Global Metals & Mining: Takeaways from GS Global Copper Week 2026

Marcio Farid
+55(11)3371-4580 |
marcio.farid@gs.com
Goldman Sachs do Brasil CTVM S.A.

Matt Greene
+44(20)7051-0489 |
matt.greene@gs.com
Goldman Sachs International

Nick Cash
+1(212)357-6372 | nick.cash@gs.com
Goldman Sachs & Co. LLC

Emerson Vieira
+55(11)3372-0256 |
emerson.vieira@gs.com
Goldman Sachs do Brasil CTVM S.A.

Henrique Marques
+55(11)3371-0778 |
henrique.marques@gs.com
Goldman Sachs do Brasil CTVM S.A.

Riccardo D'Agata
+44(20)7051-0958 |
riccardo.dagata@gs.com
Goldman Sachs International

We hosted our annual Global Copper Week from Jun-29 to Jul-1, hosting C-levels from 10 global copper producers, including **Antofagasta, Capstone, Ero Copper, First Quantum, Freeport, HudBay, Lundin Mining, Southern Copper, Teck (not covered) and Vale Base Metals (subsidiary of Vale).**

The discussions highlight a constructive copper outlook driven by structural supply scarcity, declining grades, infrastructure constraints and disciplined capital allocation. Across producers, growth is concentrated in brownfield expansions, selective greenfield projects and technology-led productivity gains such as leaching, automation and processing upgrades.

Key catalysts include Antofagasta's Centinela expansion, Capstone's Santo Domingo decision, First Quantum's Cobre Panama resolution, Freeport's Grasberg ramp, Ero Copper's Tucuma ramp up and Hudbay, Lundin, Southern Copper, Teck and Vale advancing major copper pipelines. Management teams emphasized balance sheet discipline, social license focus, cost control and partnerships as essential to delivering growth while managing inflation, permitting, execution and funding risks.

Please refer to the full note for more details or the event page for replays (link).

Antofagasta

Speaker: Iván Arriagada, CEO
Antofagasta (PT of £46/sh; US$51bn market cap; Buy rated - covered by Matt Greene) is a pure-play copper producer with four assets in Chile, delivering ~650ktpa of copper production in 2025 with four operated copper mines in Chile.

- **Copper market and industry trends:** Management highlighted that the copper industry continues to face structural headwinds. While major underground mines have witnessed technical challenges in the last year, across Anto's open pit operations, grade decline remains the key challenge, alongside maintaining plant throughput and securing/expanding infrastructure relating to critical inputs such as water and energy. Anto believes its operations are relatively well positioned, supported by recent investments in water infrastructure and processing capacity.
- **Centinela growth:** Centinela remains the group's most important near term

Goldman Sachs does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. For Reg AC certification and other important disclosures, see the Disclosure Appendix, or go to www.gs.com/research/hedge.html. Analysts employed by non-US affiliates are not registered/qualified as research analysts with FINRA in the U.S.

organic growth project and one of the few major copper expansions currently under construction in Chile. The second concentrator is now into the second half of the construction phase, with commissioning expected in 2027, ramp up during 2028 and first full year of production at capacity in 2029. The company expects the project to add ~144ktpa Cu and ~170ktpa of CuEq. Management also highlighted significant longer term optionality within the district, supported by the scale of the resource base and ongoing studies evaluating a potential future expansion at the second concentrator (C2E) and debottlenecking at its existing concentrator, both of which could be accelerated. Encuentro is well advanced and will provide a third open pit alongside Esperanza and Esperanza Sur feeding the two concentrators.

- **Infrastructure strategy and capital recycling:** Management reiterated its district development approach, using shared infrastructure to improve capital efficiency and unlock regional synergies. Centinela was highlighted as an example, with three open pits feeding two processing plants and the water system supporting the district. Anto remains supportive of infrastructure monetisation where third party capital can lower funding costs, citing the Pelambres desalination project as an example, where the water assets were placed into a separate vehicle, attracting private capital in the form of $2bn of debt matched to the duration of the infrastructure cash flows. Management believes this more asset light approach can enhance returns while retaining access to strategic infrastructure.
- **Argentina and possible El Pachon partnership:** Management expressed a positive view on Argentina, citing improvements in both the macroeconomic backdrop and the regulatory framework for mining investment (RIGI). With respect to a potential tie-up with Glencore's El Pachon greenfield project across the border from Pelambres, management noted that its existing position at Los Pelambres could provide several potential advantages, including logistics corridors and shared infrastructure, and importantly a freshwater supply from its desal facilities at the coast, where it is seeking to double its permitted capacity. While there could be scope for synergies, Anto sees Los Pelambres' current growth plans as independent of any adjacent developments and any future involvement would need to demonstrate clear value creation, operational synergies and alignment with capital allocation priorities.
- **Twin Metals:** Management highlighted recent positive regulatory developments in Minnesota, with the reversal of the previous mineral withdrawal and ongoing efforts to get key licences back. The next step would be federal permitting, with management expressing optimism on the project's trajectory and expecting further progress on licences in the near term.
- **Cuprochlor-T:** Anto highlighted Cuprochlor-T, its novel leaching technology, as a proven technology now progressing industrial scale deployment. The process could unlock value from lower grade primary sulphides that would otherwise be uneconomic through conventional processing, leveraging existing SxEw capacity at assets such as Centinela with limited incremental capital. Management views the technology as an attractive medium term opportunity to increase recoveries and extract additional value from existing resource bases.

Investment thesis: ANTO.L (Buy) on (1) Copper-gold leverage and scarcity premium: Anto stands out as one of the few scalable, pure European copper-gold equities, positioning it to capture the copper equity premium as investors seek targeted exposure to these commodities. **(2) Proven execution and credible medium-term growth targets:** Anto is one of the few companies delivering growth in copper currently, with its major projects tracking to plan and expected to deliver 30% incremental growth by 2030. The portfolio is anchored by Centinela and Pelambres, which together account for ~80% of current output and will drive ~95% of production growth this decade, on our estimates. **(3) Centinela expansion is the key:** The second concentrator (C2) is progressing as planned. We believe the market is not fully appreciating the other growth options, including the C2E expansion (C2E). Delivery of C2 + C2E would position Centinela as the largest and lowest cost asset and the primary driver of group growth, in our view.

Capstone Copper

Speaker: Raman Randhawa, CFO
Capstone Copper (PT C$13/sh; US$7B market cap; Neutral-rated) is a pure copper company with four existing operations in Chile, Mexico and the US producing 225kt (2025A) of both copper cathodes and sulphide and large fully-permitted greenfield project to be developed in Chile (Santo Domingo) targeting additional 106ktpa copper production.

- **Santo Domingo sanctioning progresses toward 4Q26 FID with three key criteria largely on track…** Management outlined three prerequisites for FID: 1) keeping Net Debt/ EBITDA <1.0x (currently c.0.7x), 2) securing project financing (well in progress), and 3) advancing engineering to 60% (currently c.30%, targeting 60% by Q4). Despite the volatility, the macro backdrop remains supportive, with management citing a robust copper price environment and a favorable supply-demand gap over the project's build cycle. Management noted that project finance, while successfully executed for the Mantoverde expansion, proved cumbersome with mandatory cash sweeps and long-term off-take commitments. Thus, Financing has pivoted from project finance to a corporate structure, primarily via a delayed draw term loan offering greater flexibility, while a high-yield debt may subsequently be layered in to term out the corporate facility. Finally, management stated that neither the port capex elimination ($300M) nor a potential Cozamin divestiture is a prerequisite for Santo Domingo sanctioning.
- **…But the company expects capex inflation of 15-20% on the $2.3B initial capex estimate by FID, with potential infrastructure synergies offering partial offsets**. The most recent PFS was completed in 2023 dollar terms, which implies c.3.5 years of cumulative inflation by 4Q26 FID. Management is evaluating pre-built district infrastructure—most notably the port facility, carrying roughly $300 million in capex plus inflation—as a potential reduction opportunity, though such savings would likely be NAV-neutral given the corresponding increase in operating expenses over the life-of-mine plan. The base case remains to build the port given strategic long-term opex advantages.

- **Elevated sulfuric acid prices to have an immaterial impact on Capstone's operations due to proactive supply hedging and mine plan flexibility.** To mitigate exposure to spot prices, Capstone can defer high-acid-consuming calcium carbonate ores in favor of low-cost sulfide mining. Any deferred oxide production is offset by higher sulfide throughput at the Mantoverde mill, which has been running above its nameplate capacity.
- **Management expects 2Q26 costs to represent the peak for the year, driven primarily by a temporary geopolitical spike in oil prices.** Operating costs are projected to normalize in the second half of the year as fuel pressures ease. Capstone's production remains on track, and its exposure to volatile spot acid prices is well-managed through existing supply contracts. The company plans to provide a comprehensive update on full-year cost guidance and inflationary impacts during its upcoming second-quarter earnings release.
- **The Mantoverde Optimized project remains on schedule to ramp up to a 45ktpd throughput rate in 4Q26.** Following a planned 15-day shutdown in Q3, the expansion will add 20kt tons of low-cost copper production by 2027. Meanwhile, the early-stage Phase 2 expansion to double capacity to 90ktpd supported by a two-year exploration program. This next leg of growth will be sequenced after the Santo Domingo build to preserve balance sheet strength.
- **Mantos Blancos is advancing its long-term growth pipeline through the Phase II expansion and historical tailings re-leaching opportunities.** The company has applied for an environmental permit to expand mill throughput from 20ktpd to 27ktpd by utilizing underutilized mills, targeting production by 2030 to 2031. Additionally, Capstone is evaluating a re-leach project of 120Mt of 0.3% grade copper ore. This re-leaching initiative could deliver 15ktpa copper production by leveraging the site's underutilized SX-EW plant.
- **Pinto Valley is focusing on improving mill utilization and resolving maintenance issues to drive C1 cash costs down to a target of $2.80 per pound.** While current year guidance is set at $3.00 to $3.30/lb, a major planned shutdown later this year will address filter plant constraints. According to management, long-term value will depend on district consolidation discussions with BHP. Capstone is exploring a potential mill expansion to 70ktpd or larger to process nearby legacy ores, with potential agreements expected later this year.
- **Cozamin remains a highly productive asset with substantial exploration potential to extend its current four-to-five-year LOM.** Although LOM is short (as it is usually the case for gold mines), management believes that exploration could double or triple its duration. The operation currently runs six days a week (1 day maintenance), leaving room to increase throughput. While Capstone has received unsolicited interest and may consider a sale to improve balance sheet, management stated that divesting Cozamin is not a requirement to fund the upcoming Santo Domingo project.
- **Capstone prioritizes high-return organic growth as its primary capital allocation focus, with shareholder returns planned post-Santo Domingo.** Management believes that reinvesting in its project pipeline offers the best returns for

shareholders at this stage. Once Santo Domingo is built, the company anticipates generating c. $3 billion in EBITDA. At that level, Capstone plans to introduce a formal shareholder return framework, balancing debt repayment with a combination of dividends and share buybacks depending on market conditions.

