

Market Know-How 2Q 2026

KEY TAKEAWAYS

1

A new resource reality

A perfect storm of high commodity demand is colliding with structurally constrained supply, making natural resources and critical minerals key considerations when navigating markets and constructing portfolios.

2

Identifying potential winners

Nations enter this new resource reality from vastly different starting points. We believe investors should position along the supply chains that matter, not just the commodities themselves.

3

Tactical defensiveness, structural conviction

Near-term risks from disruption in the Strait of Hormuz warrant tactical defensiveness, in our view. However, we maintain conviction in longer-term opportunities related to energy transition infrastructure, defense-linked industrials, and resource circularity.

Power Plays: Investing in a New Resource Reality

We have entered a new resource reality. The availability and price volatility of commodities is being reshaped by regional conflicts, geopolitical power dynamics, and a massive technological leap in the form of AI.

This edition of the *Market Know-How* explores how natural resources, particularly critical minerals, sit at the intersections of macro and market themes, and megatrends like electrification, AI and data centers, and national security.

As high demand for commodities collides with constrained supply, we also examine how nations enter the race for resources from vastly different starting points—some resource-rich like China and the US, others like Europe and Japan more exposed to concentrated supply chains.

For investors, we believe this environment creates opportunities across:

Public Equities: Sectors providing exposure across the resource value chain.

Fixed Income: The growth of green bonds as a liquid asset class.

Alternatives: Infrastructure requirements for AI and electrification.

Ultimately, we believe that navigating the dynamics of this new resource reality is no longer a strategic choice but a fundamental necessity for achieving effective diversification and long-term growth in an increasingly complex global landscape.

This material is addressed to an audience familiar with macroeconomic data, market dynamics, industry trends and other broad-based economic and market conditions. For further information, please consult an authorized financial advisor. This material is provided for educational purposes only and should not be construed as investment advice or an offer or solicitation to buy or sell securities. Views and opinions expressed are for informational purposes only and do not constitute a recommendation by Goldman Sachs Asset Management to buy, sell, or hold any security. Views and opinions are current as of April 1, 2026 and may be subject to change, they should not be construed as investment advice. The economic and market forecasts presented herein are for informational purposes as of April 1, 2026. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. This financial promotion is provided by Goldman Sachs Asset Management B.V.

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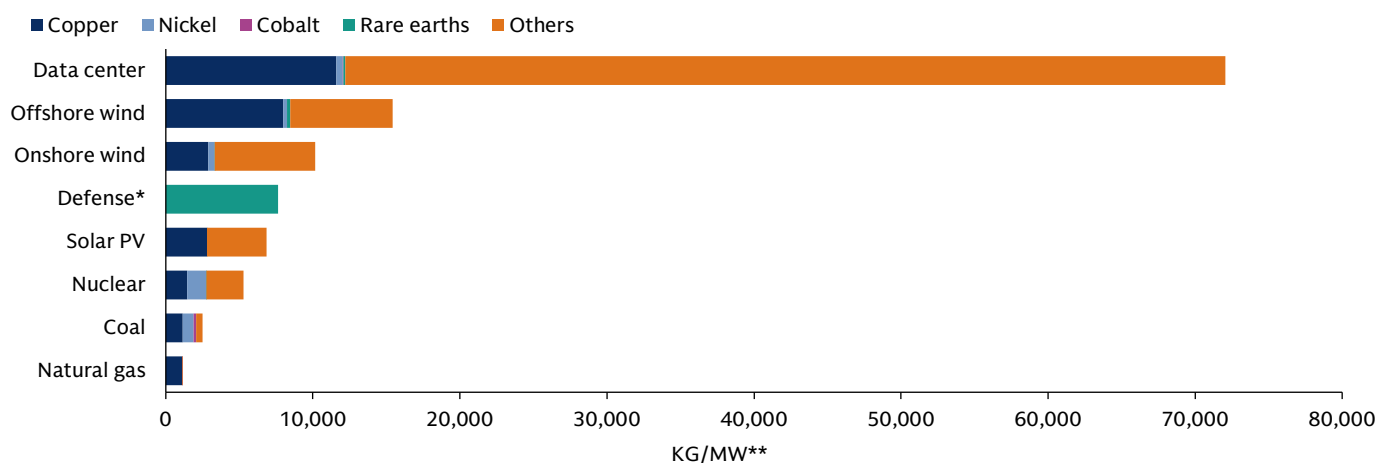
Long-Term Macro Themes

In our view, the next economic cycle will be characterized by higher inflation, elevated interest rates, and heightened macroeconomic volatility, driven by six key factors. We believe investors need to position their portfolios for CHANGE.

CHANGE

Climate transition – High level of debt – Aging demographics – New finance – Global fragmentation – Evolving technology

Minerals Required across Key Technologies



Source: IEA, World Economic Forum and Benchmark Mineral Intelligence. As of March 31, 2026. *Aggregate of F-35 Fighter Jet, Arleigh Burke Naval Ship and Virginia-class Submarine. **All are in KG/MW except for Defense which is in KG.

- We believe the future is resource-intensive. In our view, the bottleneck will not be capital; it will be materials. Natural resources sit at the center of every major secular theme: AI, defense, clean energy, and electrification. Each one relies on the same critical inputs—copper, lithium, nickel, rare earths, specialty metals—yet supply remains constrained.
- Global electricity consumption for data centers is projected to double to reach around 945 TWh by 2030,¹ equivalent to Japan's entire electricity consumption. Lithium demand could rise fivefold by 2040. Graphite and nickel demand is expected to double in the same period to 2040. Copper is set to face a major supply deficit of 30% by 2035.² China refines 19 of 20 strategic minerals, creating structural chokepoints across wind, defense, and high-density power systems.³
- This isn't a cyclical story. It's a structural repricing of the physical world. The technologies defining the next two decades, including AI infrastructure, electrified grids, and advanced weapons systems, are materially more resource-intensive than anything they replace. Every AI cluster needs grid buildout. Every grid buildout needs copper and rare earths. Every defense modernization needs magnets, alloys, and processed minerals that flow through a handful of countries.
- Winners and losers are already emerging. Economies at the roots of supply chains, particularly resource-rich emerging markets, are structurally better positioned as mineral-intensive buildouts accelerate. Permitting speed, processing capacity, and supply access will increasingly separate outperformers from the rest.
- For investors, the "material layer" is now the allocation edge. The strategic premium sits at structural chokepoints: companies and sectors that control, enhance efficiency in, substitute for, or recycle the critical inputs the world can't build without.

¹ IEA (2025), *Energy and AI*, IEA, Paris <https://www.iea.org/reports/energy-and-ai>, Licence: CC BY 4.0.

² IEA (2026), *Copper prices have hit record highs, but smelters face mounting strategic pressures*, IEA, Paris <https://www.iea.org/commentaries/copper-prices-have-hit-record-highs-but-smelters-face-mounting-strategic-pressure>, Licence: CC BY 4.0.

³ IEA (2025), *With new export controls on critical minerals, supply concentration risks become reality*, IEA, Paris <https://www.iea.org/commentaries/with-new-export-controls-on-critical-minerals-supply-concentration-risks-become-reality>, Licence: CC BY 4.0.

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Short-Term Macro Themes

Nations enter the race for critical materials from vastly different starting points. Some are resource-rich like China and the US, others like Europe and Japan are exposed to concentrated supply chains. However, we believe readiness, not just reserves, will determine who achieves lasting resource and economic security. Countries are pursuing it through distinct but overlapping playbooks: protectionism (the US and Europe), re-industrialization (the US, Europe, and China), and strategic alliances (Europe, China, and Japan).

America First? Not Without Allies.

