Commodity Analyst

Commodity Investing 101

- As tariff threats, inflation expectations, and inflation uncertainty have risen significantly while equity and credit valuations are already stretched, we address common questions on the returns and inflation hedging and diversification benefits from commodity investing.
- **Returns beyond inflation.** We argue that commodities are not just a trade solely for the occasional 'supercycle', given the long-term returns, inflation hedging and diversification benefits they offer to portfolios. While commodity prices typically track inflation, commodity *futures* might provide an additional 'risk premium' for bearing price risk uncertainty, while maintaining a low correlation with stocks and bonds.
- **Diversification and inflation hedge**. Crucially, this correlation tends to turn negative when it matters most — late in the business cycle or during supply disruptions when both equities and bonds weaken. Unlike commodity producer equities, which tend to move with the broader equity index, direct commodity exposure provides diversification. We find that broad-based commodity indices are typically an effective inflation hedge and offer higher returns than TIPS and REITs when inflation is high, since commodities are more directly tied to inflation pressures and less vulnerable to higher rates.
- **Stronger case for commodities futures, but choose wisely.** The decade following the financial crisis offered only muted commodity returns amid a below-potential economy— due to deleveraging and restrictive fiscal policy—, unusually low inflation, and highly globalized supply chains. Today's environment offers a more favorable backdrop for commodities with less slack in the economy — and supportive fiscal policy —, the move to reshoring supply chains, and higher inflation expectations. That said, commodity-specific fundamentals matter even more. Today, we specifically recommend long positions in gold (strong central bank demand, hedge against tariffs and higher inflation), copper and aluminum (electrification demand), and oil (attractive roll yield), while we are expecting significantly lower European gas prices from 2027, and possibly much earlier under a Russia-Ukraine peace deal.

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Commodity Investing 101

Uncertainty about US policy, especially trade policy, has contributed to substantial rises in inflation uncertainty and in the University of Michigan's measure of long-term US household inflation expectations. At the same time, our colleagues expect only modestly positive returns in equities and credit, which are held back by still stretched valuations (especially in the US). In this context, we address common questions on the returns and inflation hedging and diversification benefits from commodity investing.

Exhibit 1: UMich Long-Term US Inflation Expectations at Highest Since 1995

Shaded areas refer to US (NBER) recessions.

Source: University of Michigan

Q1: Why do commodity futures offer returns beyond mere inflation? Do they also add value to portfolios outside of periods where most commodity prices trend significantly higher (i.e. "supercycles")?

We argue that commodities are not just a trade solely for the occasional 'supercycle', given the long-term total returns, inflation hedging and diversification benefits they offer to portfolios. While physical spot commodity prices often just keep pace with inflation—after all, they're the raw materials underpinning the economy—commodity ***futures*** can deliver returns beyond inflation, because of a built-in risk premium. While equity investors get paid for taking on the risk that a company's profits might disappoint, investors in commodity futures get paid for taking on price risk that producers want to avoid. In addition, commodity futures investors earn interest on the cash or cash like asset (often Treasury bills) an investor deposits as collateral to secure the futures position.

