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MAY 2026

Commodities, Real Assets and the Return of the Physical Economy

The Iran war and energy shock have catapulted commodities up the list of investor priorities. While the market is (at the time of writing) pricing this as short-lived, the change in geopolitical order makes this kind of supply disruption more likely, not necessarily just for oil. Meanwhile, the demands of AI have led to a return of the tangible economy.

The changed role and priorities of the US, the loss of trust in the country and its decision to move away from its post-war role of imposing an order that enabled globalized trade, all make the question of resilience a recurring preoccupation—for portfolio managers as much as for countries.

In addition to the proximate geopolitical nudge, commodities are part of a needed strategic tilt to real assets, distinct from our positive view on gold. Indeed, we would claim that geopolitics plus government debt levels make gold more akin to money than a commodity. In this paper, our focus is other commodities, industrial metals in particular.

Commodities fill a gap in portfolio design and constitute a thematic trade linked to AI, deglobalization/geopolitics and growing resource nationalism. Commodity indices have large energy weightings. That is valid today, but we are less sure strategically, even if we think the energy transition will take much longer than people expect. We discuss the implementation for this via commodities directly, the mining sector or regionally via Latin America.

The last 30 years has seen the build-up of complex global supply chains. As these continue to unravel, the implication, in aggregate, is that both the level and volatility of inflation will increase.

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A structural case for real assets and commodities

The Iran war has put commodities back on the agenda, with oil the only diversifying asset in the thick of the tension. Some might dismiss this episode as a tactical concern, with such occasional shocks being very specific and short in duration. However, we think that there are longer-term lessons for investors. First, the radical change in the geopolitical climate over the last 18 months makes this kind of incident, with a geopolitically led hit to supply, more likely. We would also observe that, for very different reasons, climate change likewise raises the risk of periodic supply disruption, and hence greater inflation volatility. Thus, it seems likely that investors will have to respond to inflation shocks with greater regularity.

The focus of this paper is on strategic asset allocation rather than tactical dynamics. The bigger strategic narrative here is a confluence of factors that elevate the importance of supply chains and imply a higher equilibrium price for many raw materials as well as greater volatility in their prices. This results in part from an increased need for raw materials under the aegis of AI-led growth and in part from the breakdown of assumptions about geopolitical order. A recent example of the latter is the US administration recently urging countries to pay a "security premium" for critical materials sourced from outside China.[1] These forces have very different origins, but both point in the same direction when it comes to raw-material needs.

Doubters of this narrative might retort that the closure of the Strait of Hormuz is a special case. There is nothing quite akin to the urgency of energy needs and the preeminent role that Hormuz plays in energy supply. But we would argue that this is a broader issue than oil and gas. The last 30 years have witnessed the emergence of supply chains of extraordinary and unprecedented complexity with the express objective of lowering costs. This became the dominant paradigm of business practice, economic assumptions and corporate organization across most industries. The new geopolitical reality makes these extended supply chains increasingly untenable. The consequence of the need to rebuild them is not only directionally inflationary but also implies greater volatility of inflation. Economics is always and everywhere "downstream" of politics, even if investors may choose to conveniently forget this for long periods of time. This is the geopolitical manifestation of this observation.

The bigger societal issue here is that an ever-greater share of activity (either measured in economic terms or as a share of mankind's time) appears to happen online, in a fashion seemingly disembodied from the physical world. This is, however, a veneer. In fact, our consumption of physical stuff is greater than ever. This is in part because the extractive nature of an activity like AI via its power consumption and use of raw materials is shielded from view, and in part because of how globalization shifted the locus of primary natural-resource consumption.

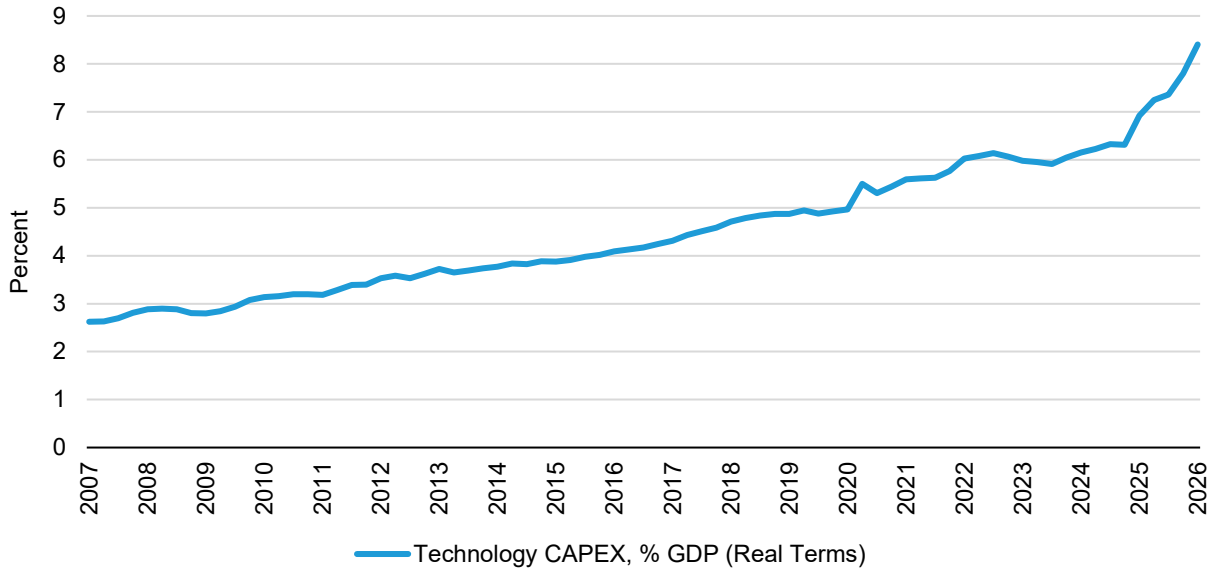
Our recent work points to the idea that higher equilibrium inflation seems a likely consequence of deglobalization and high public debt, with climate change contributing to inflation volatility.[2] This will likely lead to a greater need on the part of investors for real assets. This narrative has acquired an extra urgency with the return of the tangible capex economy. This is apparent both in the rampant energy needs of AI, but also in the associated infrastructure for generation, raw materials, grid build-out, etc. This situation raises the question of whether AI is inflationary or deflationary. There is a potential for it to be radically deflationary if it removes costs, especially labor costs, via the mass substitution of labor. However, following Crawford's categorization of AI as an extractive industry[3], its demand for energy and raw materials has the ability to drive up prices. AI capex in the US is currently running at 8% of gross domestic product (GDP) in real terms (*Display 1*). This is in line with other major capex periods, such as the railway boom in the US and UK and the post-war buildout of the US interstate highway system. However, one difference is the much shorter lifetime of the key assets, in this case computer chips. If one depreciation-adjusts the current capex wave, then it is the most intense in history.

[1] *US trade chief urges allies to pay more for critical minerals*, FT April 22, 2026

[2] Instability: Debt, Inflation and AI's Impact on Investing

[3] See Kate Crawford: *An Atlas of AI* for an excellent discussion of the extractive nature of AI.

DISPLAY 1: TECHNOLOGY CAPEX IS SOARING AS A SHARE OF US GDP



Historical analysis does not guarantee future results.

As of April 29, 2026

Source: Macrobond and AllianceBernstein (AB)

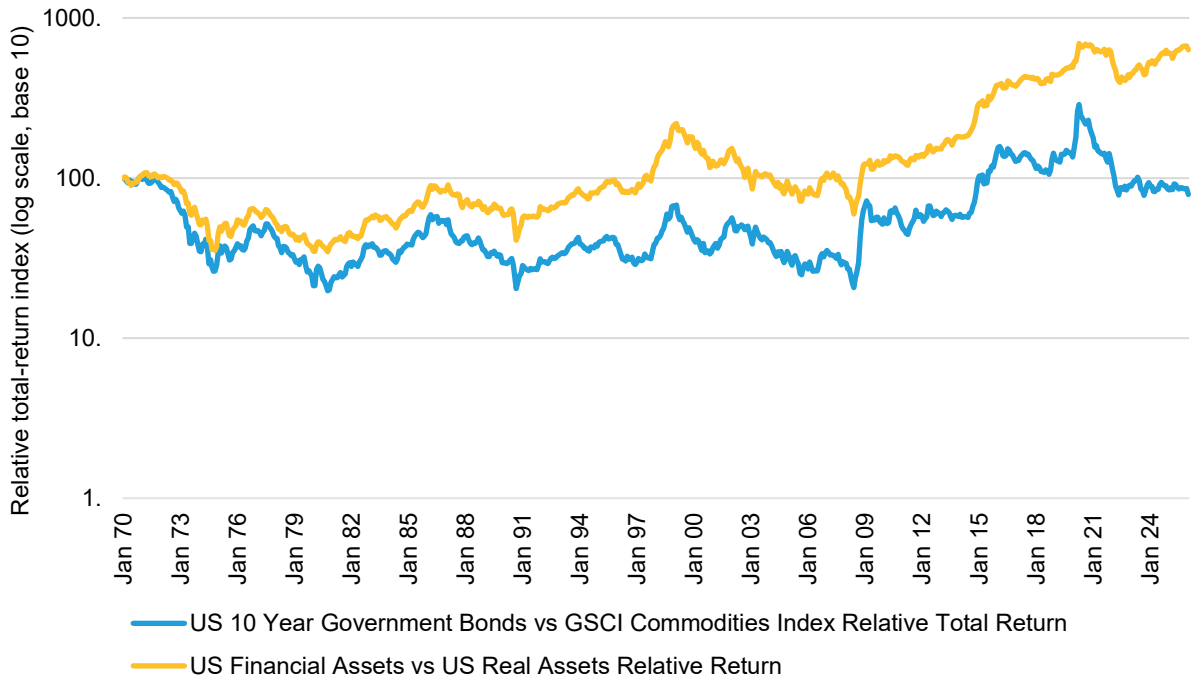
What is a real asset?

For decades, financial assets have generally outperformed real assets, but there is a threat to this trend. We recognize this is a sweeping statement that depends a great deal on what one includes as a "real asset" and how one weights them. The definition of what constitutes a real asset needs to be examined. Should it be an asset whose cash flows are contractually linked to inflation? Should it be an asset whose return shows an empirical correlation with inflation? Should it be an asset that generates positive real return over an extended period of inflation? Should it be an asset that is essential to supply chains? It is hard to give a general answer, because investors with different time horizons will have different needs. But generally speaking, at least when dealing with investors who have long-time horizons, our preferred definition would be weighted toward the idea of an asset that can generate real returns over an extended period of inflation, ideally without financial engineering.

In reality, assets sit on a spectrum between being real and purely financial. For example, equities have attributes of a real asset, to wit, an (albeit imperfect) ability to pass inflation through to dividends and generate an empirically positive real return if inflation is elevated (but not too elevated). However, corporations make use of leverage, and in recent decades they have chosen to buy back stock on a massive scale, an epic levering up of the overall system that is often overlooked in economic analysis. In *Display 2*, we plot two definitions of the relative return of financial vs. real assets on a log scale. The clearest, or narrow, definition is to compare the volatility-adjusted relative returns of nominal bonds (in this case US government 10-year bonds) to commodities (in this case the GSCI). We also show a broader definition: bonds and equities relative to an equal-weighted combination of commodities and real estate.

We stress that both the decision of which assets to include and the necessarily inadequate decisions about how to weight them will sway these representations, but it does not affect the overall conclusion. This shows the strong underperformance of financial assets during the 1970s and during the unwinding of the TMT bubble in the early 2000s. Outside of this time, there has been a general outperformance of financial assets, particularly in the 1990s and post-GFC period. But an outlook of higher equilibrium inflation implies that nominal financial assets perform less well, at least.

DISPLAY 2: TWO DEFINITIONS OF FINANCIAL VS. REAL ASSET PERFORMANCE (LOG SCALE)



Past performance does not guarantee future results.

Financial assets are proxied by an equal-weighted basket of the total returns for US 10-year government bonds and the MSCI US Equity Index. The real-asset series is an equal-weighted basket of the GSCI Commodities Index total return and Case – Shiller US National Real Estate Price Index.