- The US starts from a position of strength. It is a net energy exporter, largely self-sufficient in defense, and the global leader in AI—home to most frontier model developers and dominant in compute, cloud, and advanced chips. These advantages position it well as electrification and AI drive surging demand for power, minerals, and manufacturing capacity.
- But key vulnerabilities remain. China controls 60–90% of critical mineral processing. AI and datacenter power demand could double or triple by 2030,⁴ straining the grid. And chokepoints in semiconductors, specialty metals, and transmission infrastructure threaten both industry and defense.
- The US government is acting fast. The Section 232 determination labeled Chinese mineral dependence a national-security threat, triggering tariffs and domestic incentives. New mineral-security pacts with allies—Australia, Saudi Arabia, Southeast Asia, the DRC, and Ukraine—aim to build processing capacity outside China. Combined with federal programs (Genesis Mission,⁵ Pax Silica,⁶ and Project Vault)⁷ and broader re-industrialization legislation, the message is clear: resource security is now central to US economic and geopolitical strategy.
- At the same time, the US is rewriting the broader geopolitical playbook—putting domestic economic interests first, asserting control over resource-rich regions, and using trade and security tools to reinforce its position, even as this adds volatility to an already fragile global order.

“In a world fracturing along geopolitical lines, the nations that secure supply chains, not just reserves, will define the next economic order.”

Simona Gambarini – Senior Market Strategist, Executive Director, Goldman Sachs Asset Management

Europe: Racing to Catch Up

- Europe has made real progress—renewables are at record highs, sources of energy are more diversified, defense is being ramped up, and there is a sense of urgency to act—but deep vulnerabilities persist. The EU still imports over half its energy. The UK depends on the world for ~44%. And AI-driven power demand is only making that worse.
- The infrastructure can't keep up. A fragmented, decades-old grid leaves Europe structurally disadvantaged against regions with more scalable energy systems.
- Supply chain and defense gaps are just as stark. Critical AI and clean-energy inputs still run through Chinese rare earths. Europe holds only a sliver of global AI datacenter capacity. The UK military is stretched thin by years of underfunding. EU defense spending is rising—thanks to ReArm Europe and Germany's fiscal reform—but hitting 2.5–3% of GDP across all countries and rebuilding industrial depth will take years.⁸
- Policy is accelerating. The "One Europe, One Market"⁹ roadmap pushes deeper integration, faster consolidation, and deregulation to close the competitiveness gap flagged by the Draghi Report.¹⁰ Energy security moves—long-term LNG deals, grid upgrades,

⁴ IEA (2025), *Energy and AI*, IEA, Paris <https://www.iea.org/reports/energy-and-ai>, Licence: CC BY 4.0.

⁵ "Launching the Genesis Mission." The White House, November 24, 2025.

⁶ A US-led international initiative launched in December 2025 to secure and diversify supply chains for artificial intelligence and semiconductors. <https://www.state.gov/pax-silica>

⁷ Export-Import Bank of the United States, "Week in Review: Project Vault and the U.S. Strategic Critical Mineral Reserve," press release, February 6, 2026.

⁸ European Parliamentary Research Service, ReArm Europe Plan/Readiness 2030, Briefing PE 769.566 (Brussels: European Parliament, April 2025), and European Commission, "The Potential Economic Impact of the Reform of Germany's Fiscal Framework," *Spring 2025 Economic Forecast*. As of May 19, 2025.

⁹ *Euronews*, "One Europe, One Market: Can the EU Turn 27 Economies into One Powerhouse?" As of February 23, 2026.

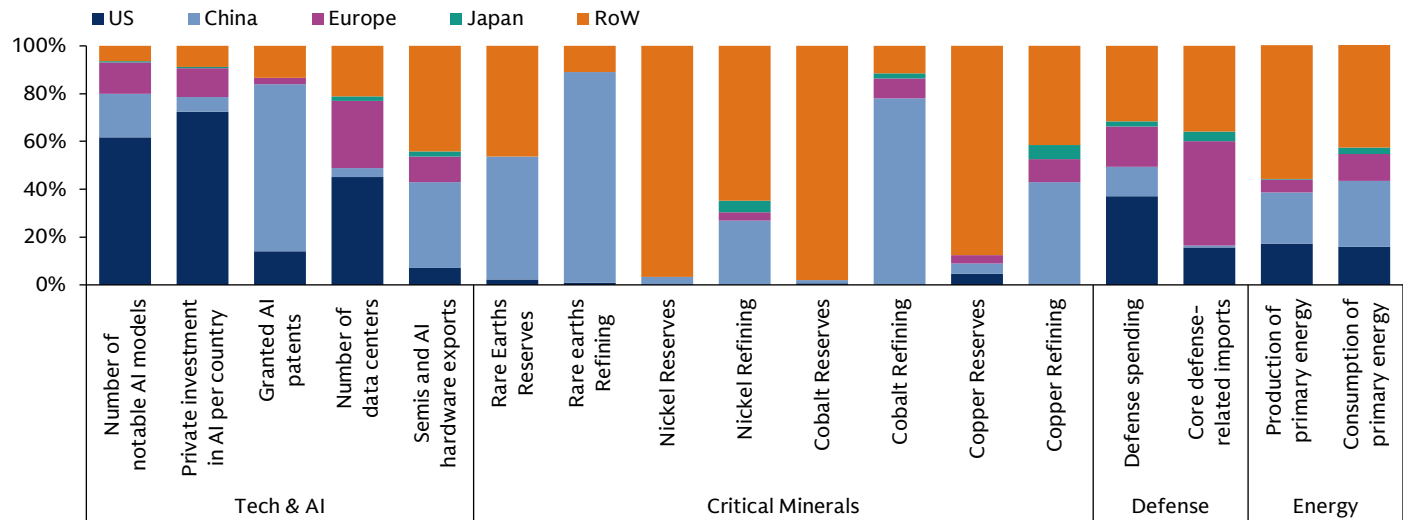
¹⁰ European Commission, The Draghi Report on European Competitiveness, European Union. As of September 9, 2024.

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nuclear revival—aim to cushion supply shocks, though reliance on the US, Qatar, and China lingers. The Critical Raw Materials Act tackles mineral dependence head-on with recycling mandates and new industrial alliances.¹¹

- Europe is racing to build the resource and industrial backbone it needs to compete, but it's starting from behind.

% Share of Global



Source: Epoch AI, Stanford HAI 2025 AI Index Report, Cloudscene, ITC Trade Maps, USGS, European Commission, SIPRI, UN Comtrade, US Energy Information Administration, Haver Analytics and Goldman Sachs Asset Management. As of April 1, 2026. Chart shows the % share of global. Please refer to page 15 for additional disclosures.

Japan: Tech Edge, Resource Scarcity

- Japan is a tech powerhouse with world-class capabilities in semiconductor equipment, robotics, and advanced materials. The government is backing that with almost ¥2 trillion (\$13 billion) for AI compute and has already doubled defense spending to 2% of GDP, with new PM Sanae Takaichi pledging more.¹²
- But the dependencies are severe. Japan imports ~90% of its energy and relies almost entirely on foreign sources for critical minerals, with China dominating supply of rare earths and battery materials. Renewables sit at just ~22%, held back by limited land, grid constraints, and slow permitting. Nuclear restarts are underway but still far below pre-Fukushima levels.
- AI is adding pressure. Datacenter capacity trails the US and China, and surging AI power demand is straining an already tight grid.
- Efforts to diversify are accelerating. JOGMEC is pushing to secure new metal sources and bilateral mineral deals.¹³ Circular-economy investments are ramping up. But Japan's structural import dependency leaves it deeply exposed to supply-chain shocks and great-power resource competition.
- In short: World-class technology, but critical resource lifelines run through rivals' hands.

