

## Strategy Matters

## How far can equity valuations go?

Over the past 6 months, Europe equities rose 12% and all **of this rally has been driven by PE expansion, rather than earnings**. In fact, the 2024 consensus EPS estimate has been revised down 5% over this period. Trading on 13.5x 12m fwd PE, Europe equities currently stand half a PE point below their long-run average since 1990, and investors wonder how much upside is left.

**Our freshly built PE model suggests that SXXP valuations can expand about 2.5% over 12 months.** Combined with our EPS growth forecast of 4% per annum by 2026, this implies **a 6% price return over the next 12 months, 9% with dividends.**

**Europe equities trade at a historical discount to US equities**, even when we adjust their 12m fwd PE to medium-term expected profit growth (PEG ratio). If economic growth modestly accelerates and central banks embark on a rate cutting cycle in June, as our economists expect, valuations will rise further. Equities have probably reached the **Optimism phase, the last one of the equity cycle, in which multiples tend to rise while profit growth slows**. Rising oil prices present a two-sided risk to our forecasts: while they could delay the rate cutting cycle, they present upside risk to EPS growth.

**Lilia Peytavin**  
+33(1)4212-1716 | lilia.peytavin@gs.com  
Goldman Sachs Bank Europe SE - Paris Branch

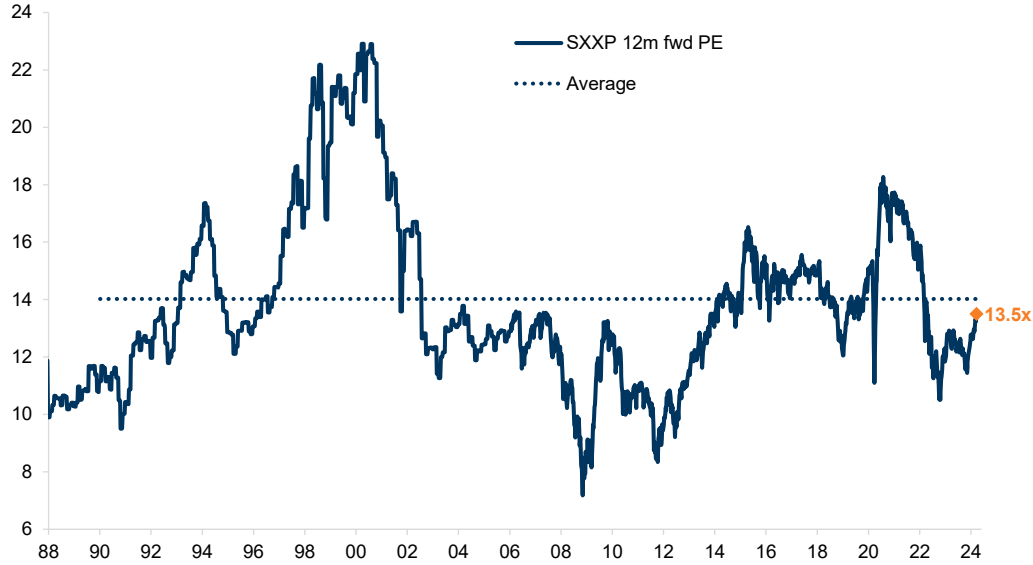
**Peter Oppenheimer**  
+44(20)7552-5782 | peter.oppenheimer@gs.com  
Goldman Sachs International