As of April 23, 2026

Source: Macrobond and AB

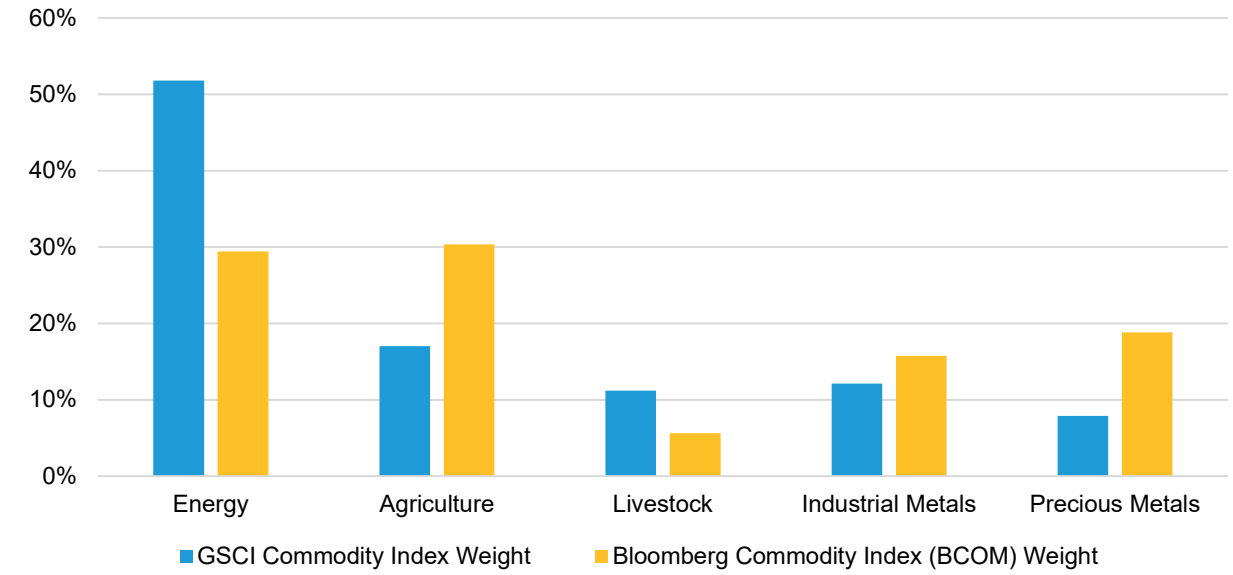
Gold as money and the weighting of commodities

In this note, we focus on the role of commodities in portfolios. Note that we exclude precious metals. We have had a positive view on gold since 2019, and this long-running positive view on precious metals still stands.[4] However, given (1) the break in the geopolitical order and (2) the high levels of public debt across the G7 nations, we think it is no longer right to see gold as a commodity. In light of the current state of the political economy, it should be seen as money. Maybe this will sound like a semantic distinction that some may think is far from the quotidian needs of running a portfolio, but we think that the distinction will start to matter more. A less-positive way of arriving at the same conclusion is to observe that gold (like cryptocurrencies) has no use, so it seems odd to classify it as a commodity.

But, if not gold, then what assets counts as commodities and how should they be weighted? When looking across commodities in a similar way and in a multi-asset context more generally, it should be clear that there is no natural or default way to assign a weight to each asset. A passive investment choice is not possible. Most commodity indices are heavily weighted toward energy (*Display 3*). Given the current uncertainty about the security of oil and gas supplies, maybe that sounds pertinent. But strategically, we are not so sure.

[4] Dancing Through the Lightning Strikes? The Ongoing Case for Gold

DISPLAY 3: SECTOR BREAKDOWN OF GSCI AND BLOOMBERG COMMODITIES INDICES



Past performance does not guarantee future results.

As of April 20, 2026

Source: Bloomberg, S&P Global and AB

The easy approach would be to say that commodities are real assets, so if one wants to increase real asset exposure then just buy a broad commodity index. However, in our view such thinking is lazy and does not adequately respond to the changed environment that investors face. However, the historically high weight of energy in broad commodity indices might not be appropriate for the future. We disagree with those who suggest that fossil fuels are trapped assets, because we think that an energy transition, if indeed such a thing is even possible, will take longer than is currently accepted.[5] However, the shares of the commodities that are economically important seem set to change.

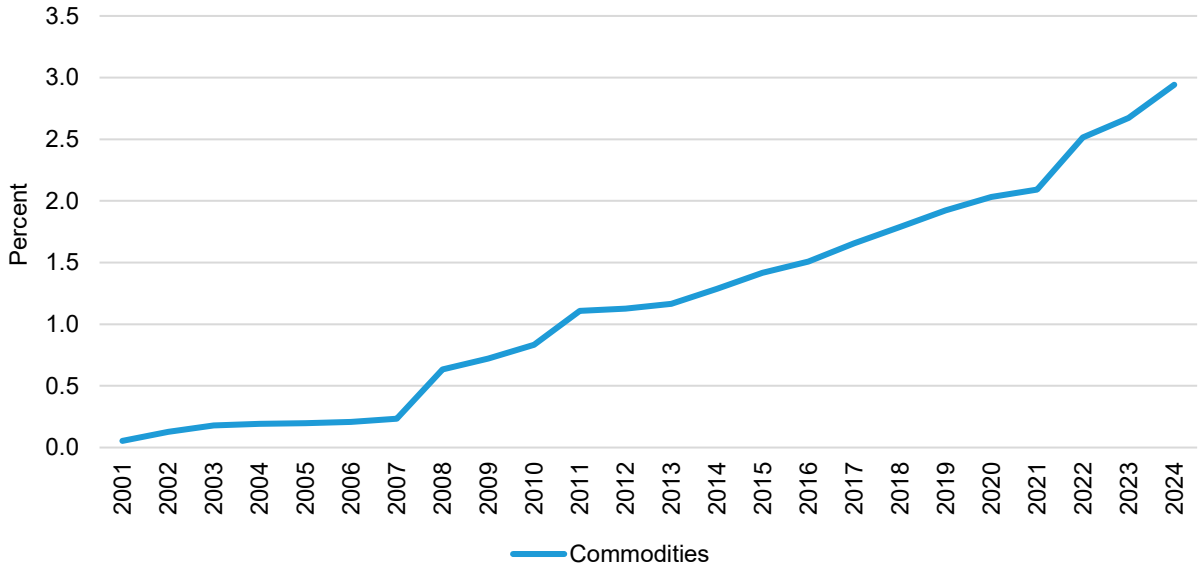
The difficulty with this proposition is that there is a good case to be made that the future relative importance of specific assets or commodities will be different from any point in the last 50 years for which we have good data, because of the confluence of the ending of the US-led post-war order, climate change and the capital needs of the AI economy.

Institutional commodity allocations

Reliable data for institutional allocations to commodities is hard to find. Perhaps the most comprehensive data set we have access to is the asset-allocation data from the US Public Plans Database (*Display 4*), which suggest a structural rise in commodity exposure for US public pension plans over the last 20 years that reaches 3% in the most recent data.

[5] Can the Energy Transition Happen?

DISPLAY 4: AVERAGE COMMODITIES ALLOCATION FOR US STATE AND LOCAL PENSION FUNDS



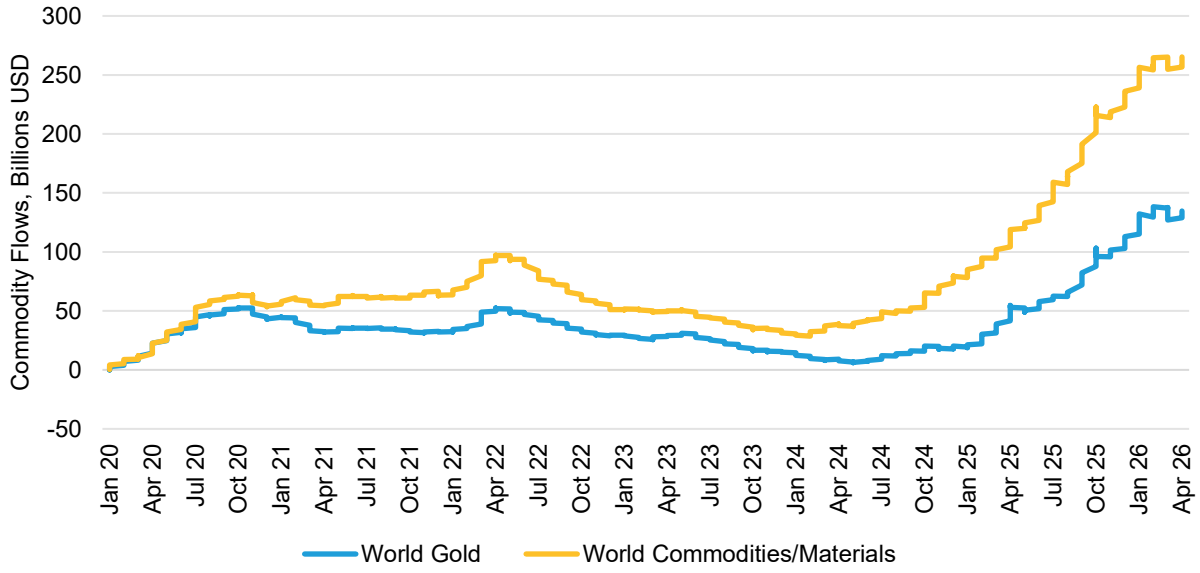
Historical analysis does not guarantee future results.

As of April 1, 2026

Source: Public Plan Database (www.publicplansdata.org) and AB

However, closer inspection of the data reveals a number of caveats. First, the average allocation is significantly skewed by large allocations of a small number of funds, and there are indications that some of the data might be stale. Also, a large portion of the rising allocation is not a result of structurally rising broad commodities allocations but rather the addition of gold exposure by a few funds and the strong rise in the gold price in recent years. As *Display 5* shows, inflows into gold funds over the past five years accounted for nearly half of total commodity-focused ETF and mutual fund inflows.

DISPLAY 5: GOLD AND COMMODITY FUND FLOWS



Historical analysis does not guarantee future results.

As of April 8, 2026

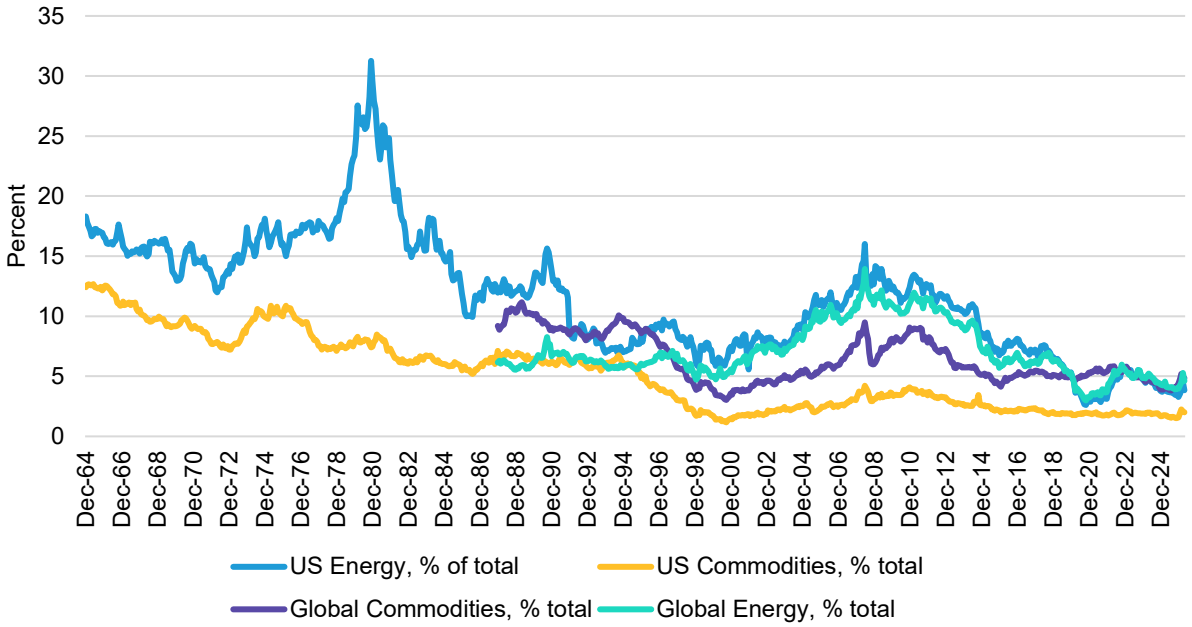
Source: EPFR and AB

On the other hand, a number of large funds in the sample do not disclose commodity exposure directly, but rather group it under a broader allocation to real assets or inflation hedges. Also, an allocation to an active equity manager focused on commodities would also most likely appear under the broader equity allocation. If we viewed this through the lens of the Total Portfolio Approach (which would be our preference—see Portfolio Design as Gesamtkunstwerk: The Total Portfolio Approach), then such an allocation would probably count as commodity exposure. Thus, it is hard to draw a definite conclusion about the structural trends of institutional allocation to commodities.

