and the dynamic trend exposure may be preferable to a more static selection during a scenario where dispersion between commodities intensifies. These strategies also tend to work best in environments of rising inflation, as the strategy return increases with the developing trend. A recent research paper, "*The Best Strategies for Inflationary Times*"[14], for example, analysed the performance of a large number of investments during specific inflationary periods since WWII, and found that trend strategies – both multi-asset and commodity focused – generated some of the strongest returns. This should not be seen as conclusive proof, of course – it is impossible to control for the impact of single variables such as inflation on returns and there are other problems with making inferences from backward-looking data. However, we can at least say that available sample evidence is not inconsistent with the plausible assumption that trend-following commodity strategies may do well in inflationary environments, assuming the manager stays consistently on the right side of the momentum.

Conclusion

Commodities have historically had several attractive features, notably diversification and inflation surprise protection, although they can weigh on long-term returns in a benign environment. We see some rationale for holding commodity futures where investors are looking for protection from runaway inflation and further inflation shocks: the potential of a vaccine-resistant variant of the COVID-19 virus[15] means border disruptions could resurface any time, whilst peak globalization and a renewed focus on national self-reliance could lead to a multi-polar world with more limitations on global trade in commodities, and concurrent price rises. Investors looking to take longer-term positions that might profit from increased structural demand for commodities should consider commodity trend strategies and both listed and unlisted commodity producers – with the benefit this may have for engaging in discussions on sustainable production. We discuss these options in our other work.

Gold is a special case commodity with specific application in portfolios. In a scenario of financial repression where governments are structurally supporting markets through continued stimulus, gold can be particularly effective at managing debasement concerns and equity downside risk.

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[14] 'The Best Strategies for Inflationary Times': Neville, Draaisma, Funnell, Harvey, Hemert, May 2021. Man Group Academic Research.

[15] A life sciences CEO and Georgetown Medical Center professor, Dr Mark Dybul has warned that we may have a vaccine resistant variant in Spring 2022. https://fortune.com/2021/11/16/enochian-biosciences-ceo-predicts-vaccine-resistant-covid-variant-in-2022/

Commodities are just one of a number of asset classes we discuss in our broader paper on building inflation protection into your portfolio.[16] They are not a silver bullet response to inflation risk, but they can be a key component of a diversified portfolio of inflation hedging assets.

Commodities have been largely ignored by institutional investors in recent years, but as the basis for all of humanity's industry and indeed of life itself, we believe investors should take an active view on how they should be incorporated into investment portfolios.

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[16] See Mercer's paper on Inflation protection, November 2021: https://insightcommunity.mercer.com/research/615bd8fc933b5e002186e73d/Mercer_Inflation_protection

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