CONNECTING THE DOTS

Competition for Capital, Differentiation, Data Centers, Going Against the Grain AstraZeneca and Germany plus key research

Sahar Islam
+44(20)7051-4935 |
sahar.islam@gs.com
Goldman Sachs International

AI, Rates and Energy continue to dominate, but equities carry on. Peter Oppenheimer highlights the 'Competition for Capital' and, while rising yields pose some risks and earnings growth is likely to slow from its recent pace, he remains constructive on equities given that growth in nominal GDP provides support for the earnings cycle without the need for a re-rating. Energy remains key to rate moves (see the chart in this CTD to see the two moving in tandem). To dig into rates, see Christian Mueller-Glissmann's "The name is bond".

Differentiation between broad themes. Stock correlations remain low, but we continue to see broad themes moving together around AI. As AI evolves from pilot to widespread use cases, we would expect to see more divergence between companies in both the AI winner and AI-at-risk camps. Some of these are hard to measure from the outside, but culture matters and will impact AI adoption. This will be increasingly true as we see more companies execute on AI and AI-related capex such as Data Centers, where operational complexity (particularly regulation as we wrote last week) is high. Attending our EU Communacopia conference this week: **Publicis** is a name to revisit – recent wins highlight the 'pitching culture' which is hard to replicate. Software moats are another area to differentiate – listen to this podcast including feedback from the SF Communacopia last week.

Another week, another deal for Utilities and Data Centers in Europe. PPC and Amazon have signed a deal to develop a 300 MW DC in West Macedonia with the option to scale up to 1GW. PPC is the first of the European Utilities to develop and lease the facility (vs. Fortum and Google last week, which was a PPA at a significant premium). Alberto Gandolfi has consistently been highlighting the potential for data centers in Europe and Buy-rated **Solaria, Drax and RWE** (the latter on CL) are names he is watching for potential announcements. **There is execution risk in building data centers** as per above, so understanding each deal's site and watching execution is key.

Going Against the Grain podcast - AstraZeneca. This is an interesting name at a time when some investors question whether the R&D pipeline productivity is slowing. Rajan Sharma argues that longer-term innovation is on track and explains why (including snippets on the culture), and also touches on the nearer-term catalysts which have driven greater investor caution. **Listen here** for a c.20 min teach in.

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.

Germany – fiscal delivery? Our Munich conference kicks off on Monday and is a broad sense-check on the Germany economy with c.90% of the DAX and MDAX attending. We have a macro to micro podcast for you, with Defence, Multi-Industry and Banks, to help you prep. See our Equities Week Ahead here for details (plus lots more on CMDs where it is a heavy week).

GS Research from the week

We filter this week's research through the merchandising lens to highlight actionable ideas and pull out some themes / key messages which we think are important - click into the reports for more!

European Communacopia Takeaways

See all takeaways from European Communacopia here and takeaways from last week's San Francisco Conference here.

Telcos

Telcos - Pricing power and cost efficiencies accelerate as satellite risks are downplayed (Andrew Lee)

BT (BT.L) - Openreach CEO - continued reassurance on line loss trends, helped by slowing altnet build and cost efficiency upside, Buy on CL (Andrew Lee)

VOD (VOD.L) - Europe CEO - encouraging on potential cost efficiency upside and UK growth, no material change underlying German trends, Buy / **See Andrew's Recent Double Upgrade** to Buy and sector piece on adding leverage (Andrew Lee)

Orange (ORAN.PA) - On track delivery, more rational competitive environment both in France and in Spain with satellites complementary, Buy (Andrew Lee)

Media

Prosus/Naspers (PRX.AS) - Highlights competitive landscape in Brazil, progress for Just Eat, with slowing order declines, Neutral (Adam Berlin)

RELX (REL.L) - Strong top-line with STM and Legal acceleration, difficult to replicate its Legal data, manage token costs by rerouting simple tasks to cheaper models, Buy (Adam Berlin)

Informa (INF.L) - Potential for 2027 to be a strong year for B2B Markets, return of Middle East events at scale, Buy (James Tate)

Scout24 (G24n.DE) - New products could help reduce churn in private subscribers, see note for sensitivity analysis, Buy (Adam Berlin)