But data on the relative importance of energy and other commodities in the public and private markets is clearer. As *Display 6* shows, the public-market weight of energy and commodities has been in a structural decline over the past 15 years. A similar decline is visible in private markets as well, where the share of natural resources has been shrinking since the peak in 2016 (*Display 7*).

Seeing the allocation in this fashion fits more closely with our practical experience. Aside from a subset of investors who have allocated to gold (and per our discussion above, we think that should be distinct from commodities), then to the extent that investors ask us about commodities it seems to be a very small part of their exposures. The relative performance of real vs. financial assets sets the stage for the view that they are not an interesting source of return.

DISPLAY 6: ENERGY AND COMMODITY SECTOR WEIGHTS ARE CLOSE TO HISTORIC LOWS

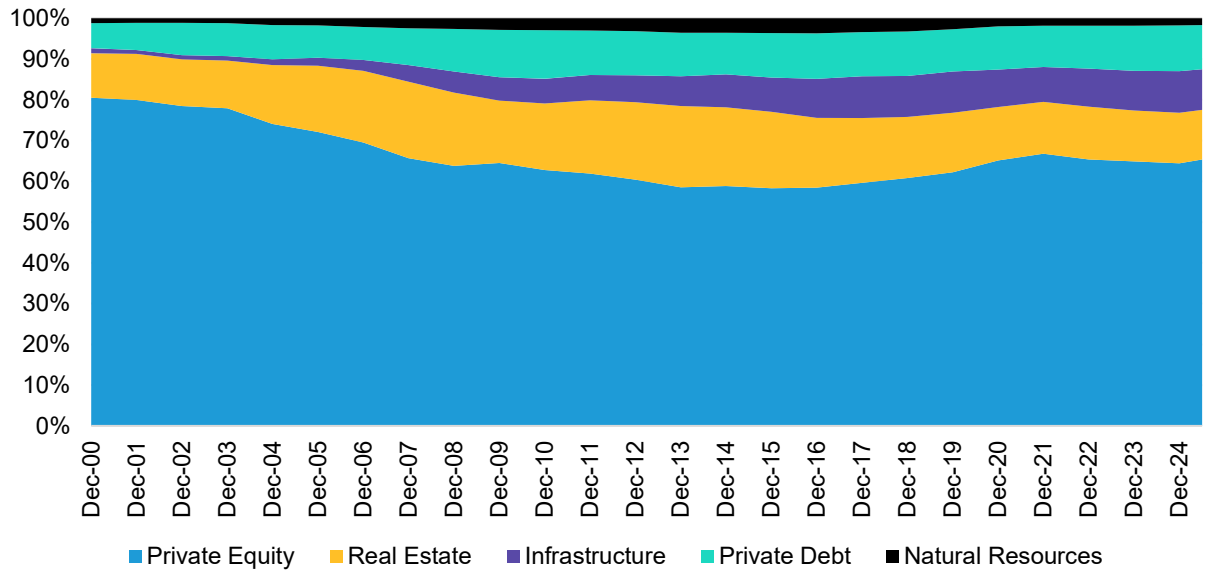


Historical analysis does not guarantee future results.

As of April 26, 2026

Source: Factset and AB

DISPLAY 7: PRIVATE MARKET SHARE OF ASSETS UNDER MANAGEMENT BY CATEGORY



Historical analysis does not guarantee future results.

As of December 31, 2025

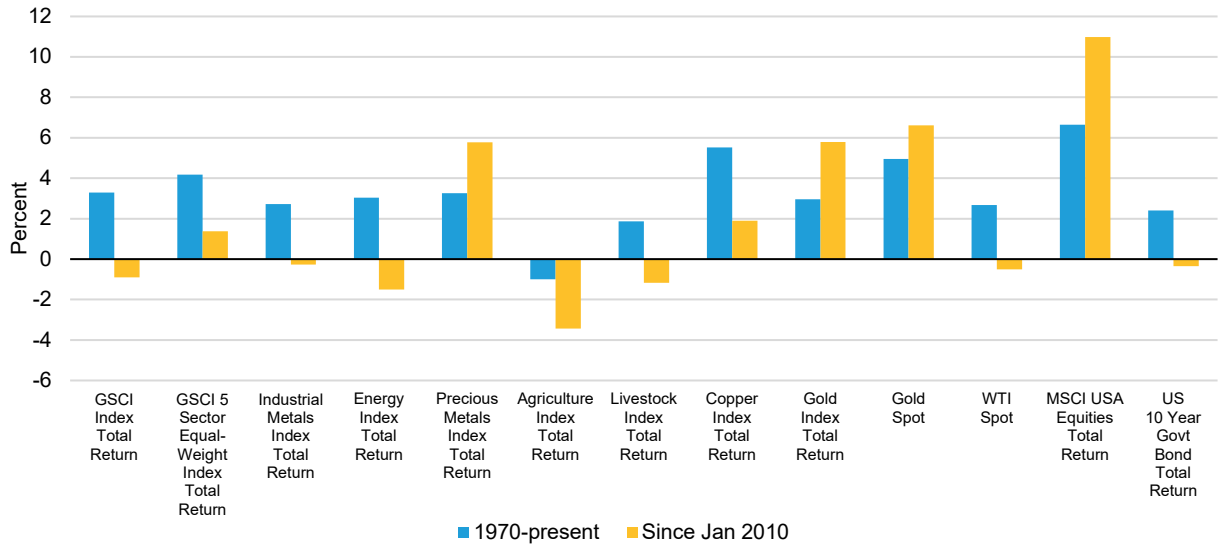
Source: Preqin Pro and AB

What should an allocation to commodities look like?

Is there a gap that commodities fill in a portfolio? In the following section, we analyze returns for the GSCI Index, five individual sub-industries (industrial metals, energy, precious metals, agriculture and livestock), and copper and gold separately. Because some series begin relatively late, such as energy in 1983 and precious metals in 1974, we also include spot price series for gold and West Texas Intermediate Crude oil benchmarks, which extend back to 1970. This allows us to capture the effects of the stagflationary periods of the 1970s.

In all cases except precious metals, real returns over the past 15 years have fallen significantly below their historical averages. Should broad commodity returns revert to their historical average of 4% real (based on an equal-weighted index), they would align with our medium-term forecast for global equity returns.

DISPLAY 8: REAL RETURNS SINCE 1970 AND SINCE 2010



Past performance does not guarantee future results.

Returns are adjusted by the US Consumer Price Index

As of April 23, 2026

Source: Macrobond and AB

However, an important distinction emerges across inflation regimes. One notable advantage of precious metals, copper and energy is that they outperform equities in real terms during high-inflation environments—specifically when inflation exceeds 4% annualized.

DISPLAY 9: REAL COMMODITY RETURNS BY INFLATION BAND

	CPI regime		
	<2%	2-4%	>4%
GSCI Index Total Return	-16.9	9.5	14.5
GSCI 5 Sector Equal-Weight Index Total Return	-8.5	7.6	10.8
Industrial Metals Index Total Return	-6.8	9.7	13.6
Energy Index Total Return	-24.1	14.1	38.7
Precious Metals Index Total Return	3.5	6.9	4.7
Agriculture Index Total Return	-8.1	0.2	10.1
Livestock Index Total Return	-7.5	5.6	7.6
Copper Index Total Return	-4.6	15.3	16.1
Gold Index Total Return	3.6	6.1	2.7
Gold Spot	3.9	8.1	8.1
WTI Spot	-17.8	10.0	19.5
MSCI USA Equities Total Return	9.6	12.9	1.1
US 10 Year Government Bond Total Return	7.0	4.5	-1.8

Past performance does not guarantee future results.

The table shows average real year-over-year return in different US inflation regimes. Inflation is measured by the US Consumer Price Index.

As of April 23, 2026

Source: Macrobond and AB

An important consideration is the state of the business cycle and whether higher inflation is driven by higher growth or whether it is a result of a stagflationary shock. In *Displays 10* and *11* below, we condition inflation regimes based on the growth regime as proxied by the G20 Composite Leading Indicator; an indicator above 100 indicates economic expansion and below 100 indicates a slowdown. Most commodities, especially industrial metals and copper, are procyclical, only producing significantly positive real returns when higher inflation is driven by higher growth. During stagflationary shocks, only energy and gold deliver positive real returns.

DISPLAY 10: AVERAGE REAL YEAR-OVER-YEAR RETURN BY INFLATION REGIME DURING ECONOMIC EXPANSION

CLI > 100	<2%		2-4%		>4%	
	Avg Real YoY (%)	% of Total Months	Avg Real YoY (%)	% of Total Months	Avg Real YoY (%)	% of Total Months
GSCI Index Total Return	-7.7	8.0	14.2	28.7	17.8	21.7
GSCI 5 Sector Equal-Weight Index Total Return	-0.7	8.0	11.7	28.7	15.5	21.8
Industrial Metals Index Total Return	7.5	9.2	19.2	29.9	26.9	17.0
Energy Index Total Return	-12.0	10.5	21.5	32.6	37.1	12.6
Precious Metals Index Total Return	1.2	8.5	8.3	27.6	7.4	20.4
Agriculture Index Total Return	-2.9	8.0	2.2	28.7	14.2	21.7
Livestock Index Total Return	1.8	8.0	7.0	28.7	12.7	21.7
Copper Index Total Return	11.8	9.2	26.5	29.9	30.4	17.0
Gold Index Total Return	1.0	9.4	6.9	30.6	5.3	15.2
Gold Spot	1.7	8.0	9.9	28.7	10.8	21.7
WTI Spot	-3.6	9.9	19.8	31.7	22.1	14.0
MSCI USA Equities Total Return	18.2	8.0	15.0	28.7	5.5	21.7
US 10 Year Government Bond Total Return	1.6	8.0	1.3	28.7	-1.6	21.7

Past performance does not guarantee future results.

CLI stands for Composite Leading Indicator from the OECD for G20 markets. A CLI above 100 indicates economic expansion. Inflation regimes are measured by the US CPI.

As of April 23, 2026

Source: Macrobond and AB

We note, however, that for some of these regimes the sample size is quite small. For instance, stagflationary periods of below-trend economic growth and high inflation are present in only around 10% of total observations (*Display 11*).

DISPLAY 11: AVERAGE REAL YEAR-OVER-YEAR RETURN BY INFLATION REGIME DURING ECONOMIC CONTRACTION

CLI < 100	<2%		2-4%		>4%	
Metric	Avg Real YoY (%)	% of Total Months	Avg Real YoY (%)	% of Total Months	Avg Real YoY (%)	% of Total Months
GSCI Index Total Return	-22.3	13.7	1.0	16.1	8.4	11.8
GSCI 5 Sector Equal-Weight Index Total Return	-13.0	13.7	0.4	16.2	2.0	11.6
Industrial Metals Index Total Return	-15.1	15.7	-5.8	18.5	-9.6	9.7
Energy Index Total Return	-31.2	18.0	2.3	20.4	42.2	5.9
Precious Metals Index Total Return	4.9	14.5	4.6	17.1	-0.1	11.8
Agriculture Index Total Return	-11.1	13.7	-3.5	16.1	2.4	11.8
Livestock Index Total Return	-12.9	13.7	3.1	16.1	-1.8	11.8
Copper Index Total Return	-14.1	15.7	-2.8	18.5	-8.8	9.7
Gold Index Total Return	5.2	16.1	4.7	18.9	-1.3	9.9
Gold Spot	5.2	13.7	4.9	16.1	3.1	11.8
WTI Spot	-26.1	16.9	-5.8	19.7	14.9	7.8
MSCI USA Equities Total Return	4.5	13.7	9.3	16.1	-7.2	11.8
US 10 Year Government Bond Total Return	10.2	13.7	10.1	16.1	-2.1	11.8

Past performance does not guarantee future results.

CLI stands for Composite Leading Indicator from the OECD for G20 markets. A CLI above 100 indicates economic expansion. Inflation regimes are measured by the US CPI index.