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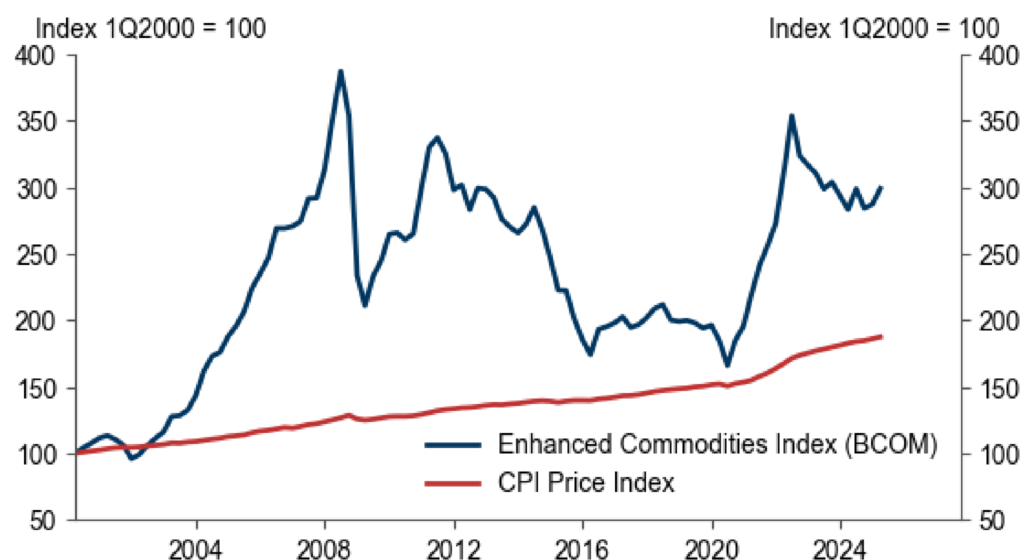
Exhibit 2: Commodity Futures Can Offer Returns Beyond Inflation, With the Enhanced BCOM Index Total Annualized Return Averaging 4% Since 2000



Source: Bloomberg, Haver Analytics, Goldman Sachs Global Investment Research

Commodity producers, like oil drillers and farmers, often want to lock in future sales at a fixed price, usually in large quantities and far in advance. Consumers, such as airlines and food manufacturers, also want price stability for their inputs but prefer buying in smaller amounts over shorter time frames, so they don't have to store large inventories. Commodity futures investors fill this gap by buying long-dated contracts at a discount (the risk premium), holding them, and later selling them to consumers who need the commodities—generating what's known as the "roll yield."

Whether the roll yield weakens or boosts total returns depends on the market. In backwardation—when spot prices are higher than futures prices because current inventories are tight— futures contracts typically rise in value as they near expiration, delivering extra profit even if spot prices stay flat. Oil often trades in backwardation because OPEC keeps inventories low to stabilize the market.[1] Brent opened 2024 at $75.89/bbl and a year later at $75.93/bbl — just a four-cents difference — yet the roll and collateral returns together generated double-digit total returns (10%).

Contango, on the other hand, occurs when futures prices exceed the spot price, often due to storage costs or expectations of tighter supply-demand balances later on. Contango implies a negative roll yield, which weighs on total returns. For example, if spot prices jump from $50 to $130 but contango is steep, an investor might pocket *less* than $80 because rolling into higher-priced futures eats into gains.

Still, if the final spot price ends up above the futures price, there is usually some profit—though contango narrows it, while backwardation amplifies it.

[1] For oil, we found that spot prices realize 4% above the consensus, on average, and 7% above the 12-months forwards, consistent with a positive risk premium.

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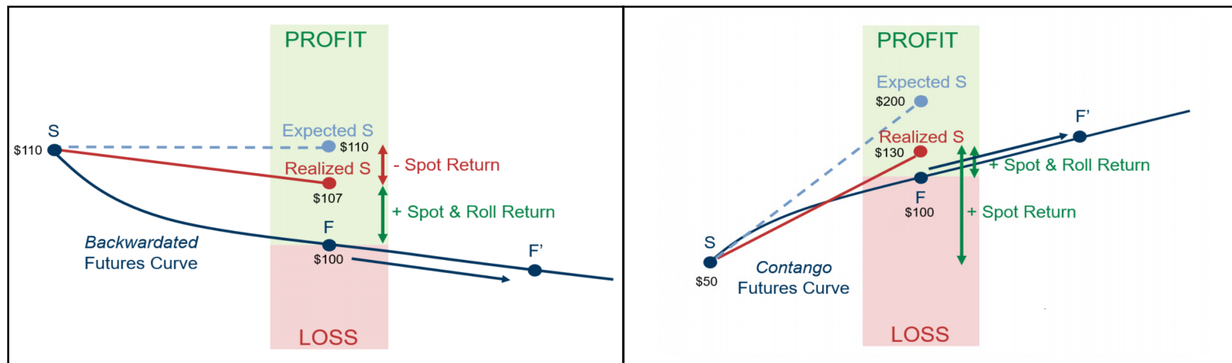
Exhibit 3: The Roll Return Is Positive When the Futures Curve Is Downward-Sloping (Backwardated) But Negative When the Curve Is Upward-Sloping (Contango)