¹¹ European Commission, Critical Raw Materials Act, European Union.

https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/critical-raw-materials/critical-raw-materials-act_en

¹² Bloomberg, "Japan Ministry Aims for \$13 Billion in Support for Chip Sector." As of November 10, 2023.

¹³ Japan Organization for Metals and Energy Security (JOGMEC) is a corporation established with the goal of securing stable and affordable resources and energy.

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China: Dominant Today, Durable Tomorrow?

- China's current position in supply-chain control is unmatched. It is dominant in rare earth mining and refining—inputs critical to EVs, wind, defense, and AI. Its renewable buildout dwarfs all rivals: 217 GW of solar added in 2023 alone—more than the entire US installed base.¹⁴ Total renewables exceed 1,400 GW, moved efficiently by the world's most advanced ultra-high-voltage grid.
- AI and defense are scaling fast. China ranks second only to the US in compute capacity, with state-backed plans to expand further and develop domestic chips to offset US export controls. Defense spending is surging, funding rapid modernization across naval, missile, space, cyber, and nuclear domains.
- That said, energy dependence is real. China is the world's largest importer of oil, gas, and coal,¹⁵ with over half its crude coming from the Middle East. To mitigate this, China has pursued an aggressive energy diversification strategy: overland pipelines from Russia and Central Asia (including Power of Siberia 2), long-term LNG deals, the world's largest strategic petroleum reserve, and a major nuclear push—recently signing the Declaration to Triple Nuclear Energy by 2050.¹⁶
- Geopolitically, China is locking in upstream access. The Belt and Road Initiative secures minerals across Africa,¹⁷ Latin America, and Southeast Asia. Export controls on gallium, germanium, and rare earth processing show China is willing to weaponize supply chains in retaliation for Western tech restrictions.
- Structural cracks remain. An aging population and slowing growth squeeze fiscal room. Property-sector stress drags on demand. US-led tech restrictions are forcing costly chip import-substitution. And overcapacity in solar, batteries, and EVs, while an export advantage, is fueling trade friction with the EU and US.
- Bottom line: China's resource strategy is the most vertically integrated of any major power, but energy import dependency, demographic headwinds, and a hardening external environment all test its durability.

¹⁴ *International Energy Agency*, *Renewables 2024: Analysis and Forecast to 2030* (Paris: International Energy Agency). As of October 9, 2024.

¹⁵ U.S. Energy Information Administration, *China Country Analysis*. As of May 19, 2025.

¹⁶ *World Nuclear News*, "China and Brazil among New Signatories to Tripling Nuclear Goal." As of March 10, 2026.

¹⁷ University of Cambridge Institute for Sustainability Leadership, *China's Belt and Road Initiative: Sustainability in the New Silk Road* (Cambridge: CISL). As of 2022.

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Market Themes

Our base case is that energy flows via the Strait of Hormuz stay largely halted for a few weeks before normalizing gradually. However, if they don't normalize, the market fallout will be non-linear. We remain moderately pro-risk into year-end but have turned tactically defensive, prioritizing hedges against stagflationary and recessionary tail risks. Over the longer term, portfolios should be positioned to secure exposure along critical supply chains, favoring companies and regions that control the sourcing, processing, and recycling of strategic minerals, while building structural allocations to energy transition infrastructure, defense-linked industrials, and resource circularity themes that will underpin the next economic order.

Base Case

Global growth stays resilient, AI momentum continues, and fiscal policy remains accommodative, but inflation normalizes slower than expected, central banks tilt more hawkish, and risks are plentiful.

Key Implications

We stay overweight equities medium-term but neutral short-term, favoring US large caps for their relative insulation from the current conflict, while expecting European and EM equities to rebound if hostilities end. Flexible bond strategies with dynamic duration, sector, and rates/credit allocation, may offer the best fixed income positioning, balancing near-term uncertainty with a longer-term pro-risk stance. Liquid alternatives earn their place as a decorrelator, particularly when traditional hedges break down.

“As the longer-term cycle pick up in Europe is facing cross winds from the Middle Eastern conflict, we have recalibrated our risk positioning in portfolios to a more neutral stance.”

Maarten, Geerdink – Head of European Equities, Fundamental Equity, Goldman Sachs Asset Management

Global Stagflation

The Middle East conflict persists, Hormuz stays partially closed, and energy prices grind higher and remain elevated—reigniting inflation, forcing central banks to resume hikes, and dragging global growth lower with sharp regional divergence as the US proves more resilient than energy-dependent Europe and emerging markets.

Key Implications

Traditional hedges lose effectiveness, making non-traditional diversifiers—such as trend-following strategies and income-oriented private assets—the preferred tools for inflation protection. Within core allocations, we would favor short-duration fixed income to reduce interest rate sensitivity and high-dividend equities for their defensive carry characteristics.

Global Recession

Energy prices surge into triple digits as the Strait of Hormuz faces severe and persistent disruption. Growth deteriorates markedly—outweighing the simultaneous rise in inflation. Faced with a demand destruction dynamic that poses a greater systemic risk than elevated prices, central banks pivot to rate cuts, prioritizing growth stabilization over inflation control.

Key Implications

Equities face broad-based selling pressure, but core fixed income stands out as a clear beneficiary, rallying as central banks cut rates and investors seek safe havens. Within equities, the playbook shifts decisively toward defensive, high dividend names—whose cash flow profiles benefit from falling discount rates and whose earnings prove more resilient in a slowdown. On the fixed income side, we would look to increase exposure to government bonds, which offer both capital appreciation potential and portfolio ballast as yields decline. Finally, alternatives earn a critical role: multi-strategy hedge funds provide tactical agility across dislocated markets, while gold serves as the ultimate hedge against geopolitical tail risk and currency debasement.

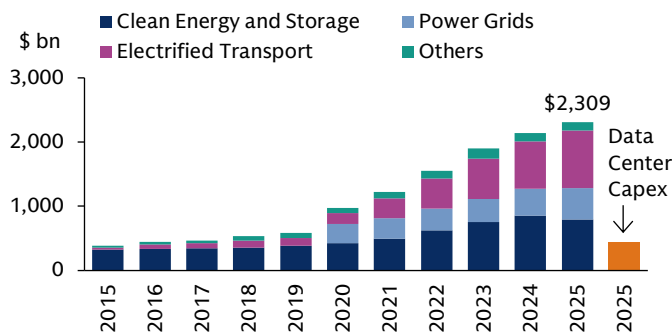
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Energy Transition & Resource Circularity in Focus

Level Setting

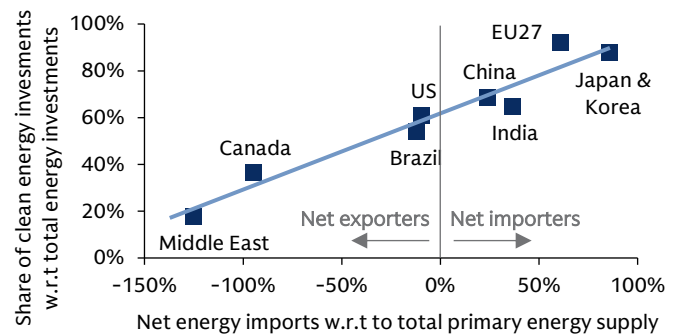
The energy transition is one of the largest structural investment themes of the decade, with global spending hitting \$2.3tn in 2025, over 5x global datacenter capex.ⁱ This trend extends beyond renewables: grid modernization, electrified transport, storage, and clean industry are all part of the buildout. Electrification bridges clean power capacity to genuine energy security, reducing reliance on volatile imported gas markets and offering a pathway to lower energy costs as governments increasingly focus on affordability and social costs. The transition also introduces a new vulnerability. Critical minerals like lithium, cobalt, nickel, and copper are essential to both batteries, solar, and wind, but also to defense systems, and supply is concentrated in a handful of countries. This is why circularity is emerging as an imperative: based on 2040 demand projections, primary mining alone cannot close the gap, making recycling or secondary supply necessary. Sustainability, in turn, is being recognized as a lens on long-term value creation, resource efficiency, and strategic resilience.