As of April 23, 2026

Source: Macrobond and AB

In addition to their inflation beta, another important benefit of commodities in multi-asset portfolios is providing diversification. Below, we repeat the analysis of dividing the sample based on three inflation regimes, but this time we look at the average 12-month rolling correlation with US equities and US bonds. As *Display 12* shows, gold in particular and precious metals more broadly have very low correlation to US equities across all inflation regimes. For the broad commodities index and energy, diversification benefits become stronger with higher levels of inflation.

DISPLAY 12: AVERAGE 12-MONTH ROLLING CORRELATION VS. US EQUITIES BY INFLATION BAND

Asset	<2%	2-4%	>4%
GSCI Index Total Return	0.34	0.10	0.03
GSCI 5 Sector Equal-Weight Index Total Return	0.38	0.15	0.07
Industrial Metals Index Total Return	0.42	0.25	0.29
Energy Index Total Return	0.30	0.08	-0.05
Precious Metals Index Total Return	0.07	0.00	-0.03
Agriculture Index Total Return	0.22	0.15	0.01
Livestock Index Total Return	0.10	-0.02	0.11
Copper Index Total Return	0.42	0.22	0.28
Gold Index Total Return	0.01	-0.03	-0.02
Gold Spot	0.02	-0.05	-0.09
WTI Spot	0.29	0.05	-0.10

Past performance does not guarantee future results.

Inflation regimes are measured by the US CPI.

As of April 23, 2026

Source: Macrobond and AB

The diversification benefits are even stronger for US bonds, where correlation is close to zero or negative across all inflation regimes (*Display 13*).

DISPLAY 13: AVERAGE 12-MONTH ROLLING CORRELATION VS. US 10-YEAR BOND RETURNS BY INFLATION REGIME

Asset	<2%	2-4%	>4%
GSCI Index Total Return	-0.26	-0.08	-0.20
GSCI 5 Sector Equal-Weight Index Total Return	-0.25	-0.11	-0.25
Industrial Metals Index Total Return	-0.20	-0.04	-0.22
Energy Index Total Return	-0.27	-0.05	-0.19
Precious Metals Index Total Return	-0.01	0.00	-0.12
Agriculture Index Total Return	-0.07	-0.05	-0.13
Livestock Index Total Return	-0.08	-0.07	-0.09
Copper Index Total Return	-0.17	-0.01	-0.23
Gold Index Total Return	0.02	0.01	-0.07
Gold Spot	0.03	-0.01	-0.05
WTI Spot	-0.27	-0.06	-0.12

Past performance does not guarantee future results.

Inflation regimes are measured by the US CPI.

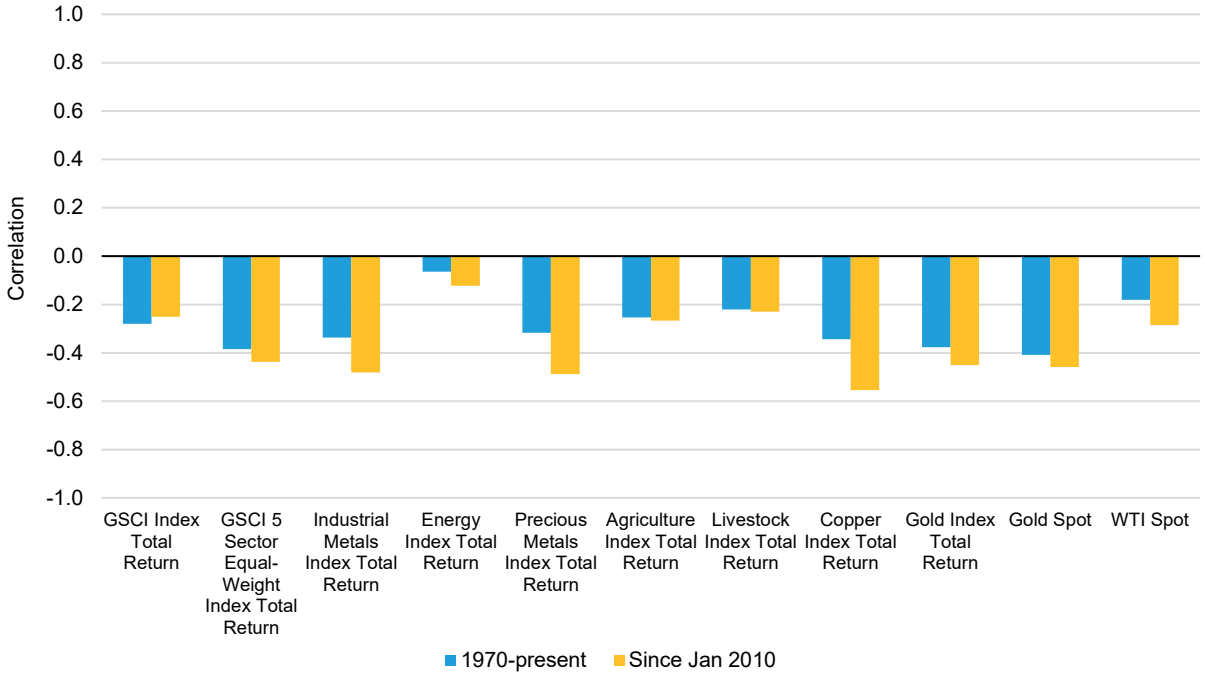
As of April 26, 2026

Source: Macrobond and AB

Commodities and the changing role of the dollar

Yet another benefit of commodities in the current macroeconomic environment is protection against US dollar debasement. As *Display 14* shows, both the broader index and sub-indices have negative correlation with the broad US Dollar DXY Index. The correlation is particularly notable for industrial and precious metals, and has strengthened over the past 15 years.

DISPLAY 14: CORRELATION OF PERFORMANCE VS. BROAD DOLLAR INDEX (DXY)



Past performance does not guarantee future results.

As of April 23, 2026

Source: Macrobond and AB

As we have noted in our previous research, there is a desire among BRICS nations to at least try to de-dollarize. Moreover, should European Union (EU) pension plans hold US long-duration government bonds as a "low risk" asset when the US was recently threatening to invade the territory of an EU country? It doesn't sound ideal. However, despite the rhetoric, so far the demand for liquidity and structural inertia makes it very hard to sell US government bonds, and when foreign buying of US equities is included, there is no evidence of any exodus from US assets. Maybe this will change, though probably not that quickly. Anyway, fiscal sustainability is a G7 problem, not just a US one.

In *Display 15*, we summarize the case for and against the dollar retaining its status. On balance, we think that we have reached peak dollar in the specific sense of its share of central-bank assets and international transactions, but not in exchange-rate terms. We do think that the net result is that the dollar will slowly lose its status as a safe-haven asset. This is a process that has further to go.

DISPLAY 15: THE DOLLAR IS NO LONGER EXCEPTIONAL

The Dollar Will Maintain Reserve Status for Now, but Attempts to De-Dollarize Are Accelerating	
Case for Losing Reserve Status	**Why This Will Take a Long Time**
Fiscal sustainability, though this is a problem for all G7 currencies	Stablecoins could drive increased USD adoption near term
Geopolitics: China and BRICS have an imperative to de-dollarize.	There may be no alternative to the dollar. China won't make the Renminbi convertible.
Trust: Capricious policymaking and the US withdrawing from allies, declining support for democracy, and falling trust in US institutions	The reach of the USD is far greater than previous reserve currencies.
Fed independence, though this is also an issue for other central banks	The absolute US growth rate is lower than in the past, but still exceptional vs. other economies.
	There is "not enough" gold, etc., even adding crypto. Asset-backed currency has limitations.
Conclusion	
Non-US investors hedge more USD exposure.	
There is a possibility of US sovereign risk being priced in and a steeper yield curve.	
There is a role in portfolios for non-fiat assets: gold and crypto.	

Current analysis does not guarantee future results.

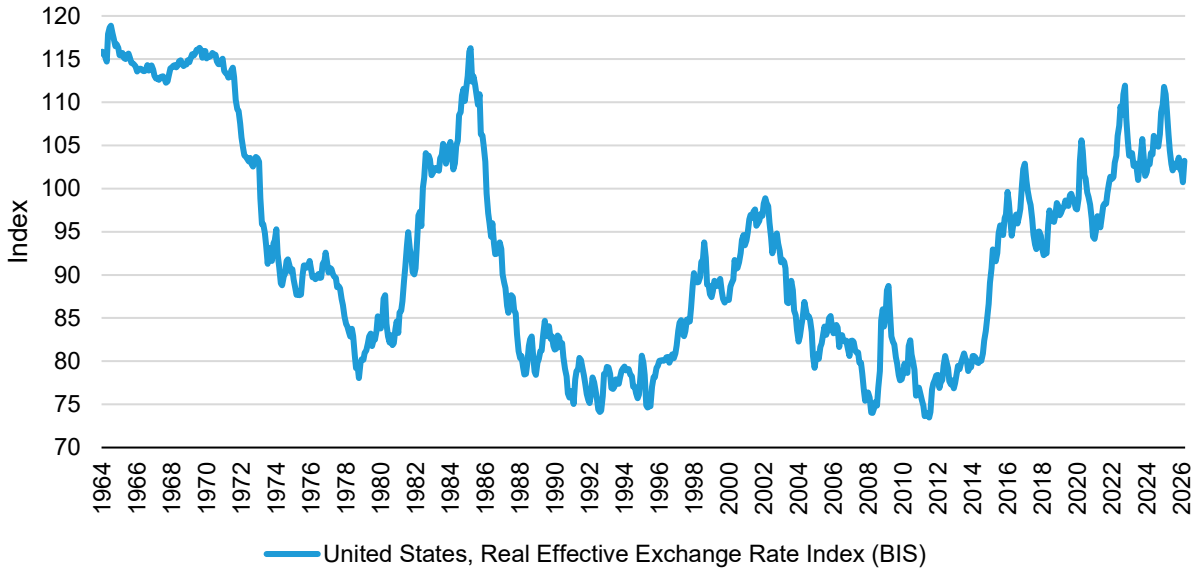
As of February 5, 2026

Source: AB

Probably the strongest force in favor of the dollar retaining its status is the lack of any credible alternative and the observation that prior shifts in reserve currency have taken decades. More recent support comes via the Guiding and Establishing National Innovation for U.S. Stablecoins (GENIUS) Act, in the clear US preference for stablecoins over central bank digital currencies (CBDCs) as digital money. With the vast majority of stablecoins being dollar-denominated, their issuers have now emerged as equivalent to a large country in their appetite to buy short-maturity US Treasuries. However, set against this, we think that the confluence of fiscal sustainability, geopolitics and questions of trust will lead non-US investors to hedge more of their US dollar exposure as it becomes less of a safe-haven asset. We stress that this can be a very gradual process.

As *Display 16* shows, the real effective US dollar exchange rate is still above its historical average suggesting there is room for further dollar weakness. The weak performance of commodities since 2010 that we discussed earlier coincided with the structural appreciation of the dollar. If the dollar continues to weaken, this structural headwind should turn into long-term support for commodity returns.

DISPLAY 16: US DOLLAR REAL EFFECTIVE EXCHANGE RATE



Past performance does not guarantee future results.

As of April 29, 2026

Source: BIS, Macrobond and AB

Global demographics and commodities

Another strong structural support for long term commodity demand is the growing share of the global population entering the middle class. *Display 17* shows the world population divided into four income levels as defined by an independent Swedish foundation Gapminder. Level One represents people living in extreme poverty at $1–$2 per day, and level two is low income at around $2–$8 per day, where basic needs are partially met. Level Three represents middle class, with income of $8–$32 per day, where life becomes more stable and comfortable, basic needs are met and there is disposable income left over. And Level Four is the high-income category at more than $32 per day. According to Gapmider's projections, more than two billion people are expected to move from Level Two to Level Three by 2040 relative to 2017.

As more people migrate to the middle class and their disposable income grows, there are a number of implications for consumption across different commodity categories:

Food & Protein: Diets undergo a fundamental transformation. Caloric intake rises overall, and consumption shifts away from starchy staples toward more varied, protein-rich meals. Demand for livestock products accelerates sharply as meat, dairy and eggs are consumed regularly rather than as a luxury. This in turn drives up demand for grain and soy used as animal feed, putting sustained pressure on land, water and supply chains built around a very different consumption baseline.