**Sharon Bell**  
+44(20)7552-1341 | sharon.bell@gs.com  
Goldman Sachs International

**Guillaume Jaisson**  
+44(20)7552-3000 | guillaume.jaisson@gs.com  
Goldman Sachs International

**Marcus von Scheele**  
+44(20)7774-7676 | marcus.vonscheele@gs.com  
Goldman Sachs International

Exhibit 1: Europe 12m fwd PE stands half a PE point below its historical average



Source: IBES, Datastream, Goldman Sachs Global Investment Research

For the exclusive use of ANGELA.GAMMINO@COMMUNITY.IT

## Our PE and EPS models suggest a 6% return over 12 months

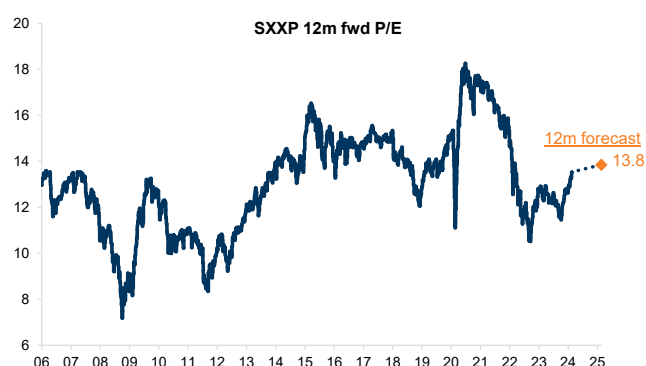
Our PE and EPS top-down macro models imply a price target of 540 for the SXXP in 12 months, i.e. a 6% price return, 9% with dividends.

**Exhibit 2: Based on our EPS and PE top-down macro models, SXXP can get 6% higher in 12 months**



Source: Datastream, Goldman Sachs Global Investment Research

**Exhibit 3: We expect SXXP 12m fwd PE to rise to 13.8x in 12 months**



Source: IBES, Datastream, Goldman Sachs Global Investment Research

**Exhibit 4: We expect SXXP to rise 6% in 12 months**

	Current	In 12 months
12m fwd EPS	37.4	39.0
Growth in 12m fwd EPS		4.2%
<b>12m fwd PE</b>	13.5	<b>13.8</b>
12m fwd PE growth		2.6%
Price	510	<b>540</b>
<b>12m price return</b>		<b>6.0%</b>
<b>12m total returns</b>		<b>9.4%</b>

Source: IBES, Datastream, Goldman Sachs Global Investment Research

**Exhibit 5: We raise our European target prices**

European Indices Forecasts						
	STOXX 600		FTSE 100		SX5E	
Price level	New	Old	New	Old	New	Old
3 months	510	490	7800	7600	5100	4800
6 months	530	500	8000	7700	5250	4900
12 months	540	510	8200	7900	5400	5000
Price Return (%)	New	Old	New	Old	New	Old
3 months	0.1	-3.9	-1.7	-4.2	1.4	-4.6
6 months	4.0	-1.9	0.9	-2.9	4.3	-2.6
12 months	6.0	0.1	3.4	-0.4	7.3	-0.6
<b>Total Return 12m (%)</b>	<b>9.4</b>		<b>7.5</b>		<b>10.6</b>	

Source: Datastream, Goldman Sachs Global Investment Research

**Our freshly built new top-down macro PE model predicts that SXXP 12m fwd PE will expand 2.2% in 12 months, from 13.5x to 13.8x, in line with the long-run average PE of European equities.**

Our model relies on 4 explanatory macro variables, to predict changes in SXXP 12m fwd PE: economic growth, interest rates, distance to the 2% inflation target and a measure of economic policy risk. Our assumptions for each of these 4 variables as well as generic sensitivities of 12m fwd PE to them are specified in [Exhibit 6](#) and [Exhibit 7](#).

We discuss how we think each of these macro variables will impact European valuations in the next section and details on our model can be found in the Appendix.

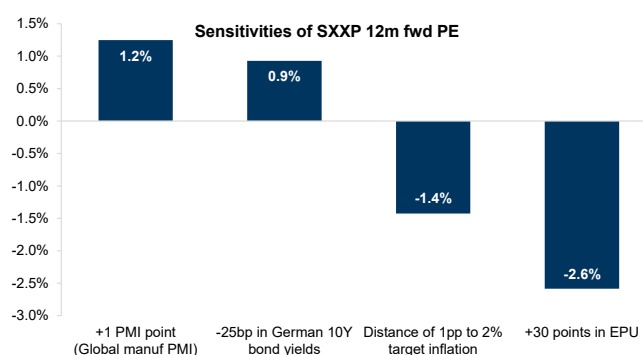
**Exhibit 6: We expect SXXP 12m fwd PE to rise 2.2% to 13.8x in 12 months**