Investment thesis: Capstone has among the highest operating leverage to copper prices, given its assets' high-cost base, so the stock could perform well in a copper price rally scenario. That said, the company's asset performance has also been volatile, increasing near term cash flow uncertainty and earnings momentum. We think the Santo Domingo project in Chile (sanctioning by late 2026) is a major milestone for the company to improve its overall cost positioning and medium-term FCF generation, but it is too soon to price it in, in our view. Moreover, we see shares implying a copper price of $15,000/t (10% above spot), or $14,400/t including Santo Domingo (5% above spot) and we think its FCF yield is not appealing in the near term (2-7% in 2026-27) given execution risks and higher operating leverage; for these reasons we are Neutral on CS shares.

Ero Copper

Speaker: Makko DeFilippo, CEO
Ero Copper (PT $31/sh; US$2.7B market cap; Neutral-rated) is a copper and gold producer with operations located in Brazil. The company also has a greenfield project, namely Furnas, in partnership with Vale.

- **Tucuma - Ramping-up towards nameplate capacity, to be fully reflected in 2027 numbers.** The greenfield project (built in 2022-2024) is ramping-up towards nameplate capacity (56% of 4Mtpa in 1Q26, but throughput continues to improve), which is expected to be fully reflected in 2027 numbers. This should be supported by the addition of more filtration capacity (1-2 quarters payback at current copper prices), expected to be delivered by 4Q26 (but not include in the production guidance for the year). To offset grade/production decline in the mine plan from the high-grade starter pit (Year 3-4 onwards), management is pursuing a pit expansion (ongoing exploration program), a high-grade underground inferred resource, and a hub-and-spoke strategy leveraging being only sulfide plant in the Western Carajas to process other known deposits in the region.
- **Xavantina - High-margin concentrate stockpile sales plus a mechanization-led mine transformation to drive second-half-weighted gold output.** Historic on-site concentrate stockpiles (35-40g/t grade gold, $300-500/oz extraction cost, 90-95% payability) represent a major value driver; ~13-14koz sold in Q4 2024 fell to ~5koz in Q1 amid the rainy season, with ~12koz drying and sales expected to ramp through Q2/Q3, supported by an industrial dryer for rainy-season resilience. On the mine side, the removal of jackleg operators in (reducing workface exposure and enabling higher volumes) delivered a 100%+ gold production increase from Q1 to Q4 2025, but the mill only operates 15-20 days per month, so is there is scope for more productivity gains. Moreover, as the mine gets deeper, there is need for more ventilation and cooling infrastructure, whose investments have been carried out and

are already reflecting in better development and mining rates (but with full-year production being more 2H-weighted).

- **Caraiba - New 1,500m shaft nearing completion to unlock the high-grade Pilar deepening zone, with full benefits from 2028.** The shaft adds to a multi-year transformation (ventilation/cooling, Jameson cells, HIGmills, mill expansion, debottlenecking) that drove all-time record throughput over the last two quarters, alongside a late-2024 contractor addition that helped the asset to nearly double throughput from in the LTM (also aided by open-pit contributions). The shaft (second deepest in Latin America and largest one in Brazil) will cut shift-change transport for ~300 personnel from ~1.5 hours (current operates 6-hour shift underground, workforce availability is at ~50% at best) to under one hour, materially boosting workforce/equipment utilization and access to higher-grade ore. Shaft bottom is expected this year or early next, with reconfiguration through 2027 and benefits from late 2027/full-year 2028.
- **Costs Outlook - FX hedging fully protects cash margins while diesel and consumable inflation persists, albeit easing.** Last year Ero entered into its largest-ever hedge book, which has a floor of 5.54 BRL/USD, provides full protection, generating an estimated $45–50 million of FX gains at a ~5.0 BRL/USD rate—shielding cash margins despite an adverse impact on reported C1 cash costs. On inputs, diesel and consumables remain a headwind, though diesel prices are now retreating, with supplier-led cost initiatives to be detailed at Q2.
- **Furnas - a high-quality growth engine advancing towards FID; PFS expected by 2027.** The asset quality is compelling: of the 75,000 meters drilled through end-May, only one drill hole intercepted a non-mineralized dike, with everything else hitting mineralization, and the initial 15-year profile envisages 70kt Cu, over 100koz Au, with clear opportunity to grow and extend mine life. On execution, three phases of drill programs are expected to be completed by the end of this year—roughly two years ahead of schedule—with the remainder toward the 90,000-metre target anticipated in 2026. The second piece is engineering with the PEA published 1Q26 while the PFS is rapidly advancing (engineering firm for the PFS and FS to be appointed shortly). The pre-feasibility study is expected in 2027, and in 2026 the company will submit its EIA based on the PEA design, positioning construction to begin later this decade (while balance sheet deleveraging continues).
- **Portfolio strategy - focused on copper-gold competencies.** Management sees high value in gold as it allows for movements such as stream partnerships (e.g. Royal Gold) that help fund copper growth. Going forward, the relevance of precious metals should increase due to Furnas' relevant gold by-products, but managements doesn't see it fit to get exposure to more exotic metals (despite Brazil having good sources for critical minerals and Ero's competitive advantages in the region) as they tend to lack certainty relative to multi-decade investments.
- **Capital allocation - Disciplined, sequential framework prioritizing deleveraging and revolver repayment ahead of potential shareholder returns.** Having reached its 1x Net Debt/EBITDA leverage target in 1Q26 (vs 2.4x in 1Q25) and which is expected to decline further, management's second priority is repaying the $145M

drawn revolver to reduce interest expense. The third step, beyond high-return organic and exploration opportunities, would be returning cash to shareholders (the form under discussion and further guidance expected later in the year after the company makes significant progress on the debt revolver repayment).

Investment thesis: We believe risk reward is less attractive due to limited copper price upside (GSe), some remaining operational uncertainties and less favorable valuation, driving our Neutral rating. We think Furnas project momentum is key to watch (link). Additionally, in terms of implied copper price, the company presents an above spot copper price of $14,600/t (7% above spot), explained by the company's short-duration profile. On the other hand, the company's gold exposure, especially in 2026 and 2027 with its gold concentrate sales, could provide a boost of FCF and form a natural hedge to copper prices.

First Quantum Minerals

Speaker: Tristan Pascall, CEO

First Quantum Minerals (PT C$44/sh; US$23B market cap; Buy-rated) is a pure copper mining company with current operating assets mainly located in Zambia (396kt Cu production in 2025A), but with a large 400ktpa Cu mine in Panama, whose activities have been suspended since 2023. The company also has greenfield projects in Argentina (Taca Taca), Peru (La Granja and Haquira).

- **Cobre Panama resolution is 2026's top priority…** Among management's top priorities for this year, Cobre Panama resolution ranks highest, followed by balance sheet strengthening (<1x ND/EBITDA target) to support growth projects. Management believes the recently concluded independent environmental audit (FQM was broadly compliant, only failed in 3 out of 370 (<3%) environmental areas during which biodiversity/reforestation was difficult to maintain as the mine was shut down) was a key milestone and is a solid basis to now carry evidence-based conversation with the government, which according to the company has been very responsive. The interministerial committee formed is meeting 2-3x a week to review the audit finding and determine a pathway forward for engaging with the company.
- **…Stockpile processing proving good technical knowledge for a potential restart**. To process the stockpile, the mine is operating on one mill train, producing lower-grade concentrate until re-grind and secondary cleaners can come back online. C1 cash costs for the stockpiling processing is expected at $4-$4.50/lb as scale is reduced (single-train operations) and the material is low grade (c. ~0.2%). A full production ramp-up scenario would require 6-9 months and key risks include 1) sourcing skilled labor force, 2) mine fleet recommissioning, and 3) condensation-related electrical issues encountered during the power plant restart. Management indicated total capital to fully restart the mine at $350-$500M million (inc. $250M allocated for stockpile processing).
- **Taca Taca advances through permitting with disciplined capital allocation framing FID timing.** The project should be taken to the board in October, though

FID remains contingent on balance sheet readiness and Cobre Panama resolution. The ESIA permit (on track, expected for 2026, together with water permits) is the key first milestone to be achieved for Taca Taca, which is important to have a full and highest-quality RIGI application, also expected to be submitted this year (note that RIGI's application deadline has been extended to July 8th, 2027) with a 4-6 month timeline for approval. Finances aside, management wants to make sure the balance sheet is in good shape and it is assessing all available financing tools — including project financing and IFC engagement.

- **Paradigm shift in copper industry's project capex.** The capex surge in the copper industry's greenfield projects (most industry GF projects with capital intensity $30,000/t) has not only been caused by multi-year inflationary pressures, but also by a paradigm shift in the scope of new projects, requiring more infrastructure (power stations, port, desalination plants, etc.) as undeveloped deposits are located in more remote regions and also because grades continue to decline, demanding even larger scale projects. On top of that, cost of capital has also increased. That said, FQM has a long track record of investing $13B in projects and with in-house developed capabilities (S3 expansion just delivered at $12,500/t; Taca Taca expected at $13,500/t; Sentinel at $12,000/t; Cobre Panama at $18,000/t with port and power plant built).
- **Kansanshi delivering strong S3 ramp-up performance while Sentinel targets a stronger second half.** The S3 expansion at Kansanshi ran 25% above nameplate capacity in Q1 and continues to track on guidance. At Sentinel, management is focused on de-bottlenecking the back end of the process plant to achieve c.60Mtpa throughput, with a heavy maintenance scheduled through 2026 and 2027. Delineation drilling beyond Sentinel's current footprint has yielded encouraging results. On power, a good wet season replenished Lake Kariba (but FQM is still importing energy), though El Nino forecasts introduce uncertainty. The company is progressing on grid stabilization via a Statcom project and 400 megawatts of wind and solar capacity with Total.
- **Balance sheet discipline remains the gating factor for future growth investments.** Management reiterated a target net leverage ratio of c.1x Net Debt/EBITDA before sanctioning any new project such as Taca Taca. The company is navigating macroeconomic headwinds including de-dollarization in Zambia, a stronger kwacha, and elevated fuel and input prices.