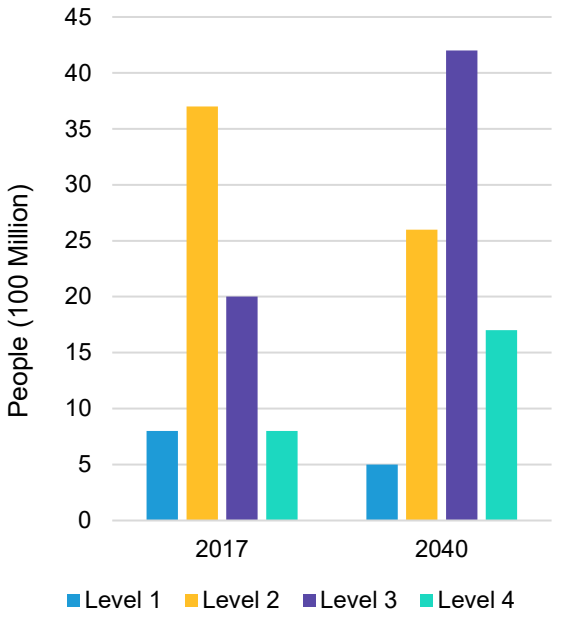
Industrial Metals & Building Materials: Rising incomes enable families to upgrade from single-room or informal dwellings to multi-room houses with solid roofs, sealed windows and secure doors, which require steel, cement, timber, glass and insulation materials. As disposable income grows, spending shifts toward home furnishings and consumer goods, such as refrigerators, stoves, washing machines, televisions and laptops. This translates to higher demand for copper, aluminum and rare-earth metals. Higher income also unlocks personal mobility, as families buy a first motorbike or moped and eventually a basic car.

Energy: Demand rises on multiple fronts simultaneously. At home, the shift to electric stoves, refrigerators, air conditioning units and other appliances drives a step-change in residential electricity consumption. The desire for mobility necessitates expanding public-transit networks and first-time ownership of motorbikes and cars translates into higher demand for oil and, increasingly, electricity.

These changes, multiplied across billions of people, create substantial and durable demand for the physical economy. And as *Display 18* shows, growth of the global middle class is going to be accompanied by continued urbanization. The share of urban

population is currently around 58% and is projected to grow to nearly 65% over the next 15 years. This trend adds further structural demand for building construction, necessary infrastructure upgrades and electrification.

DISPLAY 17: THE GLOBAL MIDDLE CLASS IS EXPANDING: THE LEVEL 2 TO LEVEL 3 INCREASE

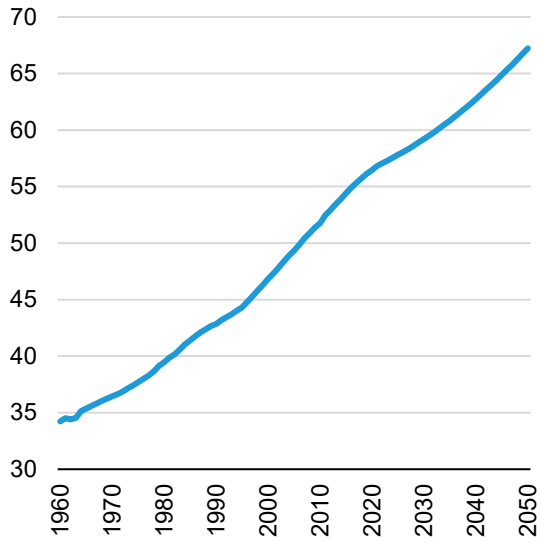


Historical analysis and forecasts do not guarantee future results.

Gapminder divides the world's population into four income levels based on daily household income in PPP-adjusted dollars: Level 1 (under $2/day, extreme poverty), Level 2 ($2–$8/day, basic needs partially met), Level 3 ($8–$32/day, stable middle-income living), and Level 4 (over $32/day, high-income living). These levels describe not just income but the material realities of daily life. For full definitions see: gapminder.org/fw/income-levels. As of April 28, 2026

Source: Gapminder based on PovcalNet, World Bank and IMF and AB

DISPLAY 18: THE GLOBAL SHARE OF URBAN POPULATION IS PROJECTED TO GROW



Past performance does not guarantee future results.

As of April 29, 2026

Source: Macrobond, World Bank and AB

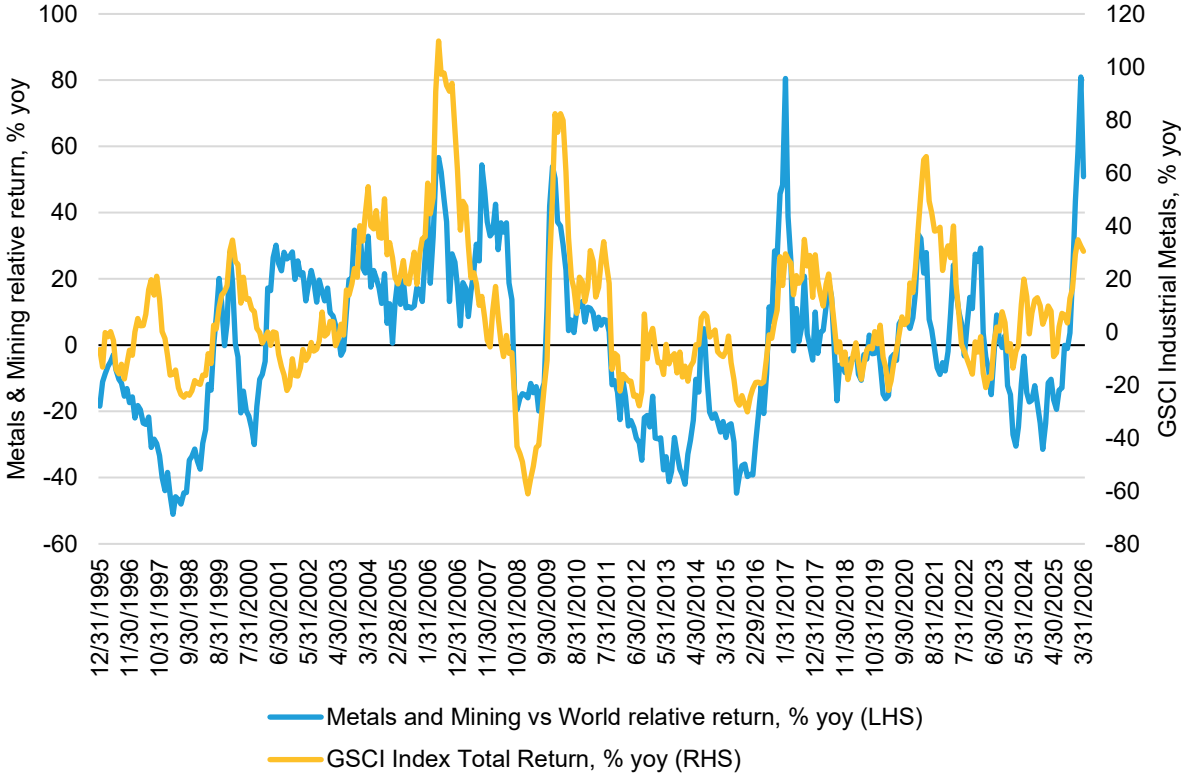
Implementation

We already have a structural allocation to gold. We covered the rationale of this exposure in depth in the previous note, so we will not repeat it here.[6] In light of our view of the return to a physical economy, we think the best *strategic* complement to this position is to add exposure to industrial metals rather than broader commodity exposure. In this final section, we consider the best way to implement this view in portfolios—either in the commodities directly or via commodity-lined equities.

As we show in *Display 19*, the relative performance of metals and mining stocks is closely linked with the performance of a global commodity index.

[6] Dancing Through the Lightning Strikes? The Ongoing Case for Gold

DISPLAY 19: METALS AND MINING EQUITY PERFORMANCE AND INDUSTRIAL METAL PRICES



Past performance does not guarantee future results.

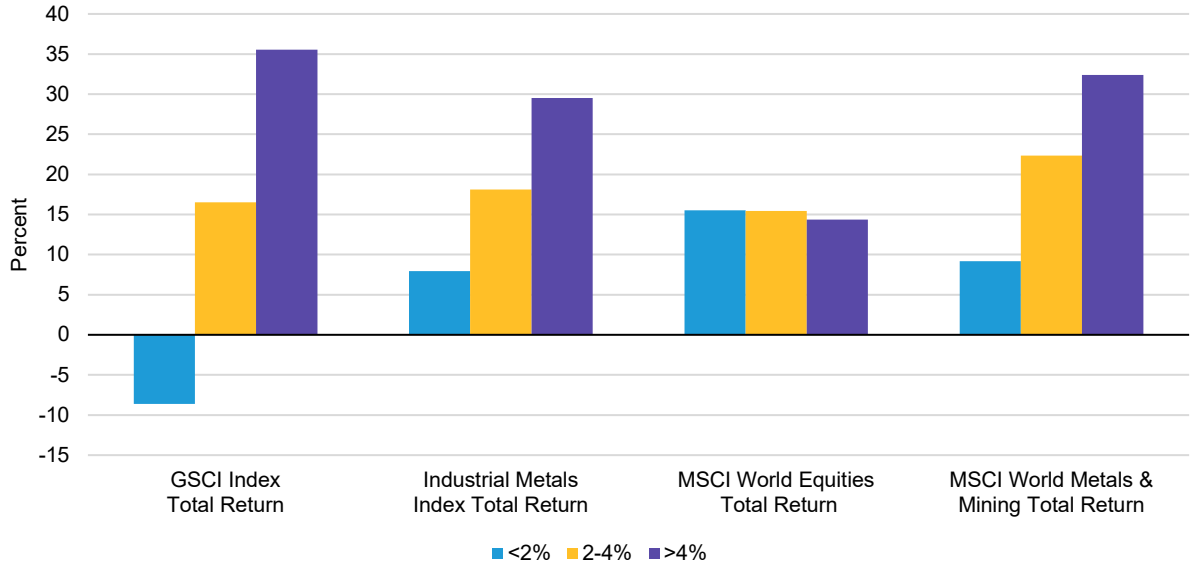
As of April 26, 2026

Source: Macrobond and AB

And as *Displays 20* and *21* illustrate, metals and mining equities provide an additional benefit for inflation protection compared with industrial-metals futures. In the periods of economic expansion when inflation is either in the 2%–4% range or above 4%, metals and mining equities historically tend to outperform both industrial-metals futures and the broader market. And in periods of economic contraction, they also offer better protection in stagflationary environments when inflation is above 4%.

The conclusion is that for investors who require income, there is an explicit reason to hold equities. For other investors, it depends on their desired trade-off between income and equity beta.

DISPLAY 20: RETURNS BY INFLATION REGIME AND ECONOMIC EXPANSION

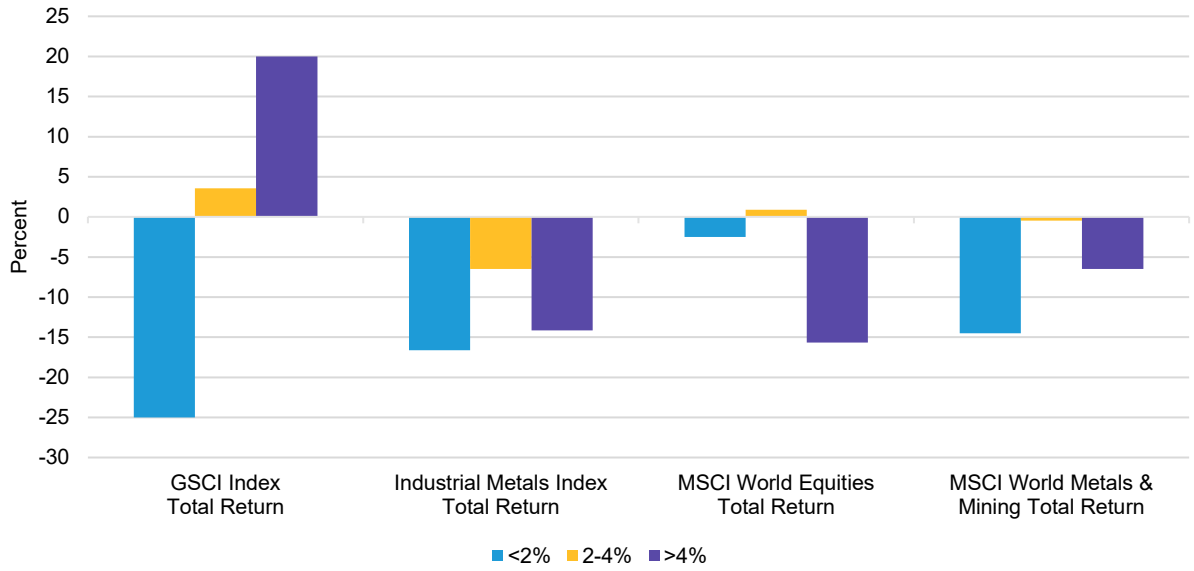


Past performance does not guarantee future results.