Left: The investor buys a futures contract F today at $100 whil the current spot price S is $110 (backwardation). Even though at expiry the spot price has dropped to $107, they have still earned a profit of $7: a $10 roll yield (S - F) parly offset by a $3 spot price decline (Realized S - S). The investor then rolls into a new long-dated future F', maintaining nominal value while contract volumes adjust.
Right: The investor buys a futures contract F at $100 while the current spot price S is $50 (contango), implying a willingness to pay more for future delivery due to expected future shortages or storage costs. In the next period, the spot price rises to $130, a potential $80 gain. However, because the investor locked into the $100 futures contract, they only capture $30, with $50 lost due to the contango.

Source: Goldman Sachs Global Investment Research

To minimize the drag from contango and maximize the boost from backwardation, investors can choose an e*nhanced commodity index.* Rather than buying the nearest-expiring contract, an enhanced index selects contracts further out on the curve (where the contango might be less severe) or uses rules-based methods to seek the most favorable part of the market. By being more selective about which contracts to roll and when, these strategies aim to lower the cost of contango and take full advantage of any backwardation—thereby boosting overall total returns even without a surge in spot commodity prices.

The annualized average total return stands at 2% since 2000 for the BCOM commodities index and 4% for the enhanced BCOM index, which is above the average CPI rate of 2% and the flat return of BCOM's underlying spot commodity prices.

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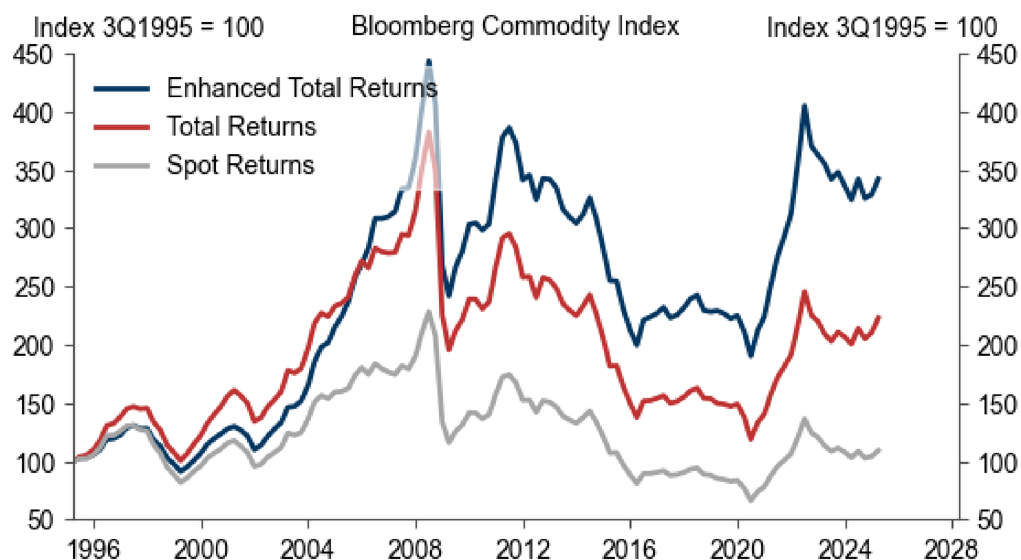
Exhibit 4: Roll Yields in Commodity Futures Investing Lift Returns Above Spot Returns; Enhanced Indices Are Designed to Outperform By Lowering the Cost of Contango and Take Full Advantage of Any Backwardation



Source: Bloomberg, Goldman Sachs Global Investment Research

Q2: Are commodities a hedge against inflation?