Investment thesis: First Quantum has a long track record of solid operational execution and successful delivery of brownfield/greenfield projects (S3 expansion, Cobre Panama). Moreover, the company has been making important balance sheet moves (e.g., gold stream agreement, asset sales, liability management), putting it in good shape for when the Cobre Panama mine restarts (not GS base case), which we believe is the stock's main catalyst. We think a Cobre Panama mine restart would place FM among the most attractive copper producers under our coverage (we see normalized FCFy 17% and EV/EBITDA at 3.2x on full restart by 2029 at spot). Notably, we have seen encouraging developments at Cobre Panama with the recent independent audit published and results broadly compliant (link) and the authorization by the government regarding the sale of stockpiled copper and the reactivation of its concentrator circuit (link).

Additionally, a resolution for Cobre Panama would allow the market to look forward and slowly price in growth optionally (e.g., the pending Taca Taca project in northwestern Argentina). We also see FQM shares implying a copper price of $11,300/t including Cobre Panama, which is 17% below spot (more details here).

Freeport-McMoRan

Speaker: Kathleen Quirk, CEO

Freeport-McMoRan (PT $75/sh; US$88B market cap; Buy-rated) is a pure-play copper producer, operating in three key regions (North America, South America, and Indonesia), which combined makes FCX the largest copper producer in the world with copper production of roughly 4.2bn lbs in 2024 per FCX. However, in 2025, the company experienced a mudslide incident at the company's Grasberg mine in Indonesia. While the near-term reduction in production is significant, the long-term prospects of the mine remain intact with FCX leaving 2030 guidance unchanged with expectations for Kucing Liar to begin ramping in the early 2030s.

- **Grasberg ramp is key near-term priority…** Freeport is on track to hit 65% capacity in the second half of 2026 after doing work to prepare for the initial start up in March which significantly derisked the project. The company aims to be at 80% in the middle of 27 and approaching full capacity by the end of 2028. Management noted that it is installing regulators into ore flow handling system in chutes which allows for more efficient extraction. FCX noted it has equipment on order that is currently on schedule which it plans to install in 2H26 and into early 2027. Once FCX achieves the target 65% capacity in 2H26, we expect meaningful free cash flow generation from Indonesia (Grasberg).
- **…While life-of-resource extension provides strategy optionality and incentive for investment.** FCX has been operating Grasberg for almost 60 years now and it has built significant infrastructure around the mine, with homes for 30,000 workers and 2 smelters making it fully integrated. The original 30-year deal with the government of Indonesia with 2 10-year extensions brought the mine to 2041 and now FCX has signed an MOU that will extend operating rights over the life of the resource. This is a significant milestone because it enables FCX to act strategically and invest in the asset and longer term projects for which it already has infrastructure in place.
- **Leaching provides significant volume upside with low capital intensity.** Historically the copper mining industry has been characterized by large capital investments into assets. The leaching opportunity FCX is rolling out will be able to produce the equivalent of a large copper mine with a relatively smaller investment. This is possible because the material it is extracting copper from has already been mined and is sitting in stockpiles. FCX estimates there is approx. 40bn lbs of copper in stockpiles that have already been mined that just needs to be extracted. This opportunity in the US comes at a capital cost of ~$1bn and operating costs of ~$1/lb to extract the targeted annual run rate of 800mn incremental lbs. FCX noted that creating a new mine of the same size would cost $10bn-$15bn. We believe this

will be a significant positive for FCX's production and cost profile within North America.

- **Additional levers for cost reduction underway in North America.** FCX targets getting costs down to $2.50/lb (down from ~$3/lb currently) in North America by 2027 through a combination of leaching and other initiatives. While leaching and mix shift to leaching is a large portion of the cost reduction, the company has other levers it is looking to pull to achieve this target. One of which is converting haul truck fleets to autonomous. They have completed this at Bagdad recently but still waiting to realize the full benefits of this opportunity. The company is also doing work with mine planning using AI and automation with shovels etc. FCX believes that automation will be a big help in offsetting labor cost increases that have impacted costs in the US since 2019-2020.
- **Disciplined capital allocation and M&A philosophy.** The company has significant brownfield growth opportunities ahead including US asset expansion of Bagdad and Safford/Lone Star, an opportunity to put in a new smelter in Chile, and additional opportunities in Indonesia such as Kucing Liar. FCX uses about half of FCF to fund organic growth while the other half is distributed to shareholders, and the company has returned roughly ~$6bn since 2021. On the M&A front, it is difficult to predict but FCX is constantly evaluating the environment for accretive opportunities. Management noted that they aren't trying to change the company, but they are trying to add value. FCX also notes that if there is an opportunity to capture synergies or leverage technologies with another company they will evaluate it. The company aims to be opportunistic, value-driven, and synergy-driven but the organic growth is the base case.

Investment thesis: FCX offers best-in-class exposure to structural deficits in the copper market with supplemental gold exposure, in our view. We believe FCX's diverse geographic footprint provides the company with tailwinds ranging from low cost production to a hedge against US copper tariffs. We believe FCX is set to reaccelerate free cash flow as the company re-ramps its Grasberg mine, which is the lowest cost mine in the world per GSe (link), given its significant gold exposure. Currently Grasberg is targeted to be exiting FY2026 at a 60%-65% run-rate, then getting up to ~100% exiting FY2027. Additionally, in North America, FCX continues to progress on a leaching initiative which is set to both increase production volumes and meaningfully reduce cost/lb through 2030 as mix shifts. As a result of the incremental operating leverage plus elevated copper prices, we estimate FCX's gross profit/lb can increase from $1.31 in 2025 to $2.90 in 2027, an increase of 121%. As a result, our view is that we sit at an inflection point where the combined impact of Grasberg's ramp, leaching initiatives, and higher copper prices can result in EBITDA margin expansion from 34% in 2025 to 54% by 2028, with free cash flow accelerating significantly. Looking beyond the next 3 years, FCX has significant growth opportunities across each region. Across Baghdad, Safford/Lone Star, Kucing Liar, and El Abra expansions, FCX has projects producing an incremental ~2bn lbs of copper which will be staggered in We anticipate FCX will finance these organically while also continuing to shareholders. Despite the anticipated margin expansion, free cash flow ample brownfield growth opportunities, FCX trades at a discount to its valuation as investors remain cautious on the ramp trajectory of the Gra



While we acknowledge the near-term risk, we believe these lbs have only been delayed and issues with Grasberg production are not permanent. Furthermore, the mining rights extension (Grasberg) signed earlier this year provides this asset with duration beyond 2041. As a result, we find the current risk reward provides an attractive entry point.

HudBay Minerals

Speaker: Peter Kukielski, President & CEO
HudBay Minerals (PT C$39/sh; US$9B market cap; Buy-rated) is a mining company with existing copper assets in Peru and Canada (118kt Cu in 2025A) and also a meaningful gold operation in Canada (268koz in 2025A, representing ~40% of revenues). HBM has a large pipeline of greenfield projects in the US (Copper World, Cactus, Mason).

- **Project sequencing: Copper World start-up by mid-2029; Cactus by 2031; Mason by mid-2030s**. Copper World's targeted first production should come in mid-2029, followed by Cactus by 2031, with the combined Arizona hub establishing the 3rd largest copper district in North America at c. 230ktpa (including Copper World's Phase II). Mason, farther dated, could come online in the mid-2030s, further scaling production HBM's US production to c.365ktpa. Sanctioning and feasibility milestones are staggered to avoid concurrent capital strain.
- **Copper World's DFS is c. 1/3 engineered, with DFS expected in Q3, a sanctioning decision likely in Q4 and start-up by mid-2029.** Management anticipates inflationary capex pressures of c.30% versus the 2023 PFS estimate, driven by US construction cost escalation, Arizona data center buildout competition, and tariff impacts, though some pricing has been locked in for trucking and mining equipment. Synergies with Cactus are already yielding improved vendor pricing given the larger operational footprint. Community surveys indicate 60-65% favorable support, with opposition under 20%, as per management, though Pima County engagement remains a focus area. Phase II permitting on federal land will commence only after Phase I is operational, with ideal timing around the 5th year of production.
- **Snow Lake operations are poised for a catalyst-rich year, with management highly confident that LOM extends well beyond current Street estimates.** An updated technical report is expected later this year to demonstrate how gold production levels of c. 180kozpa can be maintained through the end of the decade. The company is conducting its largest-ever exploration program in Snow Lake, advancing satellite deposits at 1901 and Talbot, and reevaluating the New Britannia deposit, which historically produced 80kozpa. Roughly 1.5ktpd of latent capacity at the Stall Mill remains unutilized, and a hot tails circuit upgrade would raise gold recoveries to 90%, providing enhanced ore routing flexibility.
- **Constancia's pebble crusher installation is nearing completion.** The improved output (80-100 kt in 2027-28 vs 75-90k in 2026) reflects a full year of increased mill throughput, operating efficiencies, and mine plan optimizations that smooth production over a three-year horizon, with 2029 output expected near similar levels.

Management noted that Peru's fiscal regime has remained stable across multiple administrations, and drilling permits for the Maria Reyna (district potential similar to Las Bambas or Antapaccay) and Caballito (more of satellite deposit) are expected in early 2027 following completion of the government's prior consultation process.

- **Copper Mountain is near its cash flow inflection point, with 2026 marking the final year of accelerated stripping to unlock higher grades.** Mill enhancement projects, including SAG mill replacement and additional grinding capacity, are expected to drive throughput to a permanent 50ktpd later this year. Thus, copper production should double to 60kt in 2027, with all-in sustaining costs declining to c.$3/lb and the asset delivering positive free cash flow. Beyond the near term, the New Ingerbelle satellite development and exploration upside present opportunities to extend the current 20-year reserve-based mine life by an additional 10-plus years.
- **Capital allocation: positioning to be a dividend payer post Copper World; M&A is an option, but there is scarcity of high-quality copper assets.** The company has doubled its dividend this year (from a very low base) and management expressed a directional aspiration to transform the company into a meaningful dividend payer once Copper World enters production. According to the company, the balance sheet, bolstered by proceeds from the Copper JV transaction, is sufficiently robust to fund both Copper World and Cactus without equity issuance. M&A remains an option pursued with discipline and an NAV-accretive threshold, though management acknowledges scarcity of quality copper assets. Buybacks and continued deleveraging also remain on the table within the framework guiding future capital decisions.

Investment thesis: We like HudBay's superior gold exposure (75%-50% of FCF generation in 2026-2028), which combined with Copper Mountain improvements supports attractive FCF (cumulative 26% in 2026-28). Copper is produced in relatively stable jurisdictions (Canada, Peru) and there are significant near- and long-term growth options in the US (Copper World, Cactus and Mason projects — assets not included in our price target). We estimate HBM's Copper World NAV at $2.3B (18% of market cap at stake). Moreover, we see shares pricing in an implied copper price of $13,500/t (1% below spot) and $11,700/t including Copper World (14% below spot).