Note: Analysis covers the period from December 1994 to March 2026. CLI stands for Composite Leading Indicator from OECD for G20 markets. Above 100 indicates economic expansion. Inflation regimes are measured by US CPI index.

Source: Macrobond and AB

DISPLAY 21: RETURNS BY INFLATION REGIME AND ECONOMIC CONTRACTION



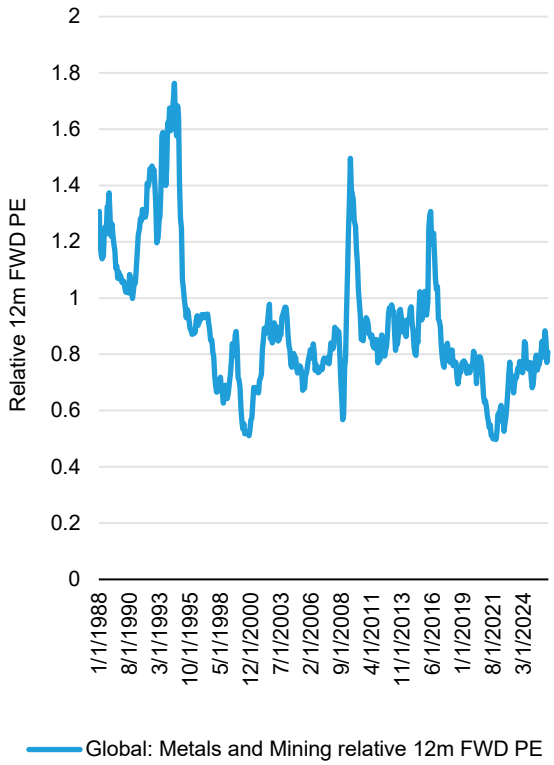
Past performance does not guarantee future results.

Note: Analysis covers the period from December 1994 to March 2026. CLI stands for Composite Leading Indicator from OECD for G20 markets. Above 100 indicates economic expansion. Inflation regimes are measured by US CPI index.

Source: Macrobond and AB

The metals and mining sector valuation is undemanding, in our view. On a 12-month forward price/earnings (PE) basis, the sector trades at a discount to the broader market and in line with its historical average (*Display 20*). On price to book value, the valuation is now in line with the broader market (*Displays 22* and *23*).

DISPLAY 22: METALS & MINING RELATIVE 12-MONTH FORWARD PE RATIO

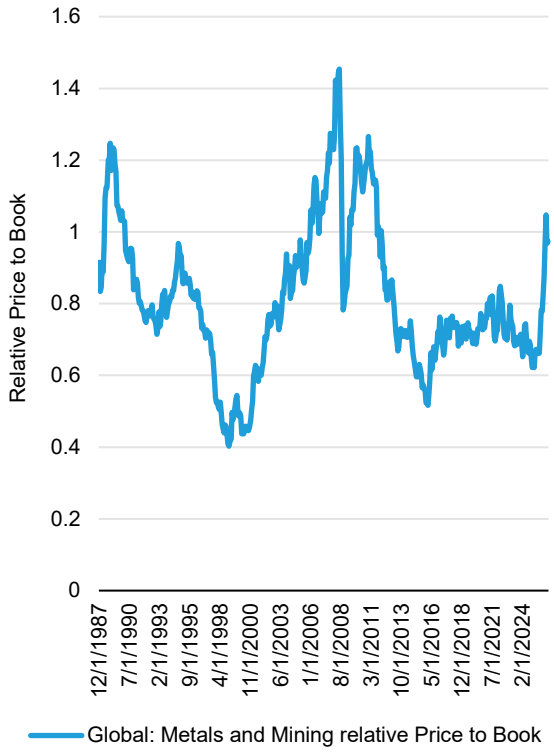


Past performance does not guarantee future results. There is no guarantee that any estimates or forecasts will be realized.

As of April 28, 2026

Source: Factset and AB

DISPLAY 23: METALS & MINING RELATIVE PRICE TO BOOK VALUE RATIO



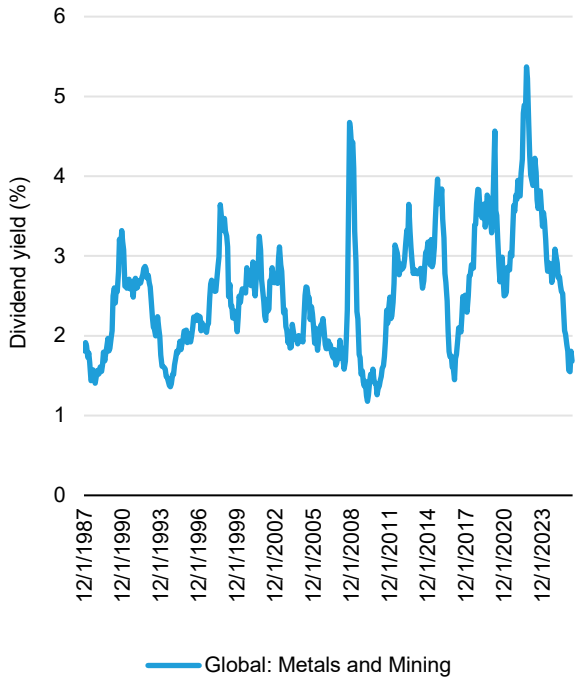
Past performance does not guarantee future results. There is no guarantee that any estimates or forecasts will be realized.

As of April 28, 2026

Source: Factset and AB

Another thing to note is that metals and mining was historically viewed as an attractive source of dividend income in the overall market, but its dividend yield has been trending down over the last couple of years and is currently around the same level as the broader market (*Display 24*). And as *Display 25* shows, analysts have been upgrading their earnings estimates for metals and mining companies since the middle of 2025. The current earnings-revisions balance is approaching elevated levels and could present a tactical headwind.

DISPLAY 24: GLOBAL METALS & MINING ABSOLUTE DIVIDEND YIELD

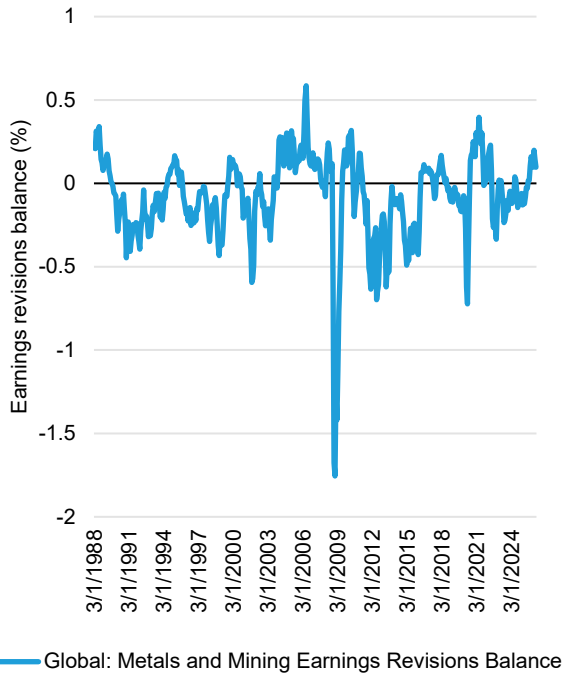


Past performance does not guarantee future results.

As of April 28, 2026

Source: Factset and AB

DISPLAY 25: GLOBAL METALS & MINING EARNINGS REVISIONS



Past performance does not guarantee future results.

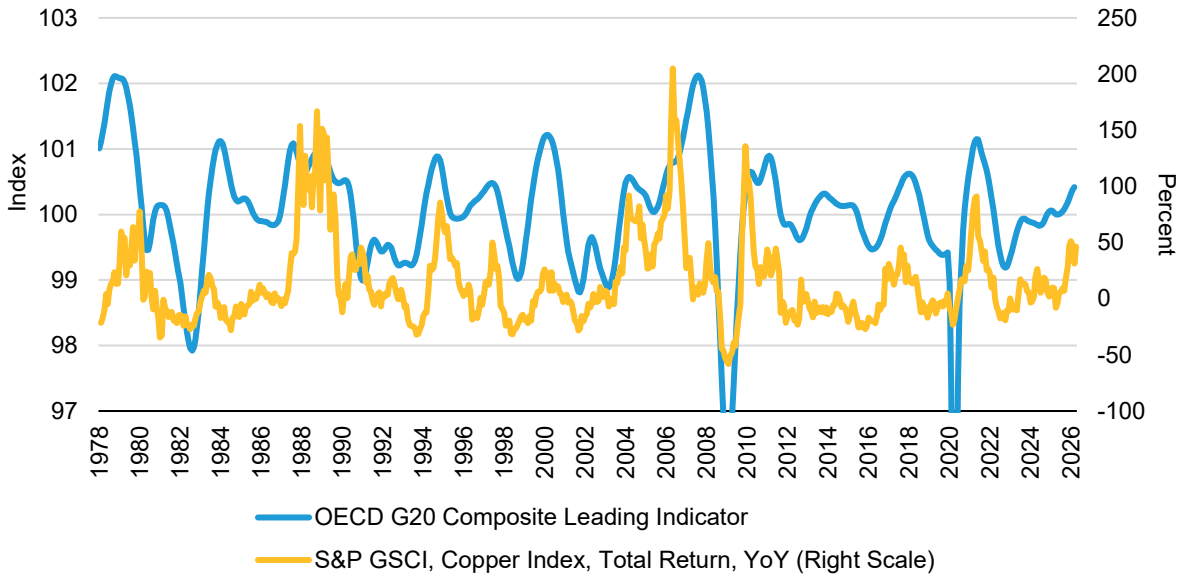
As of April 28, 2026

Source: Factset and AB

Copper

If we view exposure to industrial metals not only through the lens of historical contribution to returns and ability to offer some forms of diversification, but also as a thematic trade, then copper stands out as being arguably the most important part. Within industrial metals, copper is the most exposed to the structural tailwinds of AI-driven energy-demand growth, an accelerating energy transition and even higher defense spending. Thus, copper might be the most actionable and specific way to add commodity exposure to multi-asset portfolios; in this section, we examine the short-term and long-term outlook for copper in more detail. As *Display 26* shows, copper also remains closely tied to the global business cycle in the near-term. If the recent stagflationary shock of the Iran war worsens, then the tactical, short-term outlook is negative.

DISPLAY 26: COPPER'S TOTAL RETURN IS CLOSELY LINKED TO G20 COMPOSITE LEADING INDICATOR



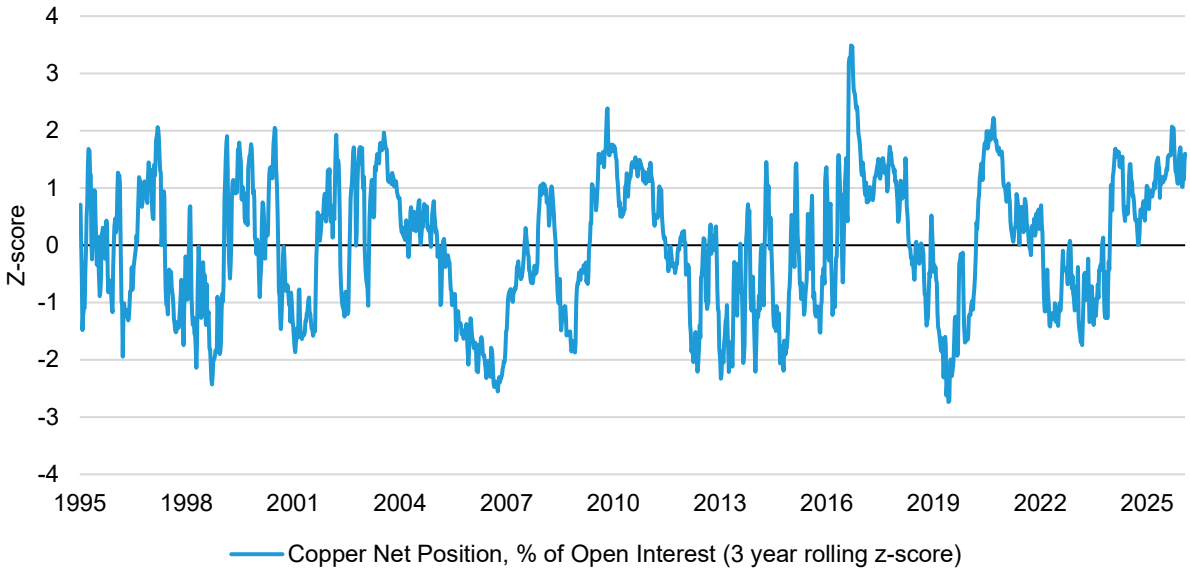
Past performance does not guarantee future results.