Yes. We find that broad-based commodity indices are typically an effective inflation hedge and offer higher returns than inflation-linked bonds (TIPS) and real estate (REITs) once inflation exceeds 3%.[2] Unlike real estate, which also depends on property values, or TIPS, which weaken when *real* interest rates rise to curb inflation, commodities — being the backbone of the global economy — are more directly tied to inflation pressures and less vulnerable to higher (real) rates.

[2] We also see commodities outperforming equities and bonds, once inflation exceeds 3% in the UK and the eurozone (see Appendix).

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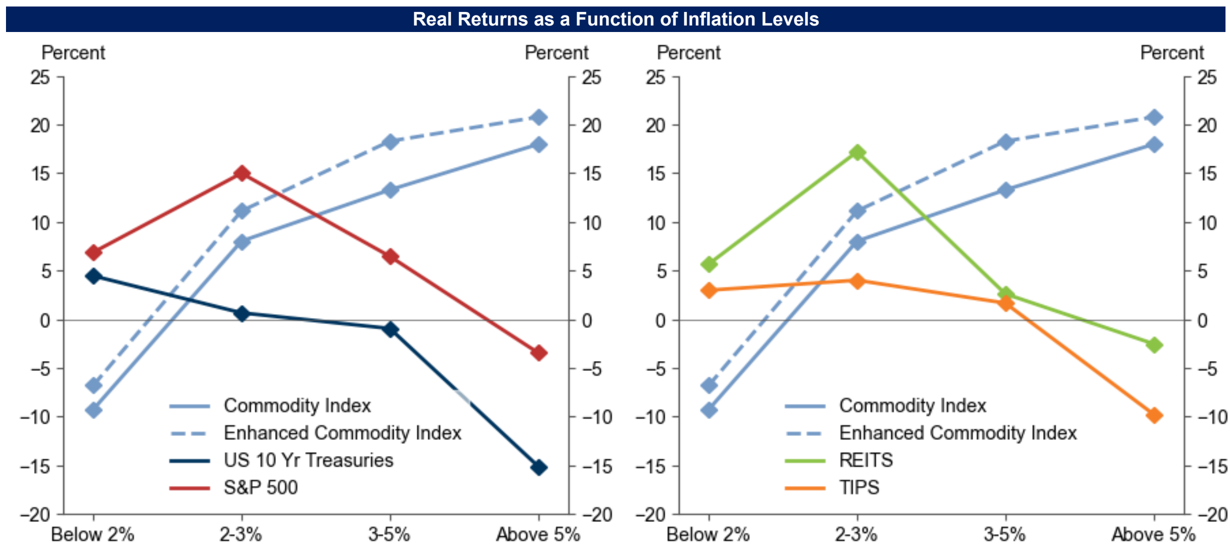
Exhibit 5: Commodity Indices Outperform Stocks, Bonds, and Even Some Popular Inflation Hedges Like Real Estate (REITs) and Inflation-Linked Bonds (TIPS) Once Inflation Exceeds 3%



The data spans 2002Q4 - 2024Q4. We consider real total returns, and we use BCOM for the commodity index. Buckets are based on PCE headline inflation levels.

Source: Bloomberg, Goldman Sachs Global Investment Research

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Crucially, effective inflation protection requires a *broad* mix of different commodities, because not all inflation is the same — as we have recently shown. Demand-led inflation (where demand overheats), supply disruptions (stagflation), and runaway inflation (where central banks are not able to control inflation) can each favor a different set of commodities.[3]

Gold typically only guards against very high inflation (runaway inflation) or when a supply disruption is geopolitical in nature, but it underperforms in demand-led inflation when central banks raise interest rates. **Energy** — especially oil — typically offers the largest and the broadest protection, whether inflation arises from supply disruptions (like the 2022 energy crisis) or booming demand (like the China boom in the 2000s). **Agriculture** may provide directionally similar inflation protection as traditional energy, while **industrial metals** can offer protection against demand-led inflation given their large exposure to the cyclical manufacturing and housing sectors.