Energy Transition Investments Reach \$2.3tn in 2025



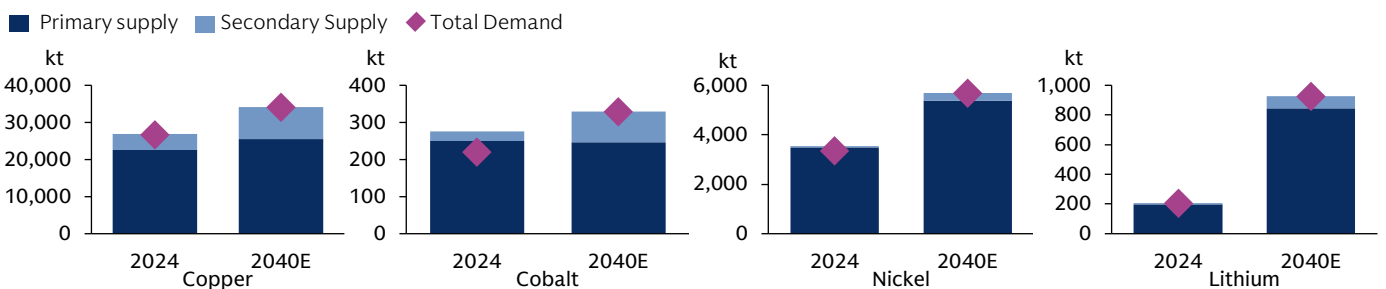
Source: Bloomberg NEF and Goldman Sachs Asset Management. As of January 2026. Grids data only starts in 2020.

Energy Security Concerns Fuel Transition Investments



Source: IEA and Goldman Sachs Asset Management. As of March 2026. Data ranging 2023-2024 depending on country data availability.

Energy Transition Critical Minerals: Secondary Supply Is Forecasted to Be Key to Meeting Demand in 2040ⁱⁱ



Source: IEA Critical Minerals Outlook 2025 and Goldman Sachs Asset Management. As of March 2026. Latest is May 2025.

From Theme to Portfolio Implementation

Energy transition momentum is showing up in markets: clean energy equities have rebounded notably, e.g., the Bloomberg GS Clean Energy Index gaining 33% in 2025ⁱⁱⁱ vs MSCI World Energy Index returning 14.4%.^{iv} While fundamental equity strategies can offer satellite exposure to the transition buildout, we believe core allocations require a benchmark-aware, risk-managed approach to avoid [unintended tilts seen in earlier sustainable strategies](#). In fixed income, green bonds can act as a thematic vehicle, with energy and utilities representing 40% of the green bond end-use industry market share in 2025.^v [Our research](#) shows diversification benefits with minimal impact on duration or yield,¹⁸ efficiently accessing the transition theme without compromising portfolio discipline.^{vi}

The energy transition offers compelling opportunities across private markets, but capturing them demands a [nuanced, asset-class-specific approach](#). In private equity, the middle and upper middle market stands out: we see a surging demand for mitigation, resilience and adaptation strategies delivered across a range of business models, to meet the demands of a generational rise in energy consumption and evolving environmental conditions. In infrastructure, a growing sustainable middle-market segment presents strong value creation potential with clear exit pathways to larger platforms. And in private credit, we see an increasing market demand for more bespoke, structured debt financing solutions to satisfy the significant capital need to build out clean energy infrastructure over the coming years.

i-vi: Please refer to page 15 of this document for additional sources and notes.

¹⁸ Bram Bos and Isobel Edwards, "How Green Bonds Can Strengthen Fixed Income Portfolio Diversification," *Goldman Sachs Asset Management*. As of September 25, 2025.

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Equities

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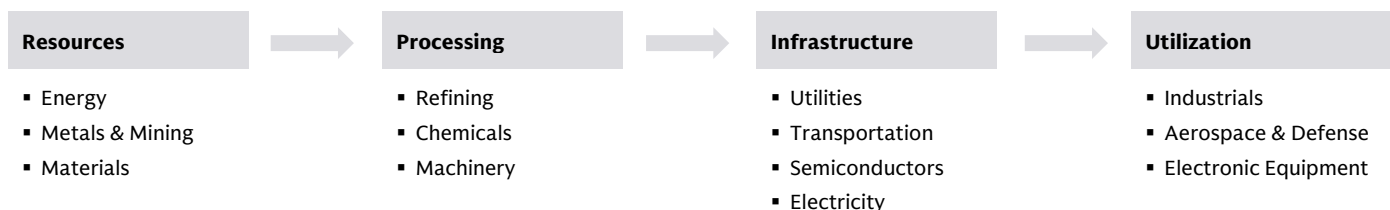
Mapping the Supply Chain

Equities offer a direct route to the structural value chains that underpin both economic competitiveness and national security—because listed sectors and industry groups cleanly mirror where governments and corporates are already deploying capital. Accelerating defense procurement cycles are funneling demand directly into dominant defense companies and specialist suppliers. Industrials and manufacturing are benefitting from supply chain reconfiguration and reshoring. Sovereign net-zero commitments and corporate power-purchase agreements are generating long-duration, contracted cash flows for utilities and grid specialists. Government-backed initiatives in the US, EU, and others are actively channeling capital toward alternative refining capacity for critical metals—opening investable pathways for non-Chinese producers to scale. AI hyperscalers’ investment concentrate demand into a set of cloud providers, chipmakers and specialized software vendors. For investors, we believe this means a modular equities playbook: tilt Materials/Energy for raw-supply exposure, add targeted Industrials/Chemicals for processing and domestic supply resilience, and use IT/semiconductor names for productivity and infrastructure layer that monetize those inputs.

Relatively Cheap Entry, Long Run Upside

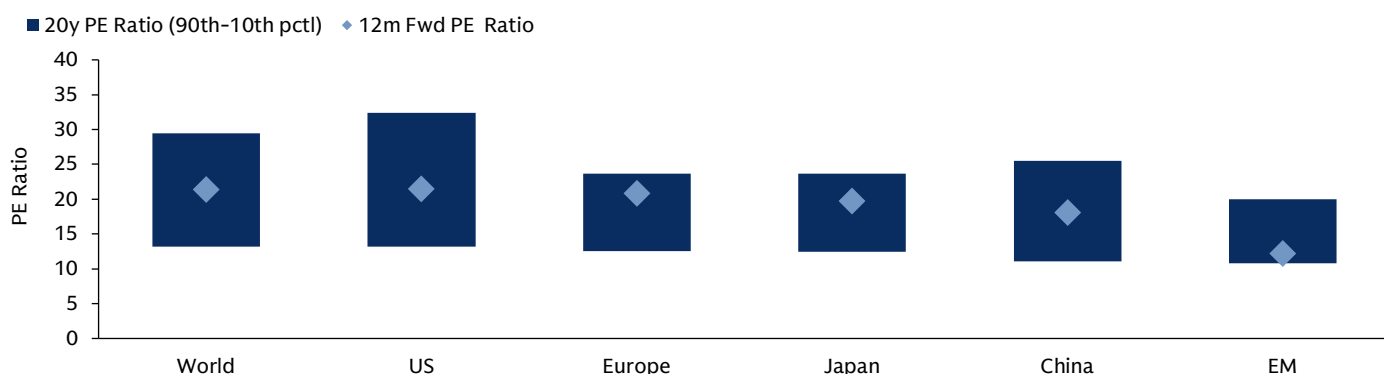
We believe valuations across major markets offer differentiated but attractive entry points. Many of the industrial and materials companies that form the backbone of physical supply chains trade at meaningful discounts to their own cyclical peaks. Meanwhile, the highest-quality IT and defense names command premium multiples, reflecting durable structural demand. The result is not a single-priced bet but a multi-bucket allocation opportunity spanning value, quality, and growth. This dispersion allows investors to blend near-term cyclical exposure with longer-duration structural return streams. Potential near-term opportunities include miners, industrial capex beneficiaries, and processing companies positioned for re-rating. Longer-term return streams may include utilities with contracted renewable revenues, defense companies with multi-year procurement schedules, and semiconductor equipment suppliers benefiting from sustained capex cycle. Together, we believe these layers create an investable, risk-managed pathway into the security, energy, and resource transition themes—capturing both the cyclical re-rating already underway and the compounding productivity gains that lie ahead.