Auto Trader (AUTOA.L) - AI reshaping discovery but market place advantages intact, dealer health improving, inventory recovering, Buy (Adam Berlin)

Auto1 (AG1G.DE) - Confidence in top-end of FY26 guidance, no changes in operating performance since the recent CFO departure, Buy (James Tate)

Software *From SF conference last week*

Software - Software demand remains stable & AI adoption accelerating, cost optimization and model choice central debates. (Mohammed Moawalla)

AI

PPC (DEHr.AT) - Major DC deal with Amazon in W Macedonia, initial phase 300 MW of capacity by 2028 (est worth €1.3/share) with scale up to 1GW (est worth €4/share), PPC will develop & lease for 15y (Mafalda Pombeiro) **Alberto Gandolfi has spoken about the Data center opportunity in Europe**, including Fortum- Google. Watch Drax, Solaria and RWE.

Nvidia - 800VDC - Multi industry implications expert call highlights adoption slower than expected. (Daniela Costa)

China Internet & AI Models - Ex.25 shows blended LLM token price (SDLLMTK) has been declining since early June, also potentially indicating rising adoption of cost-effective China models (Ronald Keung)

China AI / Semis Tour - Expect to see double-digit growth of China semis capex through 2030E, tight supply of Upstream components/ materials (Allen Chang)

Ratings Changes & Initiations

Sunbelt Up to Buy (SUNB) - Negative EPS growth for 2y, see an inflection coming with megaprojects, rates improving and non-resi stabilizing, interest rate sensitive but non-resi already lower (Suhasini Varanasi)

Straumann Up to Buy (STMN.S) - Expect acceleration in EBIT/EPS FY27E, 1-8% ahead of Visible Alpha Consensus FY26-28, stock close to decade-low valuation and relative multiples (Richard Felton)

Renk Up to Buy (R3NK.DE) - Valuation driven post pullback, c60% upside and clearer positive catalyst path, earnings underpinned by EU land-defence cycle and strong backlog (Sam Burgess)

Sector Updates

Around the World in 80 Charts (**Transport)**- Manufacturing strength visible in robust trade volumes, EU data firmer with trucking vols improving modestly, freight rates elevated, airlines short haul under pressure (Patrick Creuset)

Defence - Drones Expert Call - Short range and counter-UAS systems amongst most underinvested with Rheinmetall Skyranger highlighted as a growth area but drones not a substitute for conventional (Sam Burgess)

Trucks - Takeaways from IAA Day 1 broadly positive for US and to some extent EU (more replacement led), cautious on risks from rising Chinese competition in Europe and upcoming European CO2 regulation - see **Day 2 here**. (Daniela Costa)

Healthcare - Oral SERDs for breast cancer could be a multi-billion category for type of cancer which is c.70%+ of new cases, could be addressed by Roche (Neutral), AZN (Buy), LLY (Buy) Menarini (Private) (Asad Haider)

Reiterate Buy

DSV (DSV.CO) - Road recovery could be more gradual, but stock should meaningfully recover given low expectations when it does (possibly 3Q/4Q, still below consensus on 3Q), Buy on CL (Patrick Creuset)

Rexel (RXL.PA) - Up GSe sales slightly given strength in France supported by electrification and some signs of green shoots in German industrial activity, see potential guidance upgrade. Buy (Daniela Costa)

BNP (BNPP.PA) - Feedback from Paris trip – 2028 ambitions within management's control despite macro uncertainty given div business model and variable costs, Buy (Chris Hallam)

Smith & Nephew (SN.L) - Recent has refocused attention on strategic optionality; assessing SOTP and continue to see attractive risk-reward and current valuation, Buy on CL (Richard Felton)

Going Against the Grain Podcast on AstraZeneca and why R&D productivity is still intact looking through nearer-term catalysts, Buy (Rajan Sharma)

Earnings & CMDs

Drax (DRX.L) - Positive trading statement with guidance up, more scope for upgrades if current market conditions continue, Buy (Ajay Patel)

Next (NXT.L) - 1H27 PBT modest beat, FY27 guidance updated on better sales expectations and cost savings, Buy (Richard Edwards)