Lundin Mining

Speaker: Teitur Poulsen, Executive Vice President & CFO
Lundin (PT C$47.8/sh; US$21bn market cap; Buy rated - covered by Matt Greene) is a pure-play copper miner with three operating mines across Chile and Brazil, producing ~330ktpa of copper and offering significant long term growth in Argentina through its Vicuna JV with BHP.

- **Full Potential:** Management reiterated that the Full Potential programme has transformed operational performance across the portfolio, delivering consistency in line with guidance. Key examples include improved Chapada FCF generation,

Caserones lifting cathode production from ~15ktpa to ~25ktpa, with further medium targets to reach 35ktpa. Candelaria remains at a relatively earlier stage of the programme vs. the rest of the portfolio, with mgmt continuing to see scope for further efficiencies over the next 2-3 years, including through the underground insourcing programme (now ~95% complete).

- **Input costs manageable despite inflation:** While acknowledging higher diesel and logistics costs, management characterised cost pressures as manageable. Diesel has risen from ~5% to 7-8% of the cost base, while sulphuric acid is ~1% of operating costs, so the cost impact is seen as limited. Labour remains the largest cost category at roughly one third of total costs, with CPI-linked contracts adjusting 2-3 times per year, so that a global CPI increase that would be a bigger headwind on the cost side, although this would be an industry-wide, rather than by company specific, dynamic. The company does not hedge diesel price but has built diesel inventory in Chile sufficient to support one month of operations at Candelaria and Caserones in the event of physical supply disruptions. Management remains comfortable with its CMD target of US$1.90-2.10/lb consolidated cash costs for 2026.
- **Vicuna path to FID in 2H'26:** Management highlighted continued momentum at Vicuna following RIGI PEELP approval, reiterating the 40yr stability framework from first production. Management outlined milestones ahead of sanctioning, including an updated bottom up Stage 1 capex estimate and finalisation of funding arrangements with BHP. A mix of shareholder equity and loans is currently viewed as the most likely funding structure, with management noting that an equity-only structure would be less efficient, also due to Argentine tax considerations. There are several development banks also offering project level financing; Rio Tinto pursued this option with its Rincon lithium project. Management highlighted the San Juan provincial agreement as one of the final remaining milestones ahead of FID, with the agreement still requiring negotiation and approval by the provincial congress. Once these milestones are reached, the Boards of both BHP and Lundin will need to approve the project.
- **Chapada and Sauva:** Management outlined progress at the Sauva satellite deposit, with Phase 1 targeting ~15ktpa copper and ~45kozpa gold from Q1 2029. Copper grades are expected to be ~2x current Chapada grades, while gold grades are ~3x higher. The $70m ball mill project (half spent in 2026, the balance in 2027) remains on track for end-2027 start up and is expected to improve recoveries by ~5%. Longer term, Sauva offers a larger Stage 2 expansion via an open pit cutback, or higher grade underground development, both of which are being evaluated.
- **Caserones and Los Helados longer term optionality:** Caserones cathode production is targeted to reach ~35ktpa through further leach optimisation and modest capital, with potential to reach ~40ktpa longer term. At Los Helados, studies are assessing both standalone and integrated development options with Caserones. Unlike historical studies, which were based on lower copper and gold prices and a block cave design, current work is increasingly focused on an open pit development. A significant resource increase vs. historical estimates is expected in the next update.
- **Candelaria underground:** Management's immediate focus is increasing

underground throughput from ~9ktpd today to the 14ktpd design rate, while longer-term optimisation could support ~22ktpd. This could add approximately 10-12ktpa of copper production, alongside lower costs and productivity benefits from the near-complete insourcing programme. Development rates are now running at ~1,200m/month.

- **Capital allocation:** Management noted that the US$220m shareholder return framework and the 50/50 Vicuna JV with BHP were designed to withstand a lower copper price environment (~US$4/lb). At CMD, Lundin showed that at $5.50/lb copper it could largely self-fund its share of Vicuna Phase 1 while only moving into modest net debt. Management remains committed to the US$220m annual distribution and has stress tested this on downside pricing scenarios.

Investment thesis: LUN (Buy) on (1) relative Valuation: ~1x P/NAV (GSe) vs peers at >1x P/NAV (Visible Alpha Consensus Data). (2) leverage to copper: copper revenue now represents 85% of the total, one of the highest in the sector; (3) demonstration of strong operational performance, through continued production performance and cost discipline; and (4) growth catalysts ahead: Vicuna FID in late 2026.

Southern Copper

Speaker: Raul Jacob, Vice President, Finance & CFO
Southern Copper (PT $176.24/sh; US$142B market cap; Neutral-rated) is a low cost, pure copper mining company with Cu production (950kt in 2025A) equally split between Peru and Mexico, while also having the largest reserves among listed companies. The company has greenfield projects in Peru (Tia Maria, Los Chancas, Michiquillay, Ilo Smelter) and Mexico (El Pilar, El Arco, Empalme Smelter).

- **Southern Copper's operational resilience has roots in deep community engagement and proactive ESG investment.** Management highlighted that over a decade ago the company overhauled its ESG practices, building a dedicated team focused on social and environmental matters. The company's swift COVID-era response—deploying emergency hospitals, providing oxygen, and distributing food supplies—generated significant goodwill in operating regions. Management believes that these activities have insulated Southern Copper from the production disruptions that have affected peer assets across Peru and the broader region.
- **Cash costs before byproducts are expected to remain stable, with by-product credits providing substantial offsets.** Management guided for cash costs before by-products to hold at $2.20-$2.3/lb in the upcoming quarters, with after-byproduct costs expected near zero given elevated precious metals and zinc prices. Two non-recurrent items in Q1—mainly an interruption of the Camisea gas pipeline that temporarily lifted Peruvian power costs—explained the slightly elevated $2.31 reported figure. With Tia Maria, before by product costs are expected to at ~$2.2/lb level, or lower. Importantly, Southern Copper is a net-long producer of sulfuric acid across its Peruvian and Mexican smelters, benefiting from rather than absorbing higher acid prices.

- **Tia Maria is progressing without operational disruptions, with mechanical completion targeted for August of next year and first production anticipated in 4Q27.** The project is currently over 35% complete, and management reported no operational disruptions from protests. Management expects the ramp-up to reach full capacity of c120ktpa in 2028, leveraging operational expertise from four similar leaching and refining plants already in the company's portfolio.
- **Peru's longer-dated projects, Los Chancas and Michiquilay, face distinct risk profiles but both target production by the early 2030s.** Los Chancas (130ktpa) has been stalled for nearly two years due to illegal mining activity during the environmental study phase; management expressed confidence that the new Peruvian administration could address the illegal mining issue, after which the environmental impact assessment and permitting process would require two years before construction can commence (thus likely start-up by 2031). Michiquilay (225ktpa), by contrast, is progressing on schedule with completed drilling campaigns and community agreements in place, targeting ramp-up by 2032.
- **Mexico's project pipeline hinges primarily on resolving power infrastructure constraints in the Baja California Peninsula.** Management noted a materially improved regulatory environment in Mexico and indicated the company is very close to advancing leaching operation El Pilar (36ktpa of refined copper, but similarly to Tia Maria, it could increase). However, the El Arco project (190ktpa) remains constrained by the lack of power supply infrastructure, which can only be provided by CFE, Mexico's state-owned utility.
- **Cuajone expansion to offset grade-driven production decline.** Management noted that Cuajone produced c.160kt Cu last year but faces a grade decline (to 0.4% from 0.6%) which absent intervention would reduce production to 110-120ktpa over the next three to four years. To compensate, the company plans to add a 30ktpd milling line, lifting total capacity to 120ktpd (matching Toquepala's size) and restoring Cuajone output back to 160-170ktpa level. The estimated project capex sits at $700-$750M, though it has not yet been presented for board approval and remains excluded from the current capex program and production forecast. Board submission is targeted for January, potentially earlier. Critically, the expansion is contingent on securing additional water without increasing fresh water consumption; the company is implementing dry tailings to raise water reusability from approximately 80% toward 90%.

Investment thesis: We recently upgraded SCCO to Neutral from Sell, mostly supported by a copper scarcity premium that we see as larger than ever due to expectations of structural supply/demand tightness. With SCCO being 1) the largest pure publicly traded copper producer, 2) with a solid operational track record, 3) long life of mine reserves in friendly jurisdictions, 4) sizable and liquid trading in the US, and 5) the potential to grow production, we believe it deserves a meaningful premium. Additionally, our copper down-cycle analysis points to SCCO's strong defensive positioning in a copper downturn given its low cost profile and relatively lower operating leverage. Lastly, the company's implied copper price stands at $11,600/t, 15% below spot prices even though the company trades at a premium valuation.

Teck Resources

Speaker: Jonathan Price, CEO

Teck Resources (US$29.5B market cap; not-covered) is a diversified base metals producer with copper and zinc operations across Canada, Chile and Peru, supported by key assets including QB, Highland Valley Copper and Antamina, alongside the Red Dog zinc operation and Trail smelter.

- **Anglo Teck merger remains on track according to management,** with China the sole remaining approval and management maintaining the original 12-18 month completion timeline (expected Q4'26-Q1'27). Management continues to see value creation potential through a top-five global copper platform with >70% copper exposure, a stronger balance sheet and multiple low-capital-intensity growth opportunities. Potential TSX index exclusion remains a focus area for management, though they remain optimistic following recent S&P consultation proposals. Even if excluded, the company sees limited risk, with passive outflows largely offset by a higher LSE weighting and associated inflows.
- **Government support for critical minerals continues to strengthen,** with management highlighting faster permitting, investment in shared infrastructure and support for strategic metals as key priorities. The Canadian government is increasingly focused on multi-user infrastructure through its Major Projects Office, helping reduce the capital burden on mining companies developing new projects.
- **QB continues to show improving operational stability,** with completion of the fifth mechanical rock bench removing a key tailings constraint and supporting no TMF-related shutdowns through 2026. Focus is now on improving sand quality and installing the secondary cyclone system, while evaluating the timing of further permitted infrastructure that would enable steady state operations. Management highlighted strong Q1 production of 55kt and a solid start to Q2, with April production exceeding 19kt and sales benefiting from the return of the shiploader. While work continues on sand quality improvements and permanent tailings infrastructure, Teck remains confident in delivering FY26 production guidance of 200-235kt and continues to see longer-term upside from higher throughput and recoveries.
- **The Highland Valley Copper mine life extension remains on schedule** and within its US$2.1-2.4bn total budget, with construction ~15% complete and engineering and procurement contracts awards largely complete. The project, which extends mine life to 2046 and supports ~132ktpa annual Cu production, is entering its peak capital spending phase, with US$0.9-1.2bn planned in 2026. Management remains confident in delivering the project in 2028. TECK expects some mill downtime in 2H, relating to upgrades needed for mine life extension (factored in guidance). Amid broader concerns around productivity, Teck highlighted strong governance, data-driven project controls, detailed construction work packages and close contractor integration as key factors supporting productivity and execution.
- **Growth capital allocation remains focused on lower-risk brownfield and**

adjacency opportunities, with management stating that the Los Bronces-Andina and potential QB-Collahuasi combinations are particularly attractive given their low capital intensity, lower execution risk and strong return potential. While brownfield optimisation remains the priority, Teck continues to advance its greenfield pipeline, including San Nicolas and Zafranal, with partnerships playing a key role in reducing capital requirements and execution risk, given increased challenges associated with large greenfield projects (reduced resource quality, challenging geographies/elevation, significant infrastructure requirements).