	Portfolio strategy assumptions	% change on 12m fwd PE
Global manuf PMI (12m change)	+ 2pts	1.9%
German 10Y rates (12m change)	-25bps	0.9%
Distance of EA inflation from 2% target (12m avg)	0.38pp	-0.5%
Economic policy uncertainty (12m change)	Flat	0.0%
<b>Change in 12m fwd PE</b>		<b>2.2%</b>

Source: Goldman Sachs Global Investment Research

**Exhibit 7: Sensitivities of SXXP 12m fwd PE to macro variables of our top-down PE model**

Coefficients from our multivariate regression



Source: Goldman Sachs Global Investment Research

**We continue to forecast SXXP EPS to grow 3% this year, 4% in 2025 and we initiate our 2026 forecast at 5%.** In other words, we expect earnings to grow 4% per annum by 2026, which is conservative compared with FactSet consensus at 8%. However, bottom-up consensus tends to be revised down 5pp per annum.

For 2024, our sales-weighted GDP growth measure (an average of GDP growth forecast by our economists, weighted by SXXP geographical sales exposure) decelerates by 10bp compared with 2023, which should prevent net income margins from accelerating. As inflation slows and commodity prices do not increase much (2% based on the forecasts of our Commodities team), sales growth should be limited (although revenues are growing 2% on our forecast, an improvement compared with the 2% decline in 2023). We see upside risk to our forecast should commodity prices average \$90/bbl in 2024 rather than \$84/bbl. This would add 2pp to 2024 EPS growth.

See [Strategy Matters - Europe: Yearnings for earnings as growth slows](#), 16 November 2018 for details on our top-down EPS model.

Exhibit 8: We expect SXXP EPS to grow 4% per annum by 2026

	GS Strategy			Factset consensus		
	2024E	2025E	2026E	2024E	2025E	2026E
<b>SXXP EPS yoy growth</b>	<b>3%</b>	<b>4%</b>	<b>5%</b>	<b>5%</b>	<b>11%</b>	<b>9%</b>
EPS level	36.1	37.7	39.5	36.7	40.6	44.1
<b>SXXP ex Financials EPS yoy growth</b>	<b>2%</b>	<b>2%</b>	<b>3%</b>	<b>3%</b>	<b>12%</b>	<b>9%</b>
Sales yoy growth	2%	2%	3%	1%	3%	4%
Net income margin (level, %)	8.1	8.1	8.1	9.1	9.9	10.3
Change in net income margin (%)	0%	0%	0%	2%	8%	4%
Change in net income margin (bp)	0bp	0bp	0bp	20bp	75bp	41bp
<b>Financials EPS yoy growth</b>	<b>5%</b>	<b>10%</b>	<b>8%</b>	<b>7%</b>	<b>8%</b>	<b>8%</b>
<b>Commodity sectors EPS yoy growth</b>	<b>1%</b>	<b>9%</b>	<b>9%</b>	<b>2%</b>	<b>7%</b>	<b>3%</b>
<b>SXXP ex Commodities EPS yoy growth</b>	<b>3%</b>	<b>4%</b>	<b>4%</b>	<b>5%</b>	<b>11%</b>	<b>9%</b>
<b>SXXP ex Fin. ex Commods. EPS yoy growth</b>	<b>2%</b>	<b>0%</b>	<b>2%</b>	<b>4%</b>	<b>13%</b>	<b>10%</b>

Source: IBES, FactSet, Goldman Sachs Global Investment Research

## The macroeconomic cycle likely supports valuations

### 1. As economic growth picks up, valuations should rise

**Europe equity valuations have not moved ahead of growth and should expand modestly further as economic activity rebounds.** Valuations are highly correlated to economic growth and [Exhibit 9](#) shows that changes in SXXP 12m fwd PE have closely tracked changes in PMI. Our global economists expect only a modest improvement in global manufacturing, which calls for limited valuation expansion. That said, recent early cycle indicators such as freight volumes point to a cyclical inflection ([Exhibit 10](#)), to which Europe is especially sensitive.