We refer the reader to our latest deep-dive on commodities as an inflation hedge: "Your (Golden) Inflation Hedge for US elections."

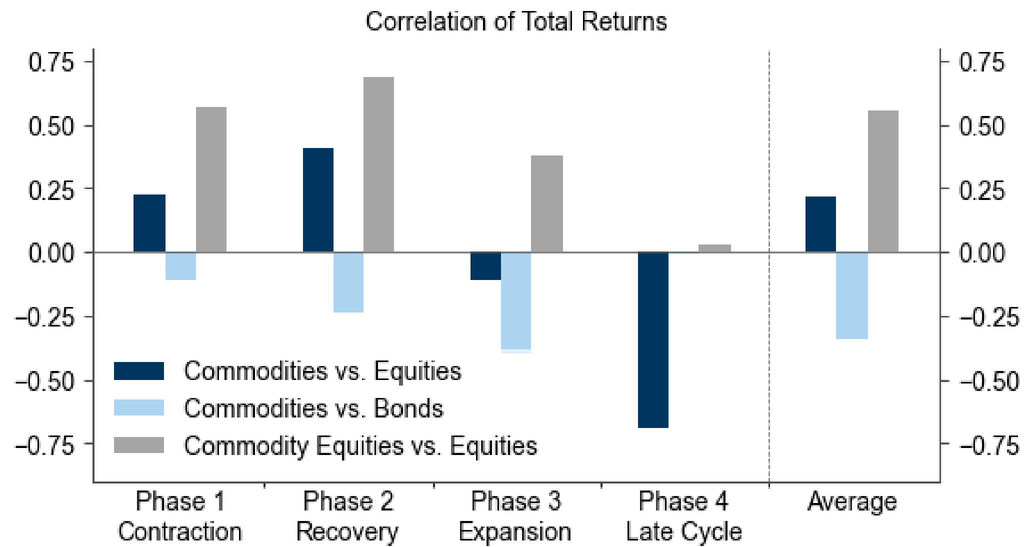
Q3: Do commodities diversify a portfolio?

Yes. Their low correlation with equities and especially bonds makes them a diversifier in portfolios (Exhibit 6). But crucially, their diversification value strengthens in supply disruptions when both equity and bond returns weaken or late in the business cycle. In 2022, for instance, food and energy supply shocks coupled with the rapid post-pandemic recovery, and the ensuing surge in inflation highlighted the hedging value of commodities, as real returns turned negative for equities (-8%) and bonds (-16%),

[3] The GSCI index likely offers the broadest protection against inflation as the commodity index weights correspond to production weights, which essentially equal weights in global commodity consumption.

while commodities delivered a 22% total real return.[4]

Exhibit 6: Commodities' Diversification Value Strengthens Late In the Business Cycle as the Correlation With Bonds and Especially Equities Turns Negative



We consider real total returns (quarterly year-on-year). We use the S&P 500 for equities, US 10 year treasuries for bonds, the federal funds rate for cash and enhanced BCOM for commodities. Commodity equities refer to a global commodity equities basket of MSCI all countries world indices of agriculture, energy, and metals and mining (weighted by the BCOM sector allocations).

Source: Bloomberg, Goldman Sachs Global Investment Research

Beyond these commodity supply disruptions, commodities also offer diversification late in the business cycle. By then, demand has been outpacing supply for an extended period, meaning the economy is operating above capacity (i.e. a positive output gap), which tends to push economy-wide inflation higher. This sustained pressure typically also drains commodity inventories, and this scarcity tends to push up both spot prices and drive a positive roll yield. Central banks typically react with rate hikes, which hurts bonds, while slowing growth weighs on equities. We find, however, that commodities typically thrive in this phase (Exhibit 7) because scarcity pushes commodity returns higher just as equities and bonds tend to weaken.