- **Cost pressures remain manageable despite higher diesel prices.** Management noted that a US$10/bbl move in WTI impacts copper unit costs by around US$0.03/lb and zinc unit costs by US$0.01/lb, highlighting the relatively limited sensitivity to energy inflation. Importantly, stronger silver and molybdenum by-product credits have more than offset higher energy costs, allowing Teck to maintain its cost guidance. Teck noted its Red Dog zinc mine had some protection because it was consuming diesel purchased in Q3 2025, given the seasonal shipping window to replenish site level inventory.
- **In zinc, management stated that the market continues to undervalue the division**, pointing to strong cash generation at Red Dog, increasingly supportive market fundamentals, negative zinc TCs (TECK is a net long miner) and growing demand linked to infrastructure protection and climate adaptation. Management remains constructive on both zinc pricing and the long-term value of the zinc business within the portfolio.

Vale Base Metals

Speaker: Shaun Usmar, CEO

Vale Base Metals (Private) is a subsidiary of Vale (Buy-rated). The company is focused on producing copper, nickel, cobalt, platinum and other metals for the energy transition. The company has assets in Brazil, Canada, Indonesia, Japan and the UK.

- **Project development is advancing on schedule, with underground optionality as a key upside.** Management reaffirmed the target of doubling copper capacity from ~350kt at end-2024 to 700ktpa by 2035, mainly driven by the Pará endowment in Brazil. Mr. Usmar highlighted the near-term developments of VBM's copper projects, with Bacaba at ~35% completion (45% on pre-strip) and a good portion of the equipment already mobilized, while its CPF (coarse particle flotation) project on time for FID with Q2 results. Further ahead, underground projects could represent an interesting upside for copper growth, with management highlighting Sossego showing high-quality intercepts below the pit (not considered for the 700kt target) as well as its underground expertise (from its Canadian operations) to de-risk this transition in Brazil.
- **Competitive capital intensity differentiates the pipeline versus peers.** Most pipeline projects sit below $20,000/t, with several near $15,000/t and Bacaba under $5,000/t—well below industry averages (~$22,000/t as per Vale). This reflects a

brownfield, regional-hub strategy leveraging existing infrastructure, know-how, and the absence of altitude constraints. Bacaba's capex was nearly halved versus the 2024 plan, lifting returns from mid-teens to over 50%. Overall, returns across the pipeline range from the high-20s to over 50%, far exceeding what M&A could deliver.

- **M&A and partnerships remain selective; potential IPO decision to be strategy driven.** Management favors organic growth given a cost-of-capital disadvantage, but could pursue partnerships where scale or complexity could be challenging—e.g., Hu'u and the Glencore/Sudbury JV. On funding, VBM's cash generation has been better than expected, with the company benefiting from some commodities tailwinds as well, which helped them to achieve a leverage level <1.0x net debt/EBITDA before expected, alleviating any funding-driven pressure to raise capital. Focus now is to operate as a stand-alone public company, and management stated that a potential IPO would be considered as a strategic value-unlock decision for Vale and Manara. The company mentioned that operational improvements delivered are 2 years ahead of their prior expectations.
- **Copper market outlook remains structurally bullish on supply scarcity.** Management is firmly constructive, citing a decade of underinvestment, declining exploration success, declining grades, and challenging jurisdictions as the key reasons. Furthermore, the sector has continuously under-delivered, with ~5% shortfalls versus annual guidance recurring—a pattern management expects to repeat going forward. Against this backdrop, VBM's high-return, controllable endowment positions it as a rare structural beneficiary.
- **Nickel business shifting toward operational competitiveness over growth.** Unlike copper, the nickel market faces near-to-medium-term surplus driven mainly by Indonesia (~50-60% of supply), which has displaced higher-cost Western output. Under these circumstances, VBM's strategy is to gain competitiveness, moving its 3rd/4th-quartile asset base into the lower half of the cost curve via debottlenecking, targeting 10-35% productivity gains and support from diversified by-product credits, while also targeting a production range of 210-250ktpa. Additionally, Indonesian RKAB (annual work plan) signals remain mixed, but rising sulfur and energy costs for HPAL provide a supportive cost floor. At ~$20,000/t, the business could generate ~$1bn of cash next year—higher than the last several years.

Investment thesis for Vale: We think Vale has a solid strategy in place to balance iron ore portfolio and to grow on copper. Valuation is also attractive on a relative basis with Vale trading at 8% FCFy at spot vs. 4-6% for peers BHP/RIO. Vale also has a cleaner capital allocation strategy with limited M&A risk and improving operational performance. Vale stands out in terms of dividend carry and could be a relatively defensive stock going into an electoral year in 2026.

Valuation and Key Risks

Antofagasta
Our 12-month TP of £46 is set at a 25/75 blend of 1.3x NAV and EV/EBITDA with an 8.5x target multiple.

Downside investment risks to our view and price target: (1) Commodity price movements — particularly unexpected US tariff related events (this is the key near-term risk to our call), (2) operational delivery in light of broader challenges facing the industry, (3) execution risk at Centinela — 50% complete; on track and budget, but unforeseen weather/safety/technical/design issues could delay the project and increase costs, and (4) value destructive M&A — we would view positively asset level transactions that unlock industrial synergies versus corporate transactions.

Capstone Copper
We are Neutral-rated on Capstone Copper with a 12-month price target of C$13/sh based on an equal-weighted blended DCF and 1-yr fwd EV/EBITDA target multiple of 7.1x, based on 5-yr historical avg + 1 std.deviation. Our DCF model assumptions include a 1.8 beta and 9.9% nominal WACC, based on 35%/65% D/E capital structure and 30% tax rate, consistent with the assumptions we used for other copper names in our coverage. We do not include Santo Domingo and other non-sanctioned projects into our DCF, an approach that is consistent with the assumptions we use for other copper names in our coverage.

Upside risks: 1) Given the company's high operating leverage, higher than expected copper prices could potentially lead to better than expected performance; 2) faster-than-expected delivery of its Santo Domingo project (potential to reach 60% production growth; not in GS numbers).

Downside risks: 1) Slower-than-expected ramp up in Mantoverde's MVDP and eventually in Mantoverde's MVO could represent downside risk to production and costs. We also note potential capex overrun risks for MVO; 2) copper projects being approved and executed faster than expected, leading to lower copper prices and consequently lower earnings; 3) macroeconomic and tariff uncertainty which could potentially decelerate copper demand and impact Capstone's volumes; 4) regulatory environment could impact profitability in view of limited earnings' diversification (Capstone's assets are increasingly concentrated in Chile, >70%).

Ero Copper
We are Neutral-rated on Ero Copper with a 12-month price target of $31.0 based on our equal-weighted blended DCF/1-yr fwd EV/EBITDA target multiple of 6.5x. Our DCF model assumptions include a 1.4 beta and 10.7% nominal WACC.

Upside risks: 1) faster than expected turnaround on current operational issues at Tucumã and Caraíba mines; 2) higher-/longer-than-expected copper prices, which could potentially increase investor interest in copper assets; and 3) higher-than-expected gold prices, which could impact positively the company's profitability and increase interest from investors.

Downside risks: 1) production and cost disappointments during the Tucumã project ramp up; 2) lower-than-expected copper prices, which could potentially reduce investor interest in copper assets; and 3) lower-than-expected gold prices, which could impact the company's profitability and reduce interest from investors.

First Quantum Minerals

We are Buy-rated on First Quantum with a 12-month target price of C$44.0/sh based on our EV/EBITDA multiple-based valuation. Our multiple-based valuation consists of an equal-weighted blended multiple of 9.2x for 2026E and 2027E EV/EBITDA (5-yr historical avg + 1 std.deviation).

Downside risks: 1) Zambia currently generates 100% of the company's EBITDA and asset concentration is now elevated (production issues in Zambia—e.g., energy availability, accidents—could significantly reduce the company's ability to honor cash obligations); 2) a longer-than-expected resolution at Cobre Panama could limit FM's ability to deleverage; 3) lower-than-expected copper prices could reduce investor interest in owning copper assets; and 4) a potential reopening of Cobre Panama with worse-than-expected economics could pose a risk.

Freeport-McMoRan

Our 12-month price target of $75 based on a through-cycle EV/EBITDA valuation (85%) and an M&A component (15%). Our fundamental valuation of $72 is based on a 7.1x EV/EBITDA multiple to 2026-2028 average estimates. As for the M&A component, we apply a 9.0x multiple to FY2026-2028 estimates to arrive at a valuation of $94.

Risks. 1) Commodity prices lower than anticipated; 2) Higher energy costs; 3) Labor strikes in Indonesia and South America; 4) Mine operating disruptions resulting in less output than anticipated; 5) Higher than anticipated capital costs; 6) Cost reduction less than anticipated.

Hudbay Minerals

We are Buy-rated on HudBay Minerals Inc with a 12-month price target of C$39/sh with a PT methodology of an equal-weighted blended DCF/1-yr fwd EV/EBITDA target multiple of 5.2x. Our DCF model assumptions include a 1.2 beta (long-term historical average) and 8% WACC (nominal), based on 35%/65% Debt/Equity capital structure and 35% tax rate, all unchanged. We include in our DCF neither the NAV contribution of Copper World nor those from other non-sanctioned projects, which is consistent with the assumptions we use for other copper names in our coverage.