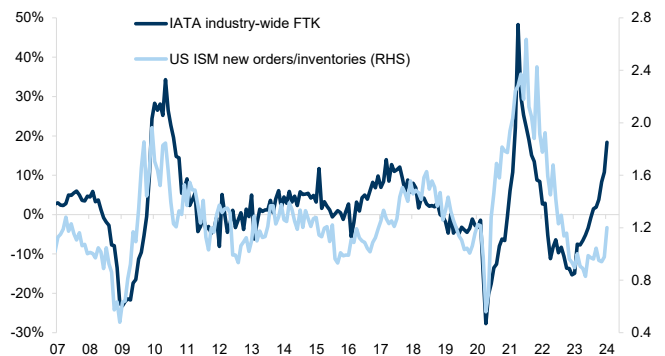
Our macro PE model (see details in Appendix) suggests that **for each 1 point increase in Global manufacturing PMI, SXXP 12m fwd PE rises 1.2%**. If by the end of the year the global manufacturing PMI rises to 52 (from 49 at the end of 2023), this would boost SXXP PE by 3.8%.

**Exhibit 9: SXXP 12m fwd PE has not moved ahead of growth improvement**



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

**Exhibit 10: Global airfreight is now in one of its strongest yoy recoveries on record, off a low base**  
Global FTK growth yoy vs. US ISM new orders/inventory ratio (RHA)



Source: IATA, Datastream, Goldman Sachs Global Investment Research

Interestingly, we find that M&A activity tends to lag valuations rather than predict it. As equity valuations drop, the number of M&A deals tends to fall too in the next year. As [Exhibit 11](#) shows, there is a strong correlation between changes in valuations and M&A deals with a one-year lag. **The recent rise in listed equity valuation suggests that the number of M&A deals should rise about high single digit this year**, after having fallen 27% in 2023 compared with 2022.

**Exhibit 11: M&A activity tends to lag equity valuations by one year**



Source: Bloomberg, IBE, Datastream, Goldman Sachs Global Investment Research

### Valuations expand in the Optimism phase but are we there yet?

Various features of the market suggest that equities are in the Optimism phase of the cycle, which is characterised by valuation expansion. However, equities could also be in the Growth phase, where valuations fall. It is always difficult to identify the phase in which equities are in real time, and the Optimism phase is one of the most difficult to call.

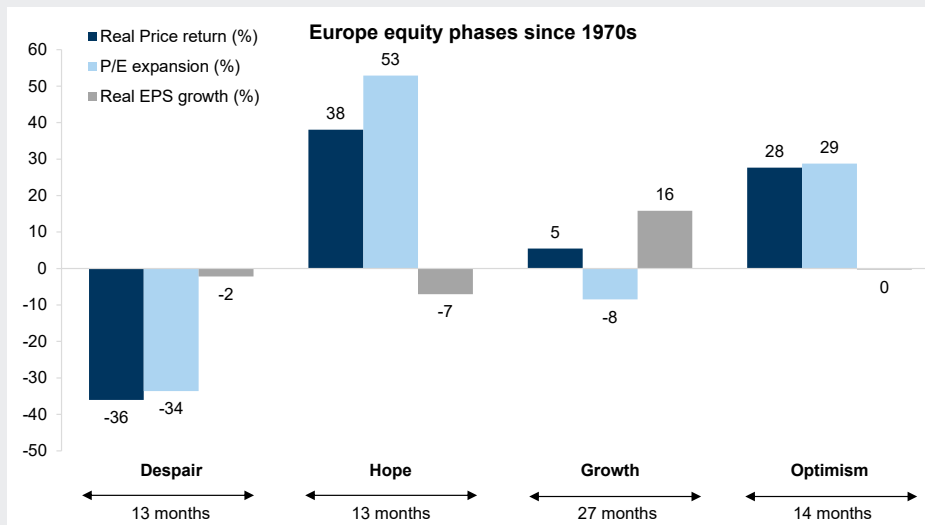
Equities go through cycles, and behave differently depending on the phase in which they are. Our previous work shows that valuations expand the most in the Hope phase, when equities rally sharply after a bear market and investors pay in anticipation of future earnings ([Exhibit 12](#)). Equities then go through the

Growth phase, during which profits tend to drive (more modest) returns. At the end of this period starts the **Optimism phase, in which valuations rise anew, as investors continue to buy the market despite the fact that profit growth is slowing down.** This period lasts on average 14 months. See [The equity cycle part 1: Identifying the phases](#), 22 October 2009.