Berkeley (BKGH.L) - Trading update, £1.4bn medium-term guidance reaffirmed, advocating for SDLT reform, Sell. (Rebecca Parker)

Barratt (BTRW.L) - +12% on results, resilient performance in a tough macro backdrop, forward-looking indicators, such as customer inquiries and website traffic, have remained stable, Buy. (Rebecca Parker)

Unite Group (UTG.L)- Delivering against occupancy guidance improves earnings visibility, Buy. (Rebecca Parker)

ISS (ISS.CO) - CMD takeaways, delivering higher-quality growth, margins above expectations, and potential for compelling shareholder returns, Buy (Ben Andrews)

Tracking the data

See Around the World in 80 Charts in the Sector updates

Informa (INF.L) - Middle East exhibition data shows sequential improvement as scaled events return, 2 top 50 events in Middle East (LEAP and MEE) down 20% YoY, trough 50-60% in March, Buy (James Tate)

MKS (MKS.L) - Worldpanel data shows strength in Food offset by weakness in FH&B, lowering 1H27/FY27E earnings, Buy (Richard Edwards)

Commodities and Energy

Crude Awakening Podcast navigating oil's breakout replay (Neil Mehta, Daan Struyven, Alexa Petrick Breno & Daniel Dickerson)

Oil - Diesel prices close to all-time highs in the US and Europe, close long European diesel rec and recommend long summer European gasoline, refiners switching output from gasoline to diesel (Yulia Zhestkova Grigsby)

Oil Tracker - Brent was close to $110 with Saudi's East-West pipeline closed, Ex 3 – Oil market in larger deficit in Aug as inventories draw (Yulia Zhestkova Grigsby)

Gold - Central bank gold purchasing trend remains strong through July. Fed hikes to flow rather than de-rail, maintain $5,400/toz end-27 forecast despite hike (Lina Thomas)

Iron Ore - Cost curve +20% over last 2yrs; marginal cost moves to ~US$95/t with higher oil and freight costs (Paul Young & Matt Greene)

Events incl M&A

ABI (ABI.BR) - Exploring optionality following balance sheet restoration, scope for further M&A following recent bolt-ons and minority stake buybacks, Buy (Olivier Nicolaï)

Puig (PUIGb.MC) - To take full control of ISDIN, transforming its skincare exposure, limited financial impact, strategically compelling, CMD on 28 Oct, Buy on CL (Aron Adamski)

Essity (ESSITYb.ST) - Press reports point to imminent Consumer Tissue sale process, Sell. (Aron Adamski)

CVC (CVC.AS) - Key Qs post the Fund X news last week, positive visibility on FRE growth and reaffirms strength of fundraising franchise, Buy on CL (Oliver Carruthers)

Flatex (FTKn.DE) - FAQs following changes to the Supervisory Board, -8% on Fri 11th, Buy on CL. (Oliver Carruthers)

Heidelberg (HEIG.DE) - Clinker closure announced, supports cost out catalyst, Buy. (Ben Rada Martin)

Aena (AENA.MC) - DORA III approval, broadly in line with our expectations, Sell. (Patrick Creuset)

SEB (SEBF.PA) - CEO change during turnaround; rebound plan unchanged, execution remains the focus, Buy. (Ope Otaniyi)

Macro

Global Strategy - Competition for Capital as AI/rates dominate, continued sharp rise in bond yields could put pressure on equities but fundamentals remain supportive, diversify. (Peter Oppenheimer)

September FOMC Recap - Hawkish dots show two-hike baseline; adding an October hike (David Mericle)

BoE Recap - Opening the door to a November hike (James Moberly)

GOAL - The name is bond - rethinking duration in balanced portfolios, bond-like equities to improve diversification with a growing number of stocks with a negative beta (Christian Mueller-Glissmann)

GOAL Kickstart - Most assets have been negatively correlated with rising US front-end

rates, Equities were more negatively correlated last week versus last 3m / **Revisit Why Equities Struggle** when higher yields are driven by energy, more hawkish policy or rising term premia (Christian Mueller-Glissmann)

Dividend Swap Monitor - European dividends supported by strong earnings but upside increasingly limited (Christian Mueller-Glissmann)

Credit - Expect $420 billion of gross debt issuance in 2027, which reflects some modest upward revisions in CapEx forecasts (was $400bn a few weeks ago), new forecast would be a 60% increase YoY versus 2026 estimate of $250bn ($229bn so far). (Amanda Lynam)

US Strategy on what higher interest rates mean in charts (Ben Snider).