Downside risks: Downside risks to our price target and investment view include: 1) copper/gold prices below GS macro forecasts, mainly impacting the higher cost Copper Mountain asset, the principal FCF growth enabler before Copper World, 2) Peru's copper production decline if throughput ramp-up is not achieved/delayed as the high-grade Pampacancha deposit depletes, 3) failure to optimize Copper Mountain and expand mine throughput through the ball to SAG mill conversion leading to still-negative FCF generation, 4) Failure to extend Manitoba's hub gold production while capex is being disbursed for exploration activities, 5) Delayed sanctioning and/or capex overrun at Copper World, 6) Social unrest activities in Peru impacting copper production, 7) Wildfires in the Manitoba region impacting gold production.

Lundin Mining

We are Buy rated on LUN.TO/LUMIN.ST with TP of C$47.8/SEK311. Our TPs are based on a blend of 1x NAV and EV/EBITDA and a 10x target multiple on consolidated NTM EBITDA.

Key risks to our view and price target: (1) commodity price movements — in particular unexpected US tariff related events (we believe this is the key near-term risk to our call), (2) operational delivery in light of broader challenges facing the industry, (3) geopolitical risk in Argentina and/or unforeseen weather/safety/technical/design issues, which could delay the Vicuna project and increase costs, and (4) value destructive M&A — we believe asset level transactions that unlock industrial synergies would carry lower risks than corporate transactions.

Southern Copper

We are Neutral-rated on SCCO with a 12-month price target of US$176.24 based on equal-weighted DCF and 1-yr fwd EV/EBITDA target multiple of 13.7x, based on 5-yr historical avg + 1 std.deviation.

Upside risks: 1) Stronger than expected copper and/or by-products prices (namely silver and molybdenum), 2) Capacity to deliver better-than-expected costs despite the near-term production decline, 3) Faster-than-expected ramp-up of board-approved projects (namely Tia Maria) we consider in our model, 4) Southern Copper has a strong project pipeline for the coming years and some of these projects are still not board-approved and not considered in our model (El Arco, Los Chancas, Michiquillay, Ilo and Empalme smelters). A successful delivery of these projects at competitive costs could represent an upside risk. 5) Increased valuation premium due to scarcity value if we see rotation out of other large cap pure copper producers into SCCO.

Downside risks: 1) Softer-than expected copper and/and by-products prices (namely silver and molybdenum), 2) Higher-than-expected costs due to operating deleverage as production decline, 3) Faster-than-expected mine depletion in select assets, 4) capex overrun on ongoing growth projects, mainly Tia Maria, 5) Political and regulatory risks in Mexico and Peru (ongoing reforms include shortening mining concessions/tightening water permit regulations).

Vale

We are Buy-rated on Vale with a 12-month price target of $18 based on our DCF methodology (WACC 9.0%, Beta 1.10).

Downside risks: (1) Lower iron ore prices on the back of a potential stronger-than-expected China macro slowdown could impact Vale's main products. (2) Stronger BRL relative to USD could negatively impact Vale's profitability. (3) Slower-than-expected improvement of base metals supply & demand dynamics (copper and nickel) could keep prices lower for longer, impacting Vale's profitability negatively. (4) Any further legal actions regarding Samarco could potentially increase Vale's provisions. (5) Operational performance could disappoint for both iron ore and base metals, driving lower-than-expected volumes and pressuring cash flow generation.

Disclosure Appendix

Reg AC

We, Marcio Farid, Matt Greene, Nick Cash, Emerson Vieira, Henrique Marques and Riccardo D'Agata, hereby certify that all of the views expressed in this report accurately reflect our personal views about the subject company or companies and its or their securities. We also certify that no part of our compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

Unless otherwise stated, the individuals listed on the cover page of this report are analysts in Goldman Sachs' Global Investment Research division.

Contributing Authors: Marcio Farid Goldman Sachs do Brasil CTVM S.A., Matt Greene Goldman Sachs International, Nick Cash Goldman Sachs & Co. LLC, Emerson Vieira Goldman Sachs do Brasil CTVM S.A., Henrique Marques Goldman Sachs do Brasil CTVM S.A., Riccardo D'Agata Goldman Sachs International.

Unless otherwise stated, the individuals listed in the Contributing Authors disclosure of this report are analysts in Goldman Sachs' Global Investment Research division.

GS Factor Profile

The Goldman Sachs Factor Profile provides investment context for a stock by comparing key attributes to the market (i.e. our universe of rated stocks) and its sector peers. The four key attributes depicted are: Growth, Financial Returns, Multiple (e.g. valuation) and Integrated (a composite of Growth, Financial Returns and Multiple). Growth, Financial Returns and Multiple are calculated by using normalized ranks for specific metrics for each stock. The normalized ranks for the metrics are then averaged and converted into percentiles for the relevant attribute. The precise calculation of each metric may vary depending on the fiscal year, industry and region, but the standard approach is as follows:

Growth is based on a stock's forward-looking sales growth, EBITDA growth and EPS growth (for financial stocks, only EPS and sales growth), with a higher percentile indicating a higher growth company. **Financial Returns** is based on a stock's forward-looking ROE, ROCE and CROCI (for financial stocks, only ROE), with a higher percentile indicating a company with higher financial returns. **Multiple** is based on a stock's forward-looking P/E, P/B, price/dividend (P/D), EV/EBITDA, EV/FCF and EV/Debt Adjusted Cash Flow (DACF) (for financial stocks, only P/E, P/B and P/D), with a higher percentile indicating a stock trading at a higher multiple. The **Integrated** percentile is calculated as the average of the Growth percentile, Financial Returns percentile and (100% - Multiple percentile).

Financial Returns and Multiple use the Goldman Sachs analyst forecasts at the fiscal year-end at least three quarters in the future. Growth uses inputs for the fiscal year at least seven quarters in the future compared with the year at least three quarters in the future (on a per-share basis for all metrics).

For a more detailed description of how we calculate the GS Factor Profile, please contact your GS representative.

M&A Rank

Across our global coverage, we examine stocks using an M&A framework, considering both qualitative factors and quantitative factors (which may vary across sectors and regions) to incorporate the potential that certain companies could be acquired. We then assign a M&A rank as a means of scoring companies under our rated coverage from 1 to 3, with 1 representing high (30%-50%) probability of the company becoming an acquisition target, 2 representing medium (15%-30%) probability and 3 representing low (0%-15%) probability. For companies ranked 1 or 2, in line with our standard departmental guidelines we incorporate an M&A component into our target price. M&A rank of 3 is considered immaterial and therefore does not factor into our price target, and may or may not be discussed in research.

Quantum

Quantum is Goldman Sachs' proprietary database providing access to detailed financial statement histories, forecasts and ratios. It can be used for in-depth analysis of a single company, or to make comparisons between companies in different sectors and markets.

Disclosures

Rating and pricing information

Antofagasta Plc (Buy, 3,868p), Capstone Copper (Neutral, C$13.25), Ero Copper (Neutral, $26.21), First Quantum Minerals (Buy, C$39.80), Freeport-McMoRan Inc. (Buy, $60.97), HudBay Minerals Inc. (Buy, C$32.90), Lundin Mining Corp. (Buy, C$35.15), Lundin Mining Corp. (Buy, Skr238.80), Southern Copper (Neutral, $172.01) and Vale (Buy, $14.99).

Financial advisory disclosure

Goldman Sachs and/or one of its affiliates is acting as a financial advisor in connection with an announced strategic matter involving the following company or one of its affiliates: Teck Resources Limited.

The rating(s) for Antofagasta Plc and Lundin Mining Corp. is/are relative to the other companies in its/their coverage universe: Antofagasta Plc, ArcelorMittal SA, BHP Group Ltd., Boliden, Glencore Plc, Lundin Mining Corp., Norsk Hydro, Rio Tinto Plc

The rating(s) for Capstone Copper, Ero Copper, First Quantum Minerals, HudBay Minerals Inc., Southern Copper and Vale is/are relative to the other companies in its/their coverage universe: Aura Minerals, CSN, CSN Mineracao, Capstone Copper, Copec, Dexco, Empresas CMPC SA, Ero Copper, First Quantum Minerals, Gerdau, Grupo Mexico, HudBay Minerals Inc., Klabin, SQM, Southern Copper, Suzano, Ternium, Usiminas, Vale

The rating(s) for Freeport-McMoRan Inc. and Teck is/are relative to the other companies in its/their coverage universe: Cleveland-Cliffs Inc., Commercial Metals Co., Freeport-McMoRan Inc., Nucor Corp., Reliance Inc.

Company-specific regulatory disclosures

Compendium report: please see disclosures at https://www.gs.com/research/hedge.html. Disclosures applicable to the companies included in this compendium can be found in the latest relevant published research

Distribution of ratings/investment banking relationships

Goldman Sachs Investment Research global Equity coverage universe

	Rating Distribution			Investment Banking Relationships		
	Buy	Hold	Sell	Buy	Hold	Sell
Global	50%	34%	16%	65%	60%	45%

As of April 1, 2026, Goldman Sachs Global Investment Research had investment ratings on 3,074 equity securities. Goldman Sachs assigns stocks as Buys and Sells on various regional Investment Lists; stocks not so assigned are deemed Neutral. Such assignments equate to Buy, Hold and Sell for the purposes of the above disclosure required by the FINRA Rules. See 'Ratings, Coverage universe and related definitions' below. The Investment Banking Relationships chart reflects the percentage of subject companies within each rating category for whom Goldman Sachs has provided investment banking services within the previous twelve months.