Since the start of Covid-19, equities have entered what we dubbed the *Post-modern cycle* (Exhibit 13).

- **The Despair phase** started with the pandemic in February 2020 when the SXXP fell 35% in one month
- **The Hope phase** started in March 2020 when equities rebounded, driven by valuations while profits collapsed 29% that year
- **The Growth phase** started in 2021, when profits rebounded sharply, boosted by inflation and soaring commodity prices which fed into sales, as well as limited supply, supporting pricing and margin expansion. Profits rose 79% in 2021 and 21% in 2022. End of 2022 SXXP EPS was 54% above its 2019 level, making this the strongest EPS growth seen by Europe since 2003-2004.
- **Growth slowdown.** We estimate that profits fell 2% in 2023, and that they will grow 4% per annum by 2026. This slowdown in earnings growth could be the typical one you tend to see in the Optimism phase, when valuation expansion drives equity returns. But it could also be a prolongation of the Growth phase, morphing into a business cycle where the economic recovery is timid, inflation and commodity prices normalise and profits grow below trend.

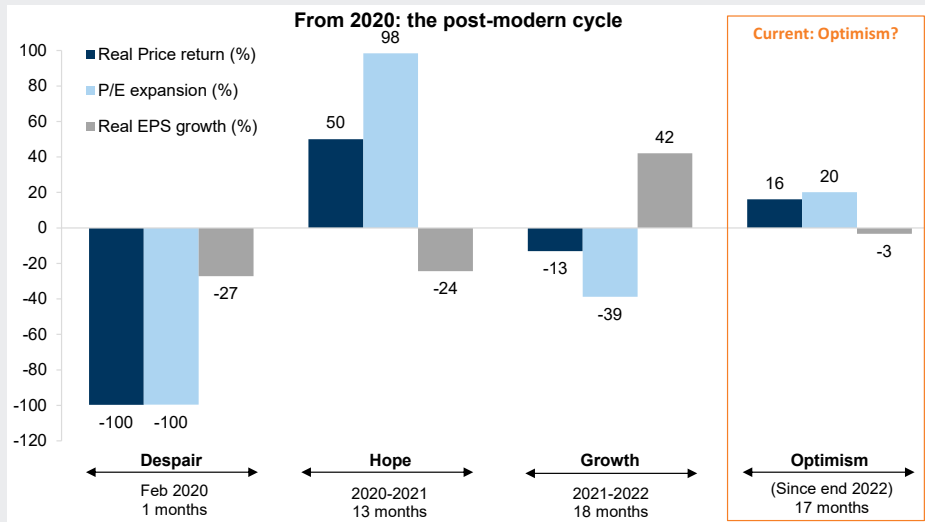
**Exhibit 12: Valuations expand the most in the Hope and Optimism phases of the equity cycle**  
Decomposition of SXXP returns since 1970s - Annualised growth rates



Source: Datastream, FactSet, Goldman Sachs Global Investment Research

**Exhibit 13: European equities could be in the last phase of the Post-modern cycle which started in 2020**

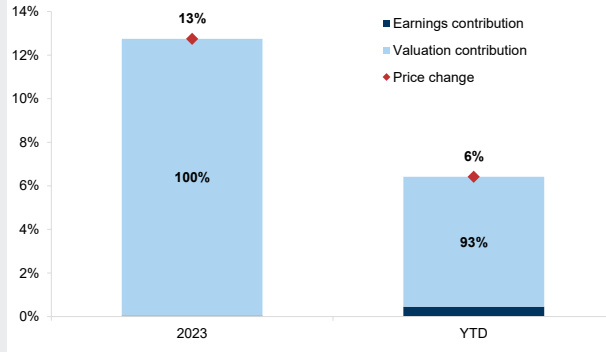
Decomposition of SXXP returns in the current cycle - Annualised growth rates