Accessing the Theme through Equities



Source: MSCI, S&P Global Market Intelligence and Goldman Sachs Asset Management. As of April 1, 2026.

12m Forward P/E Valuations Today since 2006



Source: Bloomberg, MSCI and Goldman Sachs Asset Management. As of April 1, 2026. PE Ratio is calculated as the market-weighted average forward P/E ratio for the following sectors: Energy, Industrials, IT, and Materials.

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Fixed Income

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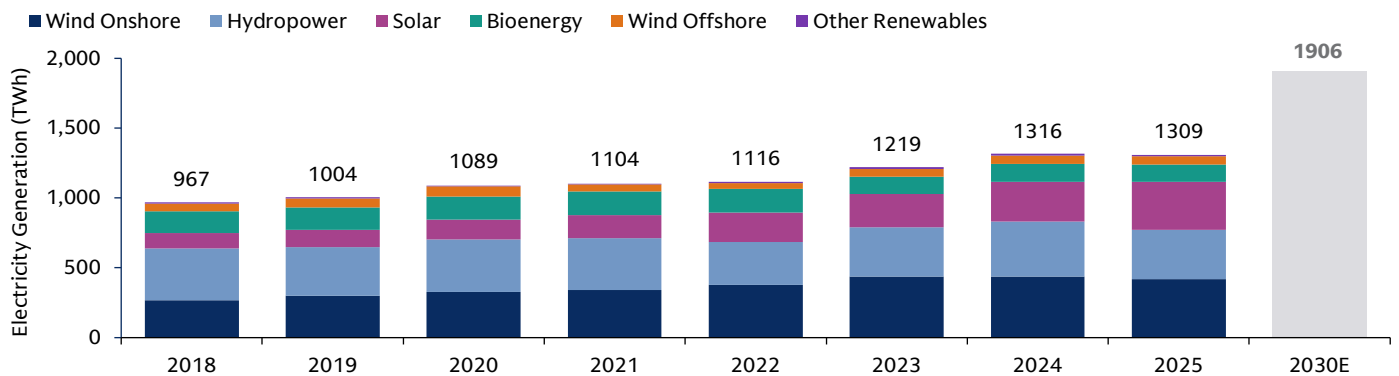
Financing the EU Energy Transition

Europe’s renewables build-out for energy security creates an unambiguous structural financing requirement. The EU’s binding Renewable Energy Directive aiming at a share of renewable energy in the total EU energy mix of ~42.5% by 2030,¹⁹ with an aspirational top-up to 45%, sits against a 2024 renewables share of ~25.2%, implying a rapid acceleration in deployed capacity and large grid upgrades, while final energy demand estimate for 2030 (~992.5 Mtoe) defines the scale of required generation and system investment.²⁰ To achieve this scale and speed, the European Commission’s Clean Energy Investment Strategy estimates roughly €660bn capital is required per year to 2030, rising to €695 billion between 2031 and 2040.²¹ Bank funding and equities will de-risk projects but cannot supply the scale or long maturities needed; the net result is a persistent, multi-year capital funding gap that must be filled predominantly by long-dated capital-markets debt and blended-finance structures.

Green Bonds: Yields With Impact

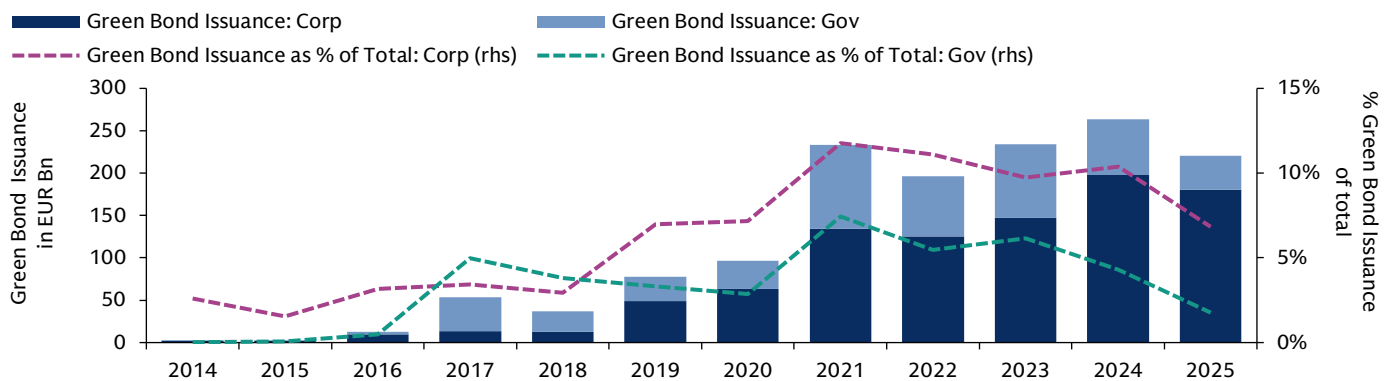
Green bonds are the most scalable, tradable fixed-income instrument to capture that demand. The EU Green Bond Standard embeds taxonomy alignment, mandatory disclosure and external verification, materially reducing green-washing risk and improving investor comparability, which in turn deepens demand from pensions, insurers and benchmarked asset managers. Europe already dominates aligned green issuance and reporting, and labelled green paper now accounts for a meaningful and growing share of EU issuance, meaning fixed-income portfolios must treat green bonds as a structural allocation, not a satellite sleeve. Green bonds provide (1) duration and cash-flow match to long-lived assets, (2) tradable exposures for large institutional balance sheets, (3) a transparent channel for impact attribution, and (4) lower spread volatility in periods of major market events.

Electricity Generation in EU from Renewables (TWh)



Source: Eurelectric, European Commission, European Environment Agency and Goldman Sachs Asset Management. As of April 1, 2026.

Green Bonds as a Percentage of Total Bonds Issued by Corporations and by Governments in the EU-27, 2014-2025



Source: Bloomberg and Goldman Sachs Asset Management. As of April 1, 2026.

¹⁹ European Commission, Renewable Energy Directive: Targets and Rules, European Union.

²⁰ European Environment Agency, Primary and Final Energy Consumption, European Union.

²¹ European Commission, “Commission Launches Strategy to Accelerate Clean Energy Investment.”