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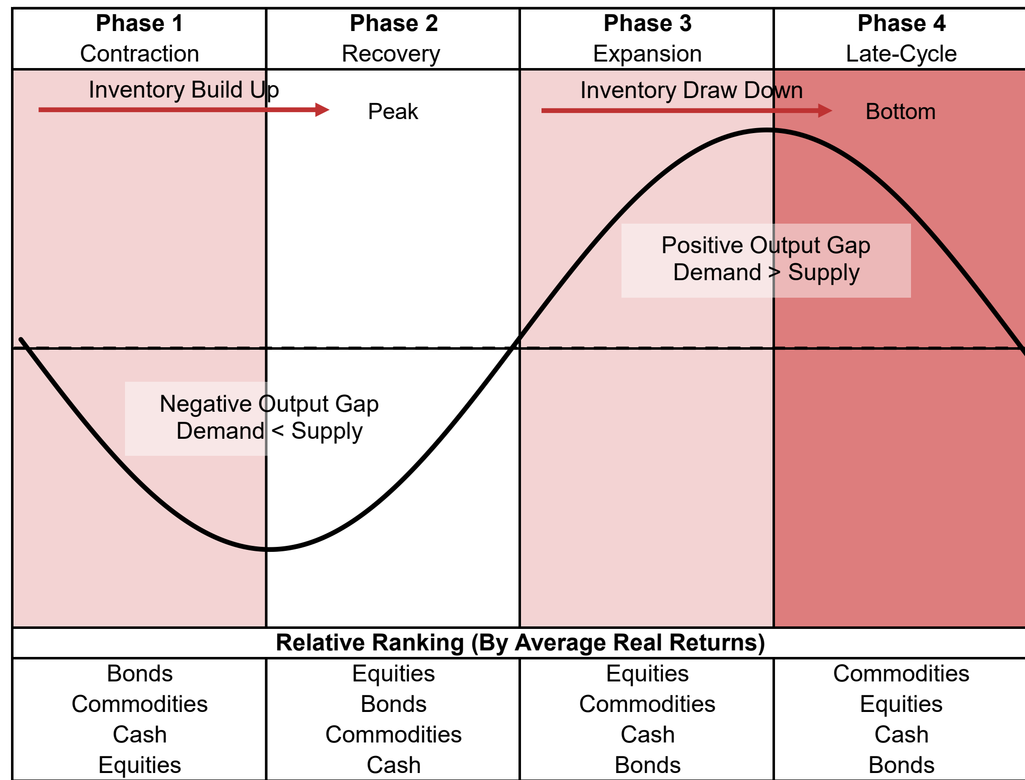
[4] We consider S&P 500 for equities, US 10 Year Treasuries for bonds, and BCOM for commodities.

Exhibit 7: Commodity Returns Tend To Exceed Returns of Other Asset Classes Late In the Cycle, When Inventories Have Been Depleted By Prolonged Overheated Demand



Phase 1 Contraction	Phase 2 Recovery	Phase 3 Expansion	Phase 4 Late-Cycle
Relative Ranking (By Average Real Returns)			
Bonds	Equities	Equities	Commodities
Commodities	Bonds	Commodities	Equities
Cash	Commodities	Cash	Cash
Equities	Cash	Bonds	Bonds

The relative ranking is based on the analysis in Exhibit 19 in "Commodity Insights: Your (Golden) Inflation Hedge for US Elections".

Source: Goldman Sachs Global Investment Research

Q4: If I want commodity exposure, can't I just buy mining or energy stocks?