As of April 29, 2026

Source: Macrobond, OECD, S&P Global and AB

We also note that over the last few years, investors' position in copper has increased and is currently almost two standard deviations above its historical average. Such concentration presents near-term risk, especially in light of any potential weakening of the economic growth outlook.

DISPLAY 27: FUTURES POSITIONING IN COPPER IS ELEVATED COMPARED WITH HISTORY



Past performance does not guarantee future results.

As of April 29, 2026

Source: CFTC, Macrobond and AB

The link to the cycle and the buildup in investor positioning both point to the need for some tactical caution. However, time horizon matters a lot. *Display 28* shows that over the next 15 years, the share of copper demand from cyclical core economic activities will shrink while most new demand will be supported by less economically sensitive structural sources of demand—the energy transition, AI and defense spending.

A similar dynamic is playing out in China. The construction boom from the early 2000s that lasted through 2021 was a major driver of copper demand, but the real estate sector continues to languish in the aftermath of the Evergrande crisis and will likely remain a drag on near-term demand.

That said, construction is increasingly being replaced as China's primary source of copper demand. According to S&P Global, copper demand from construction is forecast to be roughly flat through 2040, while demand from electrification and the energy transition is projected to grow by nearly 60% over the same period.[7] This provides support for the positive long-term outlook for copper.

The Iran conflict will also accelerate the energy transition, both in the short run and over more strategic time horizons. According to Bernstein's Energy & Power research team, the wake of the 2022 Ukraine invasion saw a sharp increase in solar-panel installations, which had increased threefold from their 2020 level by the end of 2025.[8] And while electric vehicle (EV) sales have plateaued outside of China in recent years, there are already signs of strong renewed consumer interest in Europe and South Asian countries in particular, driven by the recent surge in oil prices.[9] According to S&P Global Research, EVs require 2.9 times more copper than a conventional car. The associated EV charging infrastructure is copper intensive, as well.

More strategically, the conflict serves as a stark reminder of the systemic vulnerabilities inherent in fossil-fuel dependence. In an era defined by recurring geopolitical instability, energy security can no longer be guaranteed through hydrocarbon supply chains that are increasingly exposed to regional shocks. Nations must urgently accelerate investment in renewable energy infrastructure and grid-scale battery storage, which is becoming a cornerstone of national security strategy.

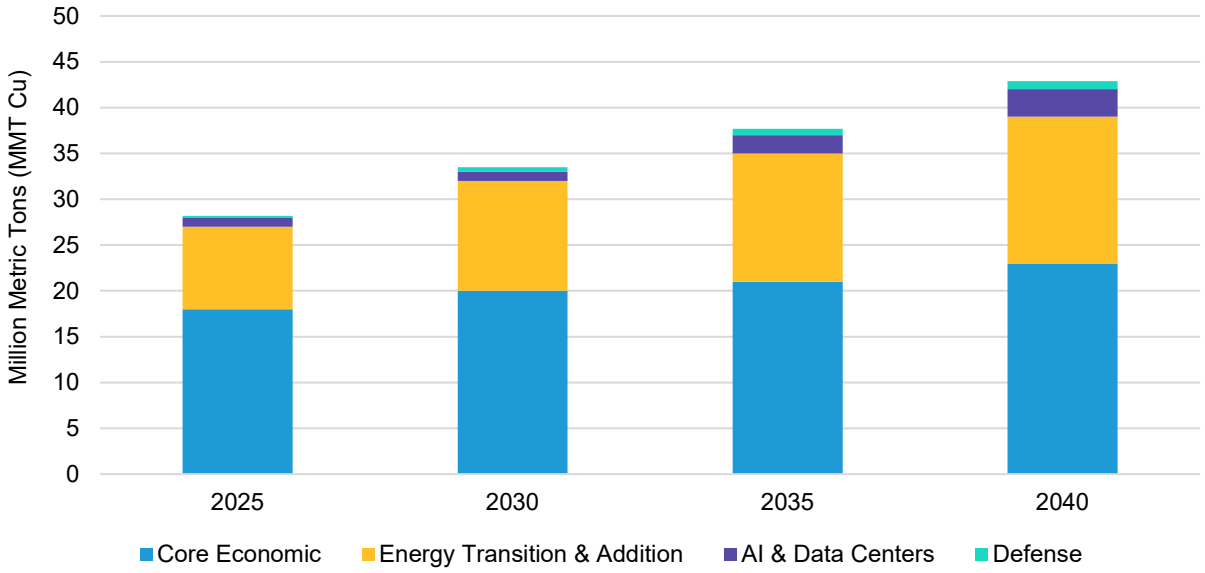
Rising geopolitical tensions should also raise the defense industry's copper demand, which was already projected to triple by 2040. While it is a small share of overall supply, it plays a strategic role where demand is highly inelastic and substitution is difficult (*Display 28*). This is part of the broader theme of growing resource nationalism, which we expect to be a semi-permanent feature of our new geopolitical reality.

[7] S&P Global. *Copper in the Age of AI: Challenges of Electrification*. S&P Global Special Report, 2026. Available at: https://www.spglobal.com/en/research-insights/special-reports/copper-in-the-age-of-ai [Accessed: April 28, 2026]

[8] Venkateswaran, Deepa, and Rory Graham-Watson. "Five Lessons from Europe's 2022 Energy Crisis Relevant Today." *Bernstein Energy & Power Research*, April 1, 2026.

[9] See for example: Mooney, Attracta, Kana Inagaki, Nassos Stylianou, and Jana Tauschinski. "EV Ownership at 'Tipping Point' in Many Parts of the World, Experts Say." *Financial Times*, London. Available at: https://www.ft.com/content/ef33078a-bdd1-48fa-a602-69c38e139d7a [Accessed: April 28, 2026]

DISPLAY 28: GLOBAL COPPER DEMAND BY CATEGORY



Past performance does not guarantee future results.

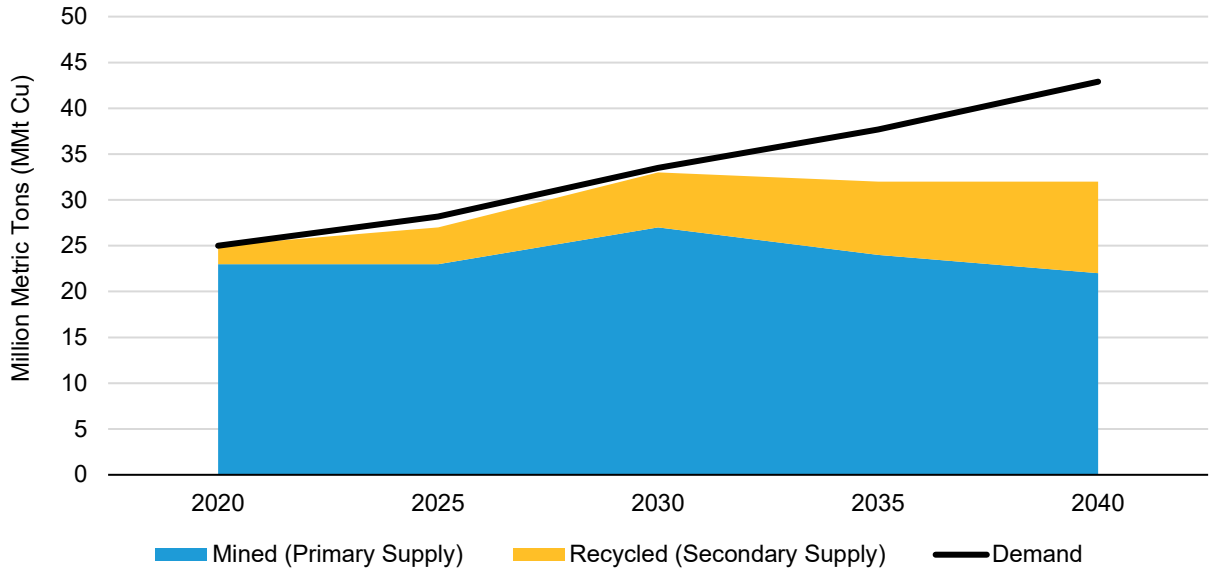
Note: The chart is adapted from S&P Global. *Copper in the Age of AI: Challenges of Electrification.* S&P Global Special Report, 2026. Available at: https://www.spglobal.com/en/research-insights/special-reports/copper-in-the-age-of-ai [Accessed: April 28, 2026]

As of January 8, 2026

Source: S&P Global and AB

Meanwhile, new supply is increasingly constrained by limits on exploration, rising operational costs and declining output from aging mines. Secondary supply from recycling can help somewhat but is unlikely to be enough to meet growing demand. As such, in *Display 29* we show the forecast material gap between expected demand and supply over the next decade and beyond. The price for potential copper substitutes, such as aluminum and silver, has climbed a lot in recent years as well, limiting the potential substitution effects.

DISPLAY 29: THE COPPER DEMAND VS. SUPPLY GAP IS PROJECTED TO GROW OVER THE NEXT DECADE AND BEYOND



There is no guarantee that any estimates or forecasts will be realized.

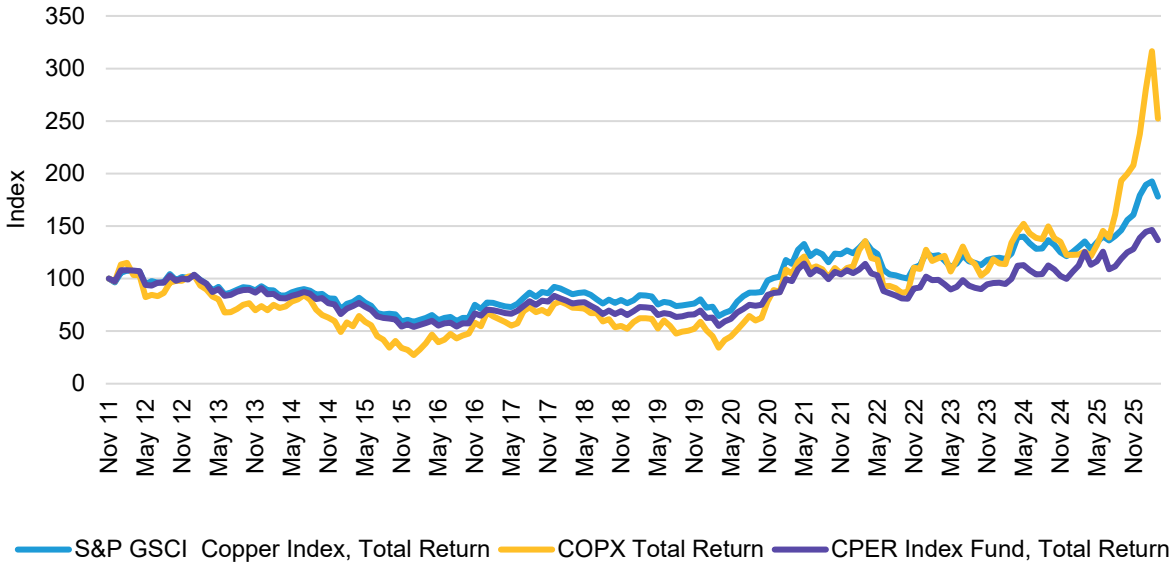
Note: The chart is adapted from S&P Global. *Copper in the Age of AI: Challenges of Electrification.* S&P Global Special Report, 2026. Available at: https://www.spglobal.com/en/research-insights/special-reports/copper-in-the-age-of-ai [Accessed: April 28, 2026]

Source: S&P Global and AB

What's the best way to get exposure to copper?

Outside of single-stock investing, equity-basket investing or active management, the two most accessible passive investment options for copper exposure are the COPX equity index and CPER Copper Futures Index Fund. The index fund generally lags the S&P GSCI Copper Index because it incurs costs from rolling futures contracts. The equity index tracks the copper price closely over time, but with significantly more volatility. Also, over the last year or so, equity performance has run ahead of copper's price, having priced in a large part of the favorable structural outlook.