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Private Assets

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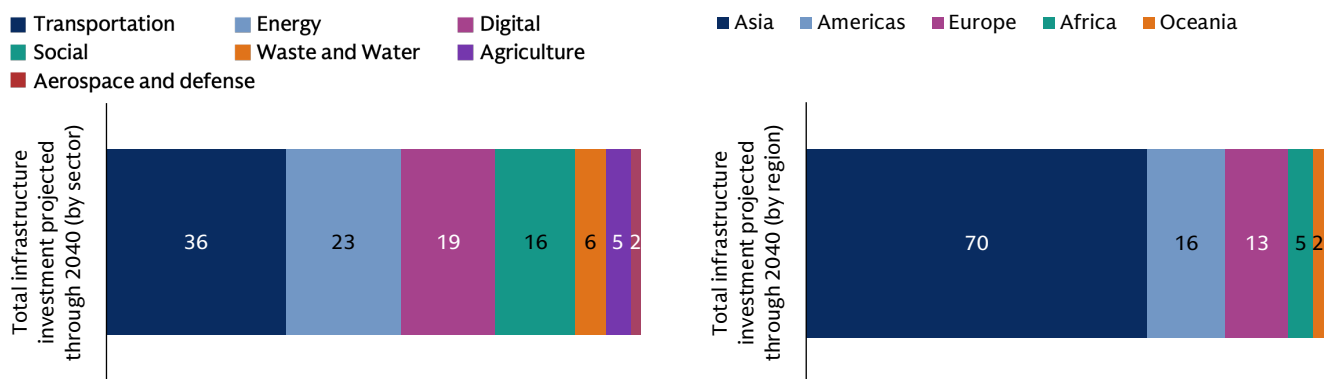
The Capex Super-Cycle

The capital required to modernize global infrastructure is accelerating. This is being driven by defense, energy, transportation, digital connectivity, and resource security all moving up national and corporate priority lists simultaneously. Estimates suggest cumulative infrastructure spending could reach \$106 trillion through 2040,²² with transportation, energy, and digital networks representing the largest funding needs and Asia accounting for the majority of global demand. This isn't just a bricks-and-steel story. Capital intensity is surging at the technology layer too. Consensus estimates hyperscaler AI capital expenditure to reach \$660+ billion in 2026 alone, reflecting the sheer scale of investment now flowing into compute, datacenters, power infrastructure, and connectivity. These themes share a common trait: they demand long-duration, asset-heavy capital deployed across power networks, logistics corridors, digital infrastructure, and the critical mineral supply chains that enable all of them. In our view, that makes private assets central to the next phase of capital formation, directly linking private markets to the physical build-out behind the decade's defining secular trends.

Mind the Allocation Gap

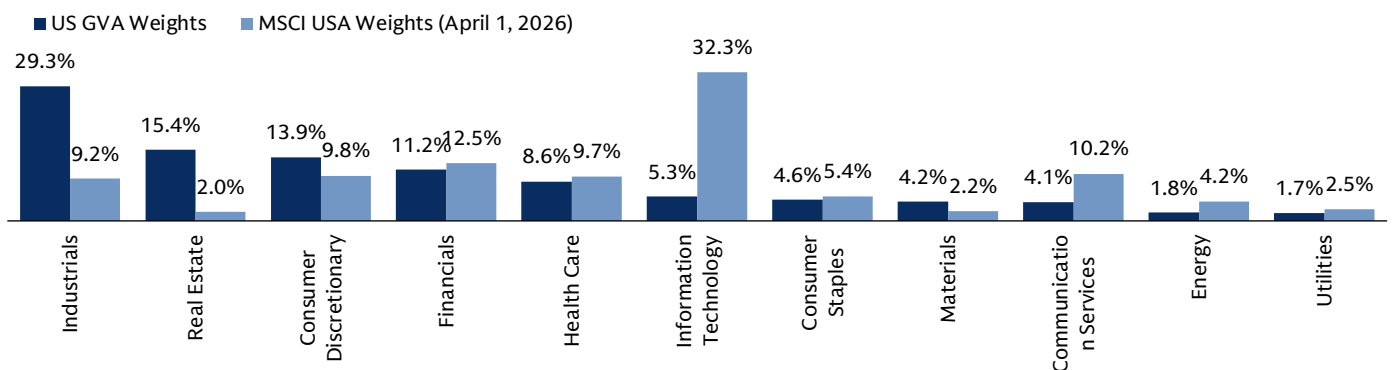
Set against that backdrop, a critical asset-allocation question emerges: do public markets provide sufficient exposure to the sectors most directly tied to this build-out? An analysis of US gross value added (GVA) suggests they do not: Industrials and Materials account for 29.3% and 4.2% of GVA respectively versus 9.4% and 2.0% in the MSCI USA Index; by contrast, Information Technology stands at 33.1% of the MSCI USA Index against 5.3% of GVA in the real economy. The mismatch is stark. The real-economy sectors absorbing the bulk of infrastructure and resource capex are significantly underrepresented in public benchmarks, while technology which is already well-owned, commands outsized index weight relative to its GVA footprint. Both public and private capital will be needed to finance this build-out. But private markets are uniquely positioned to fill the gap where public indices offer thinner representation, particularly across industrial infrastructure, energy systems, critical minerals processing, and logistics networks.

Total Infrastructure Investment Projected by 2040 (\$tn)



Source: McKinsey and Goldman Sachs Asset Management. As of April 1, 2026. Data is from McKinsey's "The infrastructure moment" released in September 2025. For illustrative purposes only.

US Gross Value Added and MSCI USA Index Sector Weights (%)



Source: Macrobond, MSCI and Goldman Sachs Asset Management. As of April 1, 2026. GVA refers to gross value added.

²² McKinsey "The infrastructure moment" report. As of September 2025.

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Relative Asset Class Calendar-Year Performance

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026 YTD
Best Performance	Emerging Market Equity 37.3%	Global Agg Bond 1.8%	US Large Cap 30.7%	Emerging Market Equity 18.3%	Commodities 40.4%	Commodities 26.0%	US Large Cap 25.7%	US Large Cap 24.5%	Europe Equity 35.4%	Commodities 40.0%
	Europe Equity 25.5%	Macro/Tactical Hedge Funds -3.7%	Global Small Cap 26.2%	US Large Cap 17.8%	Global Real Estate 35.3%	Macro/Tactical Hedge Funds 6.4%	Japan Equity 20.3%	Commodities 9.2%	UK Equity 35.2%	Macro/Tactical Hedge Funds 4.3%
	Japan Equity 24.0%	Hedge Funds -4.0%	Global Real Estate 24.3%	Global Small Cap 16.0%	US Large Cap 28.2%	Hedge Funds -5.3%	Europe Equity 19.9%	Global High Yield 9.2%	Emerging Market Equity 33.6%	Hedge Funds 3.0%
	Global Small Cap 22.7%	Global Real Estate -4.1%	Europe Equity 23.8%	Japan Equity 14.5%	UK Equity 17.4%	UK Equity -6.4%	Global Small Cap 15.8%	Hedge Funds 9.1%	Japan Equity 24.6%	UK Equity 1.6%
	UK Equity 22.6%	Global High Yield -4.1%	UK Equity 22.1%	Hedge Funds 10.9%	Europe Equity 16.3%	Global Agg Bond -11.2%	Global High Yield 14.0%	Japan Equity 8.3%	Global Small Cap 19.9%	Japan Equity 1.4%
	US Large Cap 21.1%	Emerging Market Debt -4.6%	Japan Equity 19.6%	Global High Yield 7.0%	Global Small Cap 15.8%	Global High Yield -12.7%	UK Equity 13.9%	Global Small Cap 8.2%	US Large Cap 17.4%	Global Small Cap 1.4%
	Global High Yield 10.4%	US Large Cap -4.9%	Emerging Market Equity 18.4%	Emerging Market Debt 5.9%	Hedge Funds 6.2%	Europe Equity -15.1%	Emerging Market Debt 10.4%	UK Equity 7.6%	Emerging Market Debt 13.5%	Global Real Estate 0.1%
	Emerging Market Debt 9.3%	Japan Equity -12.9%	Commodities 17.6%	Global Agg Bond 5.6%	Macro/Tactical Hedge Funds 3.4%	Emerging Market Debt -16.5%	Global Real Estate 10.3%	Emerging Market Equity 7.5%	Global High Yield 12.1%	Global Agg Bond -0.2%
	Hedge Funds 7.8%	Commodities -13.8%	Emerging Market Debt 14.4%	Europe Equity 5.4%	Japan Equity 1.7%	Japan Equity -16.6%	Emerging Market Equity 9.8%	Emerging Market Debt 5.7%	Global Real Estate 11.2%	Emerging Market Equity -0.2%
	Global Real Estate 6.8%	Global Small Cap -13.9%	Global High Yield 12.6%	Macro/Tactical Hedge Funds 4.8%	Global High Yield 1.0%	US Large Cap -18.5%	Global Agg Bond 7.1%	Macro/Tactical Hedge Funds 4.6%	Hedge Funds 9.2%	Emerging Market Debt -1.1%
Worst Performance	Commodities 5.8%	UK Equity -14.0%	Hedge Funds 8.4%	UK Equity -9.0%	Global Agg Bond -1.4%	Global Small Cap -18.8%	Hedge Funds 6.1%	Global Agg Bond 3.4%	Commodities 7.1%	Global High Yield -1.3%
	Global Agg Bond 3.0%	Emerging Market Equity -14.6%	Global Agg Bond 8.2%	Global Real Estate -9.2%	Emerging Market Debt -1.5%	Emerging Market Equity -20.1%	Macro/Tactical Hedge Funds -0.9%	Global Real Estate 2.3%	Macro/Tactical Hedge Funds 5.4%	Europe Equity -2.8%
	Macro/Tactical Hedge Funds 2.4%	Europe Equity -14.9%	Macro/Tactical Hedge Funds 5.7%	Commodities -23.7%	Emerging Market Equity -2.5%	Global Real Estate -24.0%	Commodities -4.3%	Europe Equity 1.8%	Global Agg Bond 4.9%	US Large Cap -4.4%