USA - Core retail sales well above expectations; boosting Q3 GDP tracking estimate to +3.0% (Jan Hatzius)

China - What do local clients think about the economy? More risk-averse (Fed policy upcoming Trump-Xi meeting), expect the "K-shaped" economy (Lisheng Wang) / **Trump-Xi Meeting Survey** most investors expected it to be largely symbolic. (Andrew Tilton)

Global

The Consumer

We hosted our 33rd Annual Global Retail conference in New York. See all takeaways here.

Global Retail Conference - Consumer resilience balanced by heightened discernment, Cautious lower-income consumer/closely watching gas prices, Walmart has been investing in agentic commerce, seeing solid conversion rates (Kate McShane)

Inside the Model Podcast mapping the consumer wallet.

Other Global

China's Go Global - Expansion deep dive with multiple case studies, expect average market share of Chinese companies in international markets to rise from 18% in 2026E to 30+% (Trina Chen) **Listen to podcast version here.**

Demographics to Demand - Key debates on aging and declining populations and impacts on demand (Evan Tylenda)



Disclosure Appendix

Reg AC

I, Sahar Islam, hereby certify that all of the views expressed in this report accurately reflect my personal views about the subject company or companies and its or their securities. I also certify that no part of my 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: Sahar Islam 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

Pricing Information

Aena SA (€25.48), Anheuser-Busch InBev (€68.68), Anheuser-Busch InBev (ADR) ($78.77), AstraZeneca (12,428p), AstraZeneca ($166.14), Auto Trader Group (496.8p), Auto1 Group (€18.54), BNP Paribas (€103.78), BT Group (208.2p), Barratt Redrow (314.3p), Berkeley Group (3,360p), CVC Capital Partners (€13.06), DSV A/S (Dkr1,311.50), Drax Group (837p), Eli Lilly & Co. ($1,152.44), Essity (Skr264.30), Heidelberg Materials (€146.15), ISS (Dkr295.80), Informa (893p), Marks & Spencer (365p), Naspers Ltd. (R716.70), Next (14,920p), Orange (€15.96), Prosus N.V (€35.79), Public Power Corp. (€24.68), Publicis (€97.52), Puig Brands S.A. (€16.86), RELX Plc (2,570p), RENK Group (€40.04), RWE (€60.62), Rexel S.A. (€36.18), Rheinmetall (€1,016.20), Roche (SFr361.20), SEB SA (€55.90), Scout24 SE (€74.80), Smith & Nephew (1,035.5p), Solaria (€17.55), Straumann AG (SFr94.66), Sunbelt Rentals (5,516p), Sunbelt Rentals ($73.97), Unite Group (473.6p), Vodafone (131.75p), Vodafone ($17.52) and flatexDEGIRO SE (€30.00)

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%	59%	43%

As of July 1, 2026, Goldman Sachs Global Investment Research had investment ratings on 3,104 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.

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; registered market maker. 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 60634, 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 asil@gs.com. Available Weekdays (except holidays), from 9am to 6pm. Canal de Comunicação com o Público Goldman Sachs Brasil: 0800 727 5764 e/ou asil@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 tungsaufsicht, 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, make a market or act as liquidity provider in, and buy or sell, any securities, derivatives, or other financial instruments referred to in this research (including any financial instruments issued by the companies referred to herein), 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 occu 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 suit Investors should review current options and futures disclosure documents which are available from Goldman Sachs sales represe https://www.theocc.com/about/publications/character-risks.jsp and https://www.goldmansachs.com/disclosures/cftc_fcm_dis costs may be significant in option strategies calling for multiple purchase and sales of options such as spreads. Supporting docum supplied upon request.

Differing Levels of Service provided by Global Investment Research: The level and types of services provided to you by Goldm



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.