Commodity producer equities don't necessarily give you direct commodity exposure, and they tend to be closely tied (correlation 0.55) to the broader equity market. That is because, like other stocks, these companies trade on forward-looking discounted cash flows that depend on interest rates and growth expectations. In a late-cycle environment, for instance, actual commodity prices can climb as inventories tend to be critically low, but commodity producer equities may still perform poorly in line with the broader stock market as investors worry about rate hikes or slower growth. As a result, commodity producer stocks offer an advantage in equity bull markets but offer less diversification to equity portfolios and more downside in equity sell-offs. Buying shares in commodity producers also introduces additional corporate risks — such as cost inflation, supply disruptions, and operational challenges — that can drag down performance, even when the commodity itself is rallying (Exhibit 8).

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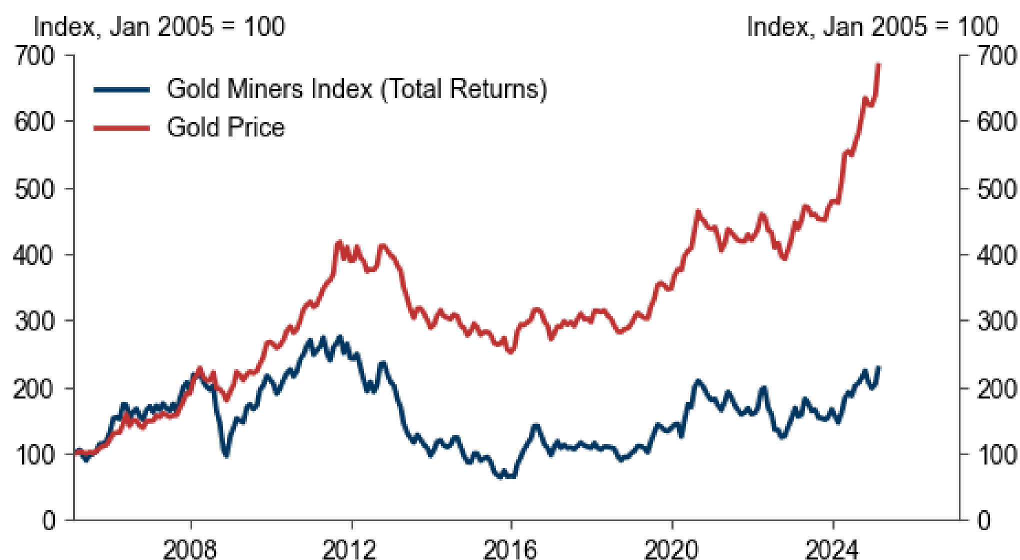
Exhibit 8: Despite Rallying Gold Prices, Corporate Risk — Including Cost Inflation and Supply Misses — Can Drag Down Performance of Gold Mining Equities



Source: Bloomberg, Goldman Sachs Global Investment Research

We find that the enhanced BCOM index and the global commodity equities basket (weighted by the BCOM sector allocations) have comparable Sharpe ratios — 0.29 for the enhanced BCOM, slightly higher than the 0.23 for the commodity equities index.

Q5: Commodities have underperformed in the last decade—what has changed to make commodities appealing again?

The decade following the financial crisis offered only muted commodity returns amid below-potential DM economies — due to deleveraging and restrictive fiscal policy —, unusually low inflation, a shale energy supply boom, and highly globalized supply chains. Today's environment offers a more favorable backdrop for commodities with less slack in the economy, an unusually high US fiscal deficit, higher defense spending, higher inflation expectations, and the move to reshoring supply chains.

That said, commodity-specific fundamentals matter even more. Today, we specifically recommend long positions in gold (strong central bank demand and hedge against tariffs and fiscal concerns), copper and aluminum (electrification demand), and oil (attractive roll yield on OPEC discipline), while we are expecting significantly lower European gas prices from 2027, and possibly much earlier under a Russia-Ukraine peace deal.

For 2025, we expect solid total returns of 10% for the BCOM index and 12% for the S&P GSCI index, with total returns for the balance of the year of 4% and 9%, respectively.