Source: Bloomberg, Macrobond and Goldman Sachs Asset Management. As of April 1, 2026. This example is for illustrative purposes only to show the performance dispersion between various asset classes over time and the potential importance of diversification. Diversification is the process of allocating capital in a way that reduces the exposure to any one particular asset or risk. Please see additional disclosures on page 12 and 15 of this document.

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Market Solutions

In a world of macro and political uncertainty, a menu of asset classes may serve as potential solutions.

		Short-to-Medium Term Solutions		Long-Term Solutions
		Base Case	Key Upside/Downside Risks	> 2 Years
Key Investment Solutions	Investment Backdrop	<ul style="list-style-type: none"> Resilient global growth Inflation continues to normalize but at a slower pace Central banks turn more hawkish AI momentum continues Even so, risks are plentiful 	<ul style="list-style-type: none"> Global Stagflation Global Recession 	<ul style="list-style-type: none"> Higher Inflation, Higher Rates & Heightened Macro Volatility <p>Themes (CHANGE)</p> <ul style="list-style-type: none"> Climate transition High Level of Debt Ageing Population New Finance Global Fracturing Evolving Technology
	Fixed Income	<ul style="list-style-type: none"> Flexible Bonds Emerging Market Debt Securitized Credit 	<ul style="list-style-type: none"> Short Duration Core Fixed Income 	<ul style="list-style-type: none"> Intermediate Bonds Green Bonds Emerging Market Debt
	Equity	<ul style="list-style-type: none"> US Equities Europe Equities EM Equities 	<ul style="list-style-type: none"> High Dividend Equities High Dividend Equities 	<ul style="list-style-type: none"> Industrial Renaissance (Industrials) Digitalization and AI (Tech) Rising Healthcare Needs (Healthcare) Natural Resources (Materials & Energy)
	Alternatives	<ul style="list-style-type: none"> Private Infrastructure Private Credit Liquid Alternatives 	<ul style="list-style-type: none"> Trend Following Strategies Multi-Strategy Hedge Funds 	<ul style="list-style-type: none"> Energy & Industrial Commodities Private Assets Trend and Multi-Strategy Hedge Funds
	FX	<ul style="list-style-type: none"> Slight Dollar Weakness 	<ul style="list-style-type: none"> Dollar-Positive Dollar-Positive 	<ul style="list-style-type: none"> Dollar-Negative

Source: Goldman Sachs Asset Management. As of April 1, 2026. The economic and market forecasts presented herein are for informational purposes as of the date of this document. There can be no assurance that the forecasts will be achieved.

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Glossary

EQUITIES

The **Dow Jones US Select Real Estate Securities Index** tracks companies that are both equity owners and operators of real estate in the US.

The **FTSE 100 Index** is the 100 most highly capitalised blue chips listed on the London Stock Exchange.

The **GPR 250 REIT Index** is a subset of the GPR 250 Index and covers all companies having a REIT-like structure. This in combination with the consistently applied rules for company inclusions results in the GPR 250 REIT Index being a sustainable representation of the global Real Estate Investment Trust market.

The **MSCI Emerging Markets Equity Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets.

The **MSCI Europe Index** captures large and mid-cap representation across 15 Developed Markets (DM) countries in Europe*. With 420 constituents, the index covers approximately 85% of the free float-adjusted market capitalization across the European Developed Markets equity universe.

The **MSCI Japan Index** is designed to measure the performance of the large and mid-cap segments of the Japanese market. With 217 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan.

The **MSCI World Small Cap Index** captures small cap representation across 23 Developed Markets (DM) countries*. With 4,116 constituents, the index covers approximately 14% of the free float-adjusted market capitalization in each country.

The **Russell 2000 Index** measures the performance of the small-cap segment of the US equity universe. The Russell 2000 Index is a subset of the Russell 3000 Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.

The **S&P 500 Index** is the Standard & Poor's 500 Composite Stock Prices Index of 500 stocks, an unmanaged index of common stock prices. The index figures do not reflect any deduction for fees, expenses or taxes. It is not possible to invest directly in an unmanaged index.

The **S&P Developed ex-US Property Index** measures the performance of real estate companies domiciled in countries outside the United States.

The **S&P Developed ex-US Small Cap Index** covers the smallest 15% of companies from developed countries (excluding the US) ranked by total market capitalization.

FIXED INCOME

The **Bloomberg US Aggregate Bond Index** represents an unmanaged diversified portfolio of fixed income securities, including US Treasuries, investment grade corporate bonds, and mortgage backed and asset-backed securities.

The **Bloomberg Global Aggregate Bond Index** is a flagship measure of global investment grade debt from a multitude local currency markets. The index includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers.

The **Bloomberg Global High Yield Index** provides a broad-based measure of the global high-yield fixed income market.

The **Credit Suisse Leveraged Loan Index** tracks the investable leveraged loan market by representing tradable, senior-secured, US-dollar denominated, non-investment grade loans.

The **ICE BofA 1-3 Month US Treasury Bill Index** measures the performance of a single issue of outstanding treasury bill which matures closest to, but not beyond, three months from the rebalancing date.

The **J.P. Morgan Emerging Markets Bond Index Global Core** (EMBIG CORE) tracks liquid, US Dollar denominated emerging market fixed and floating rate debt instruments issued by sovereign and quasi-sovereign entities.

The **J.P. Morgan CEMBI Broad Diversified Index** tracks the performance of US dollar-denominated bonds issued by emerging market corporate entities.

The **US Treasury Bond** is a debt obligation backed by the United States government and its interest payments are exempt from state and local taxes. However, interest payments are not exempt from federal taxes.

OTHER

AI refers to Artificial Intelligence.

Basis points (bps) refers to a unit represented by one hundredth of one percent.

The **Bloomberg Commodity Index** offers liquid exposure to physical commodities via futures contracts and aims to produce an attractive risk-return profile over time while ensuring that no single commodity or sector dictates the investment.

CDU/CSU refers to Christian Democratic Union/Christian Social Union.

CEE refers to Central and Eastern Europe.

Core CPI refers to Core Consumer Price Index.

DM refers to Developed Markets.

ECB refers to European Central Bank.

EM refers to Emerging Markets.