Source: Datastream, FactSet, Goldman Sachs Global Investment Research

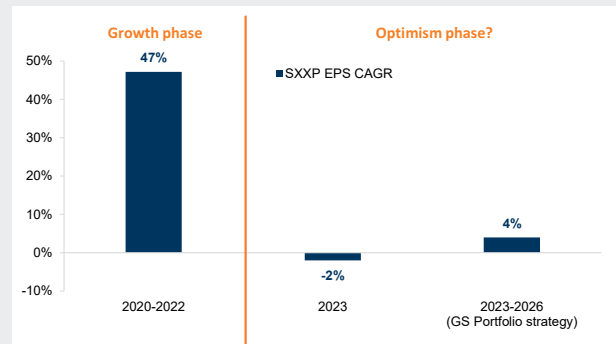
**Exhibit 14: Since the end of 2022, all the returns have been driven by valuations**

SXXP return decomposition



Source: Datastream, FactSet, Goldman Sachs Global Investment Research

**Exhibit 15: Earnings growth is set to slow compared with the Growth phase of 2021 and 2022**



Source: IBES, Datastream, Goldman Sachs Global Investment Research

**2. The rate cutting cycle should support valuations**

**As central banks embark on a rate cutting cycle, valuations tend to rise.**

Based on the 6 Fed rate cutting cycles which took place since 1980, **S&P 500 12m fwd PE rose by an average of 9% 12m after the first cut, and 18% outside of recessionary instances. SXXP 12m fwd PE rose by an average of 19% in the 3 historical ECB rate cutting cycles** (See details in the grey box). At the moment, SXXP 12m fwd PE remains 15% below its beginning of 2022 level (15.8x), before central banks embarked on their rate hiking cycle. This is not the case for S&P 500 PE which is



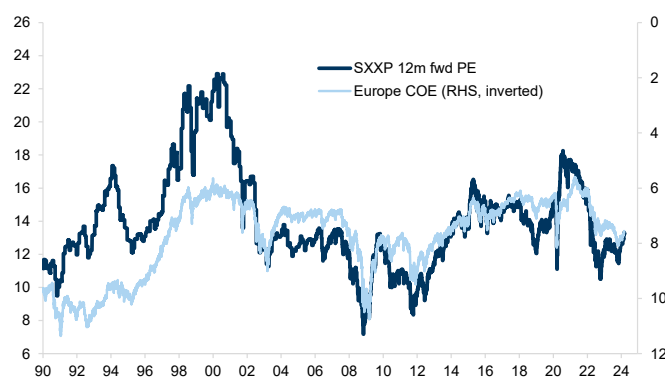
only 5% below.

If the fall in the risk-free rate (proxied by 10-year sovereign yields) is offset by a rise in the equity risk premium (ERP), then the cost of equity (risk-free rate + ERP) remains the same and there are no reasons for valuations to rise. This is why valuations fell in the years following the financial crisis. We believe that we are now in a more 'normal' environment, where deflationary risks have moderated. Falling bond yields should not be offset by rising ERP and should, therefore, be a positive for valuations. [Exhibit 16](#) shows how closely linked 12m fwd PE and the COE are. From here, **a 100bp fall in SXXP COE would likely raise SXXP 12m fwd PE to 15x.**

History shows that **the COE falls by an average of 30bp 12m after the first cut, or 100bp when cuts are not followed by a recession (what our economists expect).** We estimate the cost of equity to be roughly 7.5% both in Europe and in the US, 150bp higher than where they were early 2022.

All other things equal, our top-down macro PE model suggests that **a 50bp fall in German 10-year bond yields boosts SXXP 12m fwd PE by 1.9%.** This sensitivity appears weak, because our model also captures the impact of growth and risk (see details in the Appendix). Often, moves in bond yields reflect moves in growth or changes in sentiment from investors, which are more important in driving valuation changes than the move in bond yields itself.