Price target and rating history chart(s)

Compendium report: please see disclosures at https://www.gs.com/research/hedge.html. Disclosures applicable to the companies included in this compendium can be found in the latest relevant published research

Target price history table(s)

Capstone Copper (CS.TO)

Date of report	Target price (C$)	Closing price (C$)
14-Apr-26	13.00	12.83
13-Jan-26	14.00	13.76
28-Oct-25	11.40	11.71
25-Jul-25	7.00	7.95
30-May-25	7.50	7.44
13-Mar-25	8.00	7.82

Lundin Mining Corp. (LUMIN.ST)

Date of report	Target price (Skr)	Closing price (Skr)
18-Jun-26	311.00	258.30
04-Jun-26	314.00	288.50
07-May-26	266.00	255.50
10-Apr-26	264.00	261.20
24-Feb-26	266.00	286.60
12-Jan-26	240.00	224.40
28-Oct-25	168.00	149.10
09-Oct-25	165.00	144.60
08-Aug-25	129.00	110.70
08-Jul-25	123.00	100.30
20-Jun-25	110.00	97.00
09-May-25	109.00	82.65
28-Apr-25	114.00	82.15
10-Apr-25	117.00	68.05
06-Mar-25	124.00	88.20

Ero Copper (ERO)

Date of report	Target price ($)	Closing price ($)
14-Apr-26	31.00	30.02
13-Jan-26	33.00	29.83
28-Oct-25	25.00	20.81
25-Jul-25	18.50	14.15
25-Apr-25	18.00	12.62
26-Mar-25	17.50	13.39
11-Feb-25	18.00	13.02
02-Dec-24	19.00	15.24

Vale (VALE)

Date of report	Target price ($)	Closing price ($)
30-Jan-26	18.00	16.07
03-Dec-25	13.80	13.30
22-Oct-25	14.00	11.52
19-Sep-25	14.80	10.86
18-Jul-25	15.50	9.77
23-Feb-25	16.10	10.11
29-Jan-25	16.00	9.07
04-Dec-24	15.80	9.51
16-Oct-24	15.50	10.98
17-Jul-24	15.90	11.21
03-Jul-24	16.00	11.61
17-Apr-24	16.20	11.85
08-Apr-24	16.00	12.50
05-Dec-23	18.50	14.72
21-Nov-23	19.50	15.87
18-Oct-23	12.20	12.90
08-Aug-23	12.70	13.75
19-Jul-23	12.00	14.05

Southern Copper (SCCO)

Date of report	Target price ($)	Closing price ($)
10-Apr-26	178.00	190.65
15-Jan-26	144.00	179.63
13-Jan-26	129.00	171.19
28-Oct-25	115.00	134.69
17-Sep-25	89.00	104.05
30-May-25	90.00	87.61

First Quantum Minerals (FM.TO)

Date of report	Target price (C$)	Closing price (C$)
14-Apr-26	44.00	38.60
09-Feb-26	40.00	38.73
13-Jan-26	43.00	40.70
28-Oct-25	36.00	31.13
17-Sep-25	30.00	26.44
30-May-25	22.00	20.33

Southern Copper (SCCO)

Date of report	Target price ($)	Closing price ($)
26-Mar-25	94.00	93.24
26-Nov-24	93.00	93.36
21-Aug-24	88.00	98.20
21-Mar-24	82.00	95.96
28-Nov-23	61.00	66.57
15-Aug-23	66.00	74.27
07-Jul-23	64.00	65.49

First Quantum Minerals (FM.TO)

Date of report	Target price (C$)	Closing price (C$)
26-Mar-25	24.00	21.35
23-Jan-25	21.00	19.06
26-Nov-24	20.00	18.69
21-Aug-24	22.00	16.87
21-May-24	25.00	20.00
07-Jul-23	31.00	31.84

HudBay Minerals Inc. (HBM.TO)

Date of report	Target price (C$)	Closing price (C$)
14-Apr-26	39.00	34.78
09-Feb-26	35.00	35.15
13-Jan-26	33.00	31.27
28-Oct-25	24.50	22.55
07-Sep-25	19.30	17.62

Antofagasta Plc (ANTO.L)

Date of report	Target price (£)	Closing price (£)
04-Jun-26	4,600	4,210
15-Apr-26	3,900	3,890
10-Apr-26	4,000	3,788
17-Feb-26	4,200	3,617
09-Jan-26	4,000	3,473
26-Oct-25	2,480	2,676
09-Oct-25	2,600	2,766
14-Aug-25	2,050	2,096
16-Jul-25	2,120	1,836
08-Jul-25	2,060	1,919.5
16-Apr-25	1,720	1,554
10-Apr-25	1,710	1,456
18-Feb-25	1,850	1,835
16-Jan-25	1,800	1,738
09-Jan-25	1,690	1,718
16-Oct-24	1,875	1,819.5
05-Sep-24	2,000	1,702.5

Lundin Mining Corp. (LUN.TO)

Date of report	Target price (C$)	Closing price (C$)
18-Jun-26	47.80	37.49
04-Jun-26	48.20	42.59
07-May-26	40.80	36.10
10-Apr-26	40.60	39.20
24-Feb-26	40.90	44.41
12-Jan-26	35.80	33.74
28-Oct-25	23.90	22.04
09-Oct-25	23.50	21.37
08-Aug-25	17.10	15.92
08-Jul-25	16.40	14.50
20-Jun-25	14.70	13.66
09-May-25	14.60	11.93
28-Apr-25	15.20	11.75
10-Apr-25	15.70	9.51
06-Mar-25	16.60	12.45

Freeport-McMoRan Inc. (FCX)

Date of report	Target price ($)	Closing price ($)
01-Jun-26	75.00	67.04
24-Apr-26	68.00	61.05
01-Apr-26	70.00	61.20
07-Jul-23	45.00	38.64

Price targets shown in table(s) are unadjusted for corporate actions.

Regulatory disclosures

Disclosures required by United States laws and regulations

See company-specific regulatory disclosures above for any of the following disclosures required as to companies referred to in this report: manager or co-manager in a pending transaction; 1% or other ownership; compensation for certain services; types of client relationships; managed/co-managed public offerings in prior periods; directorships; for equity securities, market making and/or specialist role. Goldman Sachs trades or may trade as a principal in debt securities (or in related derivatives) of issuers discussed in this report.

The following are additional required disclosures: **Ownership and material conflicts of interest:** Goldman Sachs policy prohibits its analysts, professionals reporting to analysts and members of their households from owning securities of any company in the analyst's area of coverage. **Analyst compensation:** Analysts are paid in part based on the profitability of Goldman Sachs, which includes investment banking revenues. **Analyst as officer or director:** Goldman Sachs policy generally prohibits its analysts, persons reporting to analysts or members of their households from serving as an officer, director or advisor of any company in the analyst's area of coverage. **Non-U.S. Analysts:** Non-U.S. analysts may not be associated persons of Goldman Sachs & Co. LLC and therefore may not be subject to FINRA Rule 2241 or FINRA Rule 2242 restrictions on communications with a subject

company, public appearances and trading in securities covered by the analysts.

Additional disclosures required under the laws and regulations of jurisdictions other than the United States

The following disclosures are those required by the jurisdiction indicated, except to the extent already made above pursuant to United States laws and regulations. **Australia:** Goldman Sachs Australia Pty Ltd and its affiliates are not authorised deposit-taking institutions (as that term is defined in the Banking Act 1959 (Cth)) in Australia and do not provide banking services, nor carry on a banking business, in Australia. This research, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act, unless otherwise agreed by Goldman Sachs. In producing research reports, members of Global Investment Research of Goldman Sachs Australia may attend site visits and other meetings hosted by the companies and other entities which are the subject of its research reports. In some instances the costs of such site visits or meetings may be met in part or in whole by the issuers concerned if Goldman Sachs Australia considers it is appropriate and reasonable in the specific circumstances relating to the site visit or meeting. To the extent that the contents of this document contains any financial product advice, it is general advice only and has been prepared by Goldman Sachs without taking into account a client's objectives, financial situation or needs. A client should, before acting on any such advice, consider the appropriateness of the advice having regard to the client's own objectives, financial situation and needs. A copy of certain Goldman Sachs Australia and New Zealand disclosure of interests and a copy of Goldman Sachs' Australian Sell-Side Research Independence Policy Statement are available at: https://www.goldmansachs.com/disclosures/australia-new-zealand/index.html. **Brazil:** Disclosure information in relation to CVM Resolution n. 20 is available at https://www.gs.com/worldwide/brazil/area/gir/index.html. Where applicable, the Brazil-registered analyst primarily responsible for the content of this research report, as defined in Article 20 of CVM Resolution n. 20, is the first author named at the beginning of this report, unless indicated otherwise at the end of the text. **Canada:** This information is being provided to you for information purposes only and is not, and under no circumstances should be construed as, an advertisement, offering or solicitation by Goldman Sachs & Co. LLC for purchasers of securities in Canada to trade in any Canadian security. Goldman Sachs & Co. LLC is not registered as a dealer in any jurisdiction in Canada under applicable Canadian securities laws and generally is not permitted to trade in Canadian securities and may be prohibited from selling certain securities and products in certain jurisdictions in Canada. If you wish to trade in any Canadian securities or other products in Canada please contact Goldman Sachs Canada Inc., an affiliate of The Goldman Sachs Group Inc., or another registered Canadian dealer. **Hong Kong:** Further information on the securities of covered companies referred to in this research may be obtained on request from Goldman Sachs (Asia) L.L.C. **India:** Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (India) Securities Private Limited, Research Analyst - SEBI Registration Number INH000001493, 10th Floor, Ascent-Worli, Sudam Kalu Ahire Marg, Worli, Mumbai-400 025, India, Corporate Identity Number U74140MH2006FTC160634, Phone +91 22 6616 9000, Fax +91 22 6616 9001. Goldman Sachs may beneficially own 1% or more of the securities (as such term is defined in clause 2 (h) the Indian Securities Contracts (Regulation) Act, 1956) of the subject company or companies referred to in this research report. Registration granted by SEBI and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors. Goldman Sachs (India) Securities Private Limited compliance officer and investor grievance contact details, a copy of the annual compliance audit report and other relevant information and disclosures can be found at this link: https://www.goldmansachs.com/worldwide/india/research-analyst. **Japan:** See below. **Korea:** This research, and any access to it, is intended only for "professional investors" within the meaning of the Financial Services and Capital Markets Act, unless otherwise agreed by Goldman Sachs. Further information on the subject company or companies referred to in this research may be obtained from Goldman Sachs (Asia) L.L.C., Seoul Branch. **New Zealand:** Goldman Sachs New Zealand Limited and its affiliates are neither "registered banks" nor "deposit takers" (as defined in the Reserve Bank of New Zealand Act 1989) in New Zealand. This research, and any access to it, is intended for "wholesale clients" (as defined in the Financial Advisers Act 2008) unless otherwise agreed by Goldman Sachs. A copy of certain Goldman Sachs Australia and New Zealand disclosure of interests is available at: https://www.goldmansachs.com/disclosures/australia-new-zealand/index.html. **Russia:** Research reports distributed in the Russian Federation are not advertising as defined in the Russian legislation, but are information and analysis not having product promotion as their main purpose and do not provide appraisal within the meaning of the Russian legislation on appraisal activity. Research reports do not constitute a personalized investment recommendation as defined in Russian laws and regulations, are not addressed to a specific client, and are prepared without analyzing the financial circumstances, investment profiles or risk profiles of clients. Goldman Sachs assumes no responsibility for any investment decisions that may be taken by a client or any other person based on this research report. **Singapore:** Goldman Sachs (Singapore) Pte. (Company Number: 198602165W), which is regulated by the Monetary Authority of Singapore, accepts legal responsibility for this research, and should be contacted with respect to any matters arising from, or in connection with, this research. **Taiwan:** This material is for reference only and must not be reprinted without permission. Investors should carefully consider their own investment risk. Investment results are the responsibility of the individual investor. **United Kingdom:** Persons who would be categorized as retail clients in the United Kingdom, as such term is defined in the rules of the Financial Conduct Authority, should read this research in conjunction with prior Goldman Sachs research on the covered companies referred to herein and should refer to the risk warnings that have been sent to them by Goldman Sachs International. A copy of these risks warnings, and a glossary of certain financial terms used in this report, are available from Goldman Sachs International on request.