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Exhibit 9: We Expect Solid Total Returns of 10% For the BCOM Index and 12% For the S&P GSCI Index

		Historical Performance				GS Forecast	
	Dollar Weight	2022	2023	2024	YTD	Balance of Year	2025
BCOM	**100**	**16**	**-8**	**5**	**6**	**4**	**10**
BCOM ex. Agriculture & Livestock	**63**	**17**	**-10**	**9**	**8**	**6**	**14**
S&P GSCI	**100**	**26**	**-4**	**9**	**3**	**9**	**12**
S&P GSCI ex. Agriculture & Livestock	**73**	**30**	**-3**	**10**	**4**	**12**	**16**
Energy	54	42	-5	10	2	14	17
Industrial Metals	12	-8	-4	3	5	7	12
Precious Metals	8	0	12	26	9	7	17
Agriculture	18	12	-8	0	2	-3	-1
Livestock	9	5	0	20	2	0	2

We highlight the GSCI ex Agriculture & Livestock because we currently don't forecast agriculture and livestock prices, and instead use forwards.

Source: Goldman Sachs Global Investment Research

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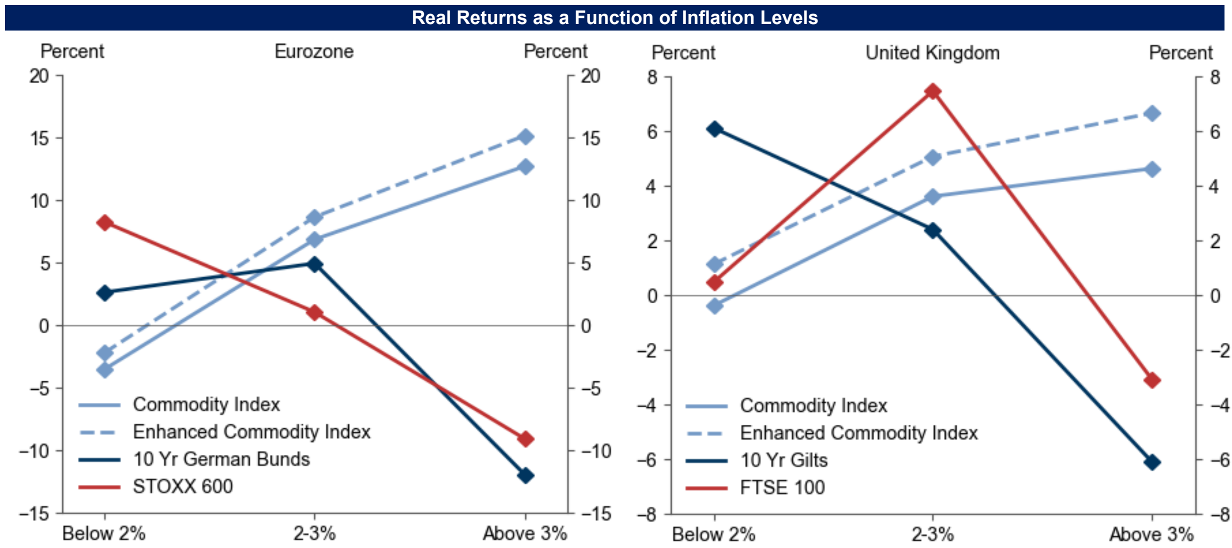
Appendix

Exhibit 10: Also in the Eurozone and the UK, Commodities Outperform Equities and Bonds When Inflation Is High



Left: The data spans 1996Q1 - 2024Q4. We consider real total returns (in $), and we use BCOM for the commodity index. Buckets are based on HICP headline inflation levels. Right: The data spans 1996Q1 - 2024Q4. We consider real total returns (in $), and we use BCOM for the commodity index. Buckets are based on UK CPI headline inflation levels.

Source: Bloomberg, Goldman Sachs Global Investment Research

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We, Lina Thomas, Daan Struyven and Samantha Dart, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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