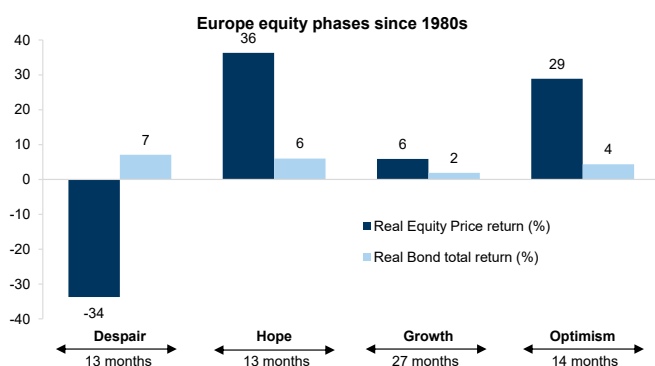
**Exhibit 16: SXXP 12m fwd PE is tightly linked to the cost of equity**  
COE = risk free-rate (10y sovereign yields) + ERP estimated by GS



Source: Datastream, IBES, Goldman Sachs Global Investment Research

We also find that **equities tend to outperform bonds late cycle, in the Optimism phase (Exhibit 17), and when central banks are cutting rates.** Based on the past 6 Fed cutting cycles, the S&P 500 outperformed US bonds by a modest 3% 12 months after the first cut, but as much as 13% in instances where no recession occurred ([Exhibit 18](#)).

**Exhibit 17: Equities outperform bonds the most in the Hope and Optimism phases of the equity cycle**



Source: Datastream, FactSet, Goldman Sachs Global Investment Research

**Exhibit 18: The S&P 500 outperformed bonds by 10% in the year following the first Fed cut, outside of recession instances**

Dates				US stocks vs US bonds (total return)	
First cut	Last cut	Length of cutting cycle (years)	Recession?	12m after the first cut	At the end of the cutting cycle
Sep-84	Feb-88	3.4	No	-7%	6%
Jun-89	Sep-92	3.2	Yes	12%	13%
Jul-95	Nov-98	3.4	No	26%	74%
Jan-01	Jun-03	2.5	Yes	-9%	-34%
Sep-07	Dec-08	1.2	Yes	-24%	-49%
Aug-19	Mar-20	0.6	Yes	-5%	-31%
Average		2.4		-1%	-3%
Average recession		1.9		-7%	-25%
Average no recession		3.4		10%	40%

Source: Datastream, Goldman Sachs Global Investment Research

### Normalisation cuts support valuation expansion

We looked at Fed cutting cycles since 1982 and observed the link with S&P 500 valuation based on 12m fwd PE. We did the same exercise in the Euro area but there have been only three cutting cycles since 2000, all in the context of a recession.

**Exhibit 19: Normalisation cuts boosted S&P 500 12m fwd PE by an average of 18% 12m after the start of the cutting cycle**

Dates				Fed funds rate		US 10 year sov. yields		Cost of equity		S&P 500 12m fwd PE	
First cut	Last cut	Length of cutting cycle (years)	Recession?	Level at the start of the cutting cycle	12m after the start	Level at the start of the cutting cycle	12m after the start	Level at the start of the cutting cycle	12m after the start	Level at the start of the cutting cycle	12m after the start
Sep-84	Feb-88	3.4	No	11.5%	-350bp	12.2%	-190bp			7.5	22%
Jun-89	Sep-92	3.2	Yes	9.8%	-156bp	8.4%	9bp			10.9	11%
Jul-95	Nov-98	3.4	No	6.0%	-75bp	6.2%	87bp	9%	-106bp	13.2	13%
Jan-01	Jun-03	2.5	Yes	6.5%	-475bp	4.9%	23bp	7%	-3bp	21.9	-1%
Sep-07	Dec-08	1.2	Yes	5.3%	-325bp	4.5%	-105bp	8%	14bp	14.3	-18%
Aug-19	Mar-20	0.6	Yes	2.