ETF refers to Exchange-Traded Fund.

FX refers to Foreign Exchange.

GDP refers to Gross Domestic Product.

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The **HFRI Fund of Funds Composite Index** is an equal weighted, net of fee, index composed of approximately 800 fund-of-funds which report to HFR.

The **HFRX Macro CTA Index** measures the performance of the hedge fund market where macro strategy managers trade a broad range of strategies. In these strategies, the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency, and commodity markets.

MSCI ACWI refers to MSCI All Country World Index.

NATO refers to North Atlantic Treaty Organization.

PBOC refers to People's Bank of China.

PCE refers to Personal Consumption Expenditures.

P/E ratio refers to Price-to-Earnings ratio.

Percentage points (pp) refers to the unit for the arithmetic difference of two percentages.

Recession is defined by the NBER as a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales.

RoW refers to rest of the world.

RRR refers to Reserve Requirement Ratio.

SPD refers to Social Democratic Party of Germany.

YoY refers to Year-over-Year.

YTD refers to Year-to-Date.

Page 2 Short-Term Macro Chart Notes: Notable AI model count is from Epoch AI and looks at the Deep Learning Era (2013 - 2026) up to February 2026, Private investment in AI per country is from the Stanford HAI 2025 AI index report, is in \$bn, looks at total private investment from 2013 to 2024 and the latest is 2024. Number of granted AI patents is from the Stanford HAI 2025 AI index report and latest is 2023. Number of data centers is from Cloudscene and latest is November 2025. Semis and AI hardware 2025 exports is from ITC Trade Maps and includes data up to and including November 2025 (aggregate of HS 8541, 8542, 8471 and 8473 products). All the critical mineral reserves and refining data is from the US Geological Survey and latest is 2025. Defense spending is from SIPRI and latest is 2024. Core defense-related imports data is from UN Comtrade, core defense-related goods refers to an aggregate of the following HS codes: 9301, 9302, 9305, 9306, 9307, 8710, 8906.1, 3601, 3602, and 3603 and latest is 2024. Production and consumption of primary energy is from the US Energy Information Administration and the latest is 2023.

Page 4 Long-Term Macro Chart Notes: All items are in KG/MW except for Defense which is in KG. *Includes and is an aggregate of F-35 Fighter Jet, Arleigh Burke Naval Ship and Virginia-class Submarine. Rare earth is the only material breakdown readily available.

Page 11 Sources:

- BloombergNEF, Energy Transition Investment Trends 2025, Published in January 2026. For scope of Data Centers data, this includes CapEx for companies that is in the top 20 of owners of live IT capacity and have 200 megawatts or more of IT capacity under construction according to BNEF's Global Data Center Live IT Capacity Database. This is a global figure and is likely a lower bound as many large developers are privately held and do not report capex.
- The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.
- BloombergNEF, Energy Transition Investment Trends 2025, Published in January 2026
- Past performance does not predict future returns and does not guarantee future results, which may vary.
- Green Bond Market Size and Forecast: 2025 to 2032, Coherent Market Insights
- Diversification does not protect an investor from market risk and does not ensure a profit.

Page 11 Notes: For "Energy Security concerns fuel transition investments" graph, the graph was plotted using the latest available data for each country. For net import ratio to energy supply, this was 2024 data for: EU27, US, Brazil, Canada, Japan & Korea. This was 2023 data for: China, India, Middle East. The country categories correspond to the categories that the International Energy Agency uses.

	Commodities	Global Agg Bond	Global High Yield	Global Small Cap	US Large Cap	Emerging Market Equity	Europe Equity	Japan Equity	UK Equity
Mar-2025 - Mar-2026	43%	3%	9%	26%	17%	30%	19%	26%	26%
Mar-2024 - Mar-2025	4%	5%	9%	0%	8%	8%	7%	-2%	14%
Mar-2023 - Mar-2024	11%	4%	13%	16%	29%	8%	14%	26%	11%
Mar-2022 - Mar-2023	-10%	-4%	-5%	-9%	-8%	-11%	1%	-5%	-1%
Mar-2021 - Mar-2022	65%	-4%	-4%	-1%	15%	-11%	4%	-6%	11%

The currency perspective is USD.

	Hedge Funds	Macro/Tactical Hedge Funds	Emerging Market Debt	Global Gov Bonds
Mar-2025 - Mar-2026	10%	6%	10%	3%
Mar-2024 - Mar-2025	4%	-2%	7%	4%
Mar-2023 - Mar-2024	10%	8%	10%	3%
Mar-2022 - Mar-2023	-2%	0%	-6%	-5%
Mar-2021 - Mar-2022	1%	5%	-6%	-4%

The currency perspective is USD.

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Important Information

Equity securities are more volatile than fixed income securities and subject to greater risks. Small and mid-sized company stocks involve greater risks than those customarily associated with larger companies. Emerging markets investments may be less liquid and are subject to greater risk than developed market investments as a result of, but not limited to, the following: inadequate regulations, volatile securities markets, adverse exchange rates, and social, political, military, regulatory, economic or environmental developments, or natural disasters.

Investments in fixed-income securities are subject to credit and interest rate risks. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rates can result in the decline in the bond's price. Credit risk is the risk that an issuer will default on payments of interest and principal. This risk is higher when investing in high yield bonds, also known as junk bonds, which have lower ratings and are subject to greater volatility. All fixed income investments may be worth less than their original cost upon redemption or maturity. Although Treasuries are considered free from credit risk, they are subject to interest rate risk, which may cause the underlying value of the security to fluctuate.

Investors should also consider some of the potential risks of alternative investments: Alternative Strategies. Alternative strategies often engage in leverage and other investment practices that are speculative and involve a high degree of risk. Such practices may increase the volatility of performance and the risk of investment loss, including the entire amount that is invested. Manager experience. Manager risk includes those that exist within a manager's organization, investment process or supporting systems and infrastructure. There is also a potential for fund-level risks that arise from the way in which a manager constructs and manages the fund. Leverage. Leverage increases a fund's sensitivity to market movements. Funds that use leverage can be expected to be more "volatile" than other funds that do not use leverage. This means if the investments a fund buys decrease in market value, the value of the fund's shares will decrease by even more. Counterparty risk. Alternative strategies often make significant use of over-the-counter (OTC) derivatives and therefore are subject to the risk that counterparties will not perform their obligations under such contracts. Liquidity risk. Alternative strategies may make investments that are illiquid or that may become less liquid in response to market developments. At times, a fund may be unable to sell certain of its illiquid investments without a substantial drop in price, if at all. Valuation risk. There is risk that the values used by alternative strategies to price investments may be different from those used by other investors to price the same investments. The above are not an exhaustive list of potential risks. There may be additional risks that should be considered before any investment decision.

Concentration in infrastructure-related securities involves sector risk and concentration risk, particularly greater exposure to adverse economic, regulatory, political, legal, liquidity, and tax risks associated with MLPs and REITs. Investing in REITs involves certain unique risks in addition to those risks associated with investing in the real estate industry in general. REITs whose underlying properties are concentrated in a particular industry or geographic region are also subject to risks affecting such industries and regions. The securities of REITs involve greater risks than those associated with larger, more established companies and may be subject to more abrupt or erratic price movements because of interest rate changes, economic conditions and other factors. Prospective investors should inform themselves as to any applicable legal requirements and taxation and exchange control regulations in the countries of their citizenship, residence or domicile which might be relevant.

An investment in private credit and private equities is not suitable for all investors. Investors should carefully review and consider the potential investments, risks, charges, and expenses of private equity before investing. They are speculative, highly illiquid, involve a high degree of risk, have high fees and expenses that could reduce returns, and subject to the possibility of partial or total loss of capital. They are, therefore, intended for experienced and sophisticated long-term investors who can accept such risks.

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