European Union and United Kingdom: Disclosure information in relation to Article 6 (2) of the European Commission Delegated Regulation (EU) (2016/958) supplementing Regulation (EU) No 596/2014 of the European Parliament and of the Council (including as that Delegated Regulation is implemented into United Kingdom domestic law and regulation following the United Kingdom's departure from the European Union and the European Economic Area) with regard to regulatory technical standards for the technical arrangements for objective presentation of investment recommendations or other information recommending or suggesting an investment strategy and for disclosure of particular interests or indications of conflicts of interest is available at https://www.gs.com/disclosures/europeanpolicy.html which states the European Policy for Managing Conflicts of Interest in Connection with Investment Research.

Japan: Goldman Sachs Japan Co., Ltd. is a Financial Instrument Dealer registered with the Kanto Financial Bureau under registration number Kinsho 69, and a member of Japan Securities Dealers Association, Financial Futures Association of Japan Type II Financial Instruments Firms Association, and Investment Management Association of Japan. Sales and purchase of equities are subject to commission pre-determined with clients plus consumption tax. See company-specific disclosures as to any applicable disclosures required by Japanese stock exchanges, the Japanese Securities Dealers Association or the Japanese Securities Finance Company.

Ratings, coverage universe and related definitions

Buy (B), Neutral (N), Sell (S) Analysts recommend stocks as Buys or Sells for inclusion on various regional Investment Lists. Being assigned a Buy or Sell on an Investment List is determined by a stock's total return potential relative to its coverage universe. Any stock not assigned as a Buy or a Sell on an Investment List with an active rating (i.e., a stock that is not Rating Suspended, Not Rated, Early-Stage Biotech, Coverage Suspended or Not Covered), is deemed Neutral. Each region manages Regional Conviction Lists, which are selected from Buy rated stocks on the respective region's Investment Lists and represent investment recommendations focused on the size of the total return potential and/or the likelihood of the realization of the return across their respective areas of coverage. The addition or removal of stocks from such Conviction Lists are managed by the Investment Review Committee or other designated committee in each respective region and do not represent a change in the analysts' investment rating for such stocks.

Total return potential represents the upside or downside differential between the current share price and the price target, including all paid or anticipated dividends, expected during the time horizon associated with the price target. Price targets are required for all covered stocks. The total return potential, price target and associated time horizon are stated in each report adding or reiterating an Investment List membership.

Coverage Universe: A list of all stocks in each coverage universe is available by primary analyst, stock and coverage universe at https://www.gs.com/research/hedge.html.

Not Rated (NR). The investment rating, target price and earnings estimates (where relevant) are removed pursuant to Goldman Sachs policy when Goldman Sachs is acting in an advisory capacity in a merger or in a strategic transaction involving this company, when there are legal, regulatory or policy constraints due to Goldman Sachs' involvement in a transaction, and in certain other circumstances. **Early-Stage Biotech (ES).** An investment rating and a target price are not assigned pursuant to Goldman Sachs policy when this company has neither a drug, treatment or medical device that has passed a Phase II clinical trial nor a license to distribute a post-Phase II drug, treatment or medical device. **Rating Suspended (RS).** Goldman Sachs Research has suspended the investment rating and price target for this stock, because there is not a sufficient fundamental basis for determining an investment rating or target price. The previous investment rating and target price, if any, are no longer in effect for this stock and should not be relied upon. **Coverage Suspended (CS).** Goldman Sachs has suspended coverage of this company. **Not Covered (NC).** Goldman Sachs does not cover this company.

Global product; distributing entities

Goldman Sachs Global Investment Research produces and distributes research products for clients of Goldman Sachs on a global basis. Analysts based in Goldman Sachs offices around the world produce research on industries and companies, and research on macroeconomics, currencies, commodities and portfolio strategy. This research is disseminated in Australia by Goldman Sachs Australia Pty Ltd (ABN 21 006 797 897); in Brazil by Goldman Sachs do Brasil Corretora de Títulos e Valores Mobiliários S.A.; Public Communication Channel Goldman Sachs Brazil: 0800 727 5764 and / or contatogoldmanbrasil@gs.com. Available Weekdays (except holidays), from 9am to 6pm. Canal de Comunicação com o Público Goldman Sachs Brasil: 0800 727 5764 e/ou contatogoldmanbrasil@gs.com. Horário de funcionamento: segunda-feira à sexta-feira (exceto feriados), das 9h às 18h; in Canada by Goldman Sachs & Co. LLC; in Hong Kong by Goldman Sachs (Asia) L.L.C.; in India by Goldman Sachs (India) Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Seoul Branch; in New Zealand by Goldman Sachs New Zealand Limited; in Russia by OOO Goldman Sachs; in Singapore by Goldman Sachs (Singapore) Pte. (Company Number: 198602165W); and in the United States of America by Goldman Sachs & Co. LLC. Goldman Sachs International has approved this research in connection with its distribution in the United Kingdom.

Goldman Sachs International ("GSI"), authorised by the Prudential Regulation Authority ("PRA") and regulated by the Financial Conduct Authority ("FCA") and the PRA, has approved this research in connection with its distribution in the United Kingdom.

European Economic Area: Goldman Sachs Bank Europe SE ("GSBE") is a credit institution incorporated in Germany and, within the Single Supervisory Mechanism, subject to direct prudential supervision by the European Central Bank and in other respects supervised by German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin) and Deutsche Bundesbank and disseminates research within the European Economic Area.

General disclosures

This research is for our clients only. Other than disclosures relating to Goldman Sachs, this research is based on current public information that we consider reliable, but we do not represent it is accurate or complete, and it should not be relied on as such. The information, opinions, estimates and forecasts contained herein are as of the date hereof and are subject to change without prior notification. We seek to update our research as appropriate, but various regulations may prevent us from doing so. Other than certain industry reports published on a periodic basis, the large majority of reports are published at irregular intervals as appropriate in the analyst's judgment.

Goldman Sachs conducts a global full-service, integrated investment banking, investment management, and brokerage business. We have investment banking and other business relationships with a substantial percentage of the companies covered by Global Investment Research. Goldman Sachs & Co. LLC, the United States broker dealer, is a member of SIPC (https://www.sipc.org).

Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients and principal trading desks that reflect opinions that are contrary to the opinions expressed in this research. Our asset management area, principal trading desks and investing businesses may make investment decisions that are inconsistent with the recommendations or views expressed in this research.

The analysts named in this report may have from time to time discussed with our clients, including Goldman Sachs salespersons and traders, or may discuss in this report, trading strategies that reference catalysts or events that may have a near-term impact on the market price of the equity securities discussed in this report, which impact may be directionally counter to the analyst's published price target expectations for such stocks. Any such trading strategies are distinct from and do not affect the analyst's fundamental equity rating for such stocks, which rating reflects a stock's return potential relative to its coverage universe as described herein.

We and our affiliates, officers, directors, and employees will from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives, if any, referred to in this research, unless otherwise prohibited by regulation or Goldman Sachs policy.

The views attributed to third party presenters at Goldman Sachs arranged conferences, including individuals from other parts of Goldman Sachs, do not necessarily reflect those of Global Investment Research and are not an official view of Goldman Sachs.

Any third party referenced herein, including any salespeople, traders and other professionals or members of their household, may have positions in the products mentioned that are inconsistent with the views expressed by analysts named in this report.

This research is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction where such an offer or solicitation would be illegal. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Clients should consider whether any advice or recommendation in this research is suitable for their particular circumstances and, if appropriate, seek professional advice, including tax advice. The price and value of investments referred to in this research and the income from them may fluctuate. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Fluctuations in exchange rates could have adverse effects on the value or price of, or income derived from, certain investments.

Certain transactions, including those involving futures, options, and other derivatives, give rise to substantial risk and are not suitable for all investors. Investors should review current options and futures disclosure documents which are available from Goldman Sachs sales representatives or at https://www.theocc.com/about/publications/character-risks.jsp and https://www.goldmansachs.com/disclosures/cftc_fcm_disclosures. Transaction costs may be significant in option strategies calling for multiple purchase and sales of options such as spreads. Supporting documentation will be supplied upon request.

Differing Levels of Service provided by Global Investment Research: The level and types of services provided to you by Goldman Sachs Global Investment Research may vary as compared to that provided to internal and other external clients of GS, depending on various factors including your individual preferences as to the frequency and manner of receiving communication, your risk profile and investment focus and perspective (e.g., marketwide, sector specific, long term, short term), the size and scope of your overall client relationship with GS, and legal and regulatory constraints. As an example, certain clients may request to receive notifications when research on specific securities is published, and certain clients may request that specific data underlying analysts' fundamental analysis available on our internal client websites be delivered to them electronically through data feeds or otherwise. No change to an analyst's fundamental research views (e.g., ratings, price targets, or material changes to earnings estimates for equity securities), will be communicated to any client prior to inclusion of such information in a research report broadly disseminated through electronic publication to our internal client websites or through other means, as necessary, to all clients who are entitled to receive such reports.

All research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client websites. Not all research content is redistributed to our clients or available to third-party aggregators, nor is Goldman Sachs responsible for the redistribution of our research by third party aggregators. For research, models or other data related to one or more securities, markets or asset classes (including related services) that may be available to you, please contact your GS representative or go to https://research.gs.com.

Disclosure information is also available at https://www.gs.com/research/hedge.html or from Research Compliance, 200 West Street, New York, NY 10282.

© 2026 Goldman Sachs.

You are permitted to store, display, analyze, modify, reformat, and print the information made available to you via this service only for your own use. You may not resell or reverse engineer this information to calculate or develop any index for disclosure and/or marketing or create any other derivative works or commercial product(s), data or offering(s) without the express written consent of Goldman Sachs. You are not permitted to publish, transmit, or otherwise reproduce this information, in whole or in part, in any format to any third party without the express written consent of Goldman Sachs. This foregoing restriction includes, without limitation, using, extracting, downloading or retrieving this information, in whole or in part, to train or finetune a machine learning or artificial intelligence system, or to provide or reproduce this information, in whole or in part, as a prompt or input to any such system.