DISPLAY 30: COMPARING COPPER INVESTMENTS



Past performance does not guarantee future results.

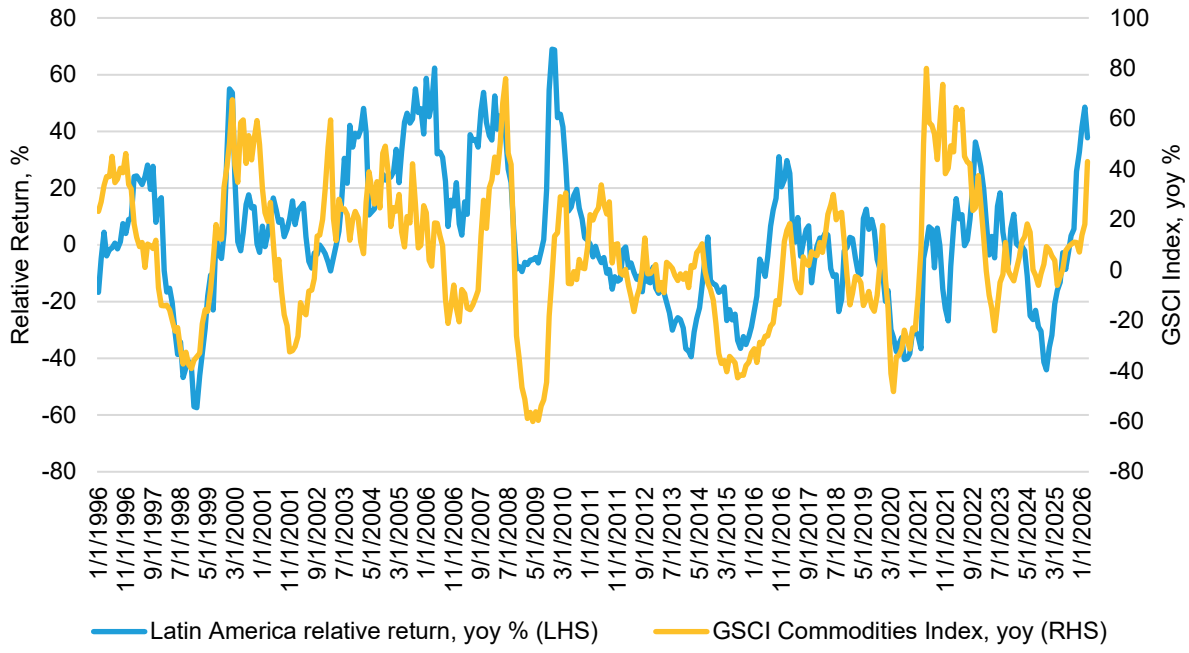
As of March 31, 2026

Source: Bloomberg and AB

Could Latin America be a structural beneficiary of the return of the physical economy?

A final option for copper implementation is regional exposure to Latin America. As a key exporter of oil, copper, agriculture and other commodities, the region is well placed to benefit from the return of the physical economy. As *Displays 31* and *32* show, it outperforms global equities in periods of higher commodity prices and, while the link is not always consistent, it is also a beneficiary of a weaker US dollar.

DISPLAY 31: LATAM VS MSCI ACWI RELATIVE RETURN AND COMMODITIES PERFORMANCE

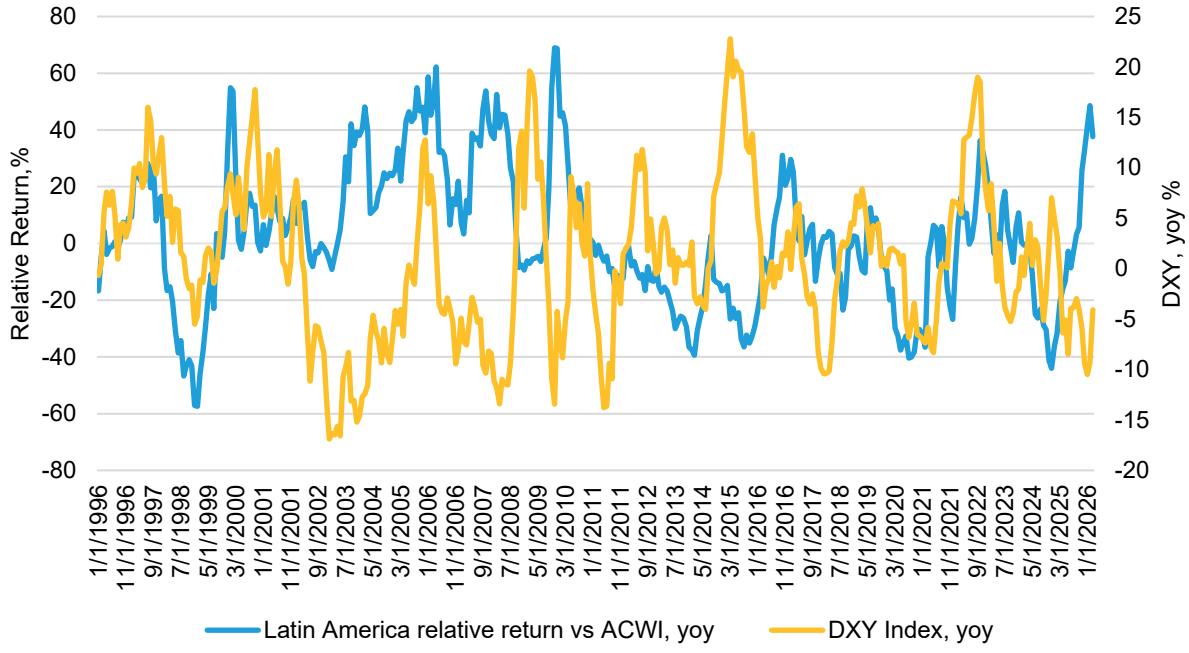


Past performance does not guarantee future results.

As of April 23, 2026

Source: Factset and AB

DISPLAY 32: LATAM VS. MSCI ACWI RELATIVE RETURN VS. DXY (YEAR OVER YEAR)



Past performance does not guarantee future results.

As of April 26, 2026

Source: Macrobond and AB

One could, perhaps, counter this case and observe that commodities do well when the dollar is weak, merely by virtue of commodities being conventionally priced in dollars (*pace* new agreements emerging in recent years). At the same time, emerging-market countries tend to outperform when the dollar is weak, so perhaps this is merely an FX story? To quantify the link further, we ran a regression of the MSCI Latin America Equity Index relative return against the MSCI All Country World Index from January 1996 through March 2026 against the change in the GSCI commodity index and broad dollar index (DXY). The summary (*Display 33*) concludes that both drivers are statistically significant, but that commodity performance is more important for relative returns—over and above the influence of US dollar weakness.

DISPLAY 33: LATIN AMERICA RELATIVE PERFORMANCE VS MSCI ALL-COUNTRY WORLD

Adjusted R-Sq	**18.30%**	
Variable	**Estimate**	**t-stat**
Intercept	0.90	0.76
GSCI Total Return Index	0.36	8.22
DXY Index	–0.30	–1.99

Past performance does not guarantee future results.

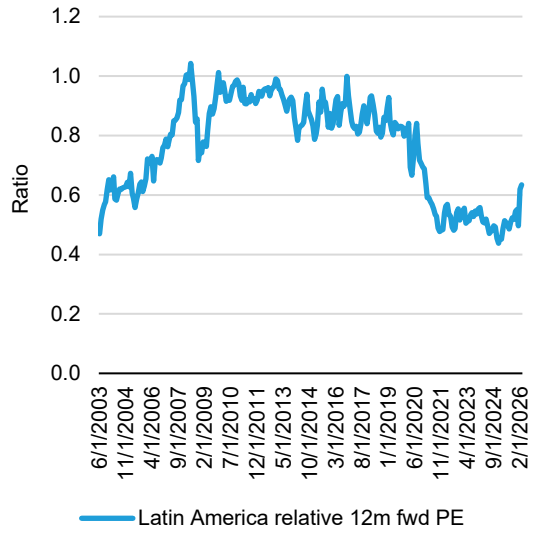
The table shows summary results from a regression of the relative year-over-year MSCI Latin American Equity Index total return vs. the MSCI All-Country World Index against the year-over-year return of the GSCI Commodities Total Return Index and DXY Index. The regression covers the period from January 1996 through March 2026.

As of April 26,2026

Source: Macrobond and AB

The region still trades at a discount to the global market index (*Display 34*) and offers a pickup in dividend yield (*Display 35*).

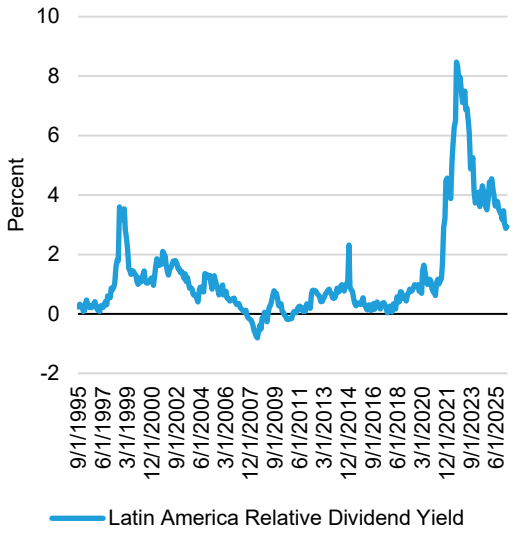
DISPLAY 34: LATIN AMERICA TRADES AT A DISCOUNT TO THE GLOBAL MARKET



Past performance does not guarantee future results.

The global market is represented by MSCI All Country World Index
As of April 26, 2026
Source: Factset and AB

DISPLAY 35: LATIN AMERICA VS. GLOBAL MARKET DIVIDEND YIELD

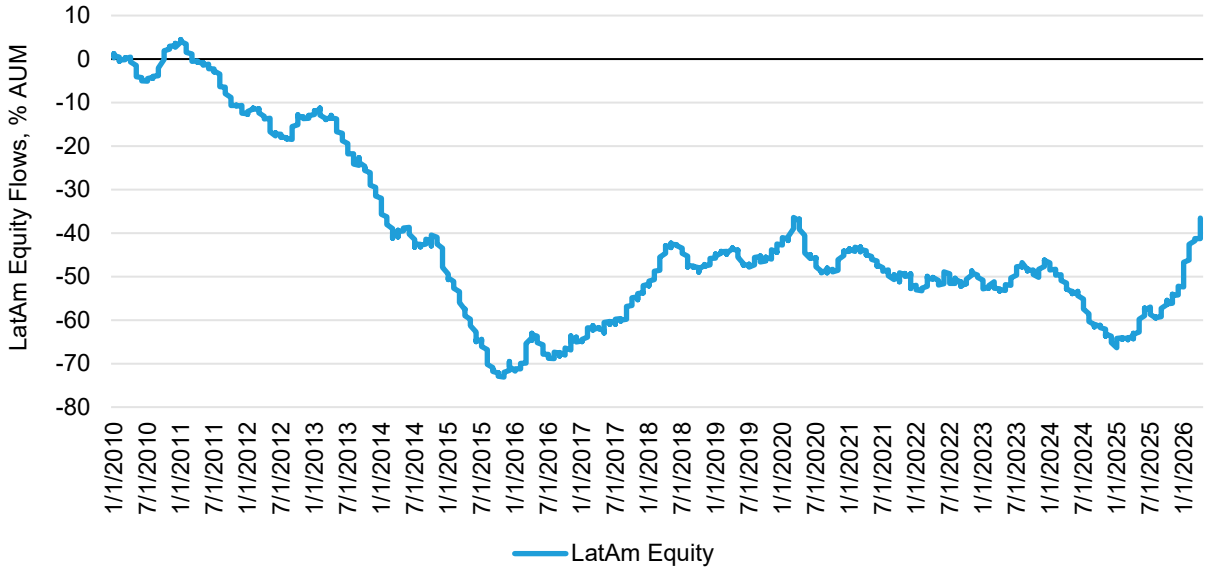


Past performance does not guarantee future results.

The global market is represented by MSCI All Country World Index
As of April 23,2026
Source: Factset and AB

While the region has seen strong investor inflows over the past year, it has not undone the structural disinvestment away from the region since 2010, showing that investors are not crowded in the region's equities (*Display 36*).

DISPLAY 36: LATIN AMERICA EQUITY FUND FLOWS



Past performance does not guarantee future results.

As of April 22, 2026
Source: EPFR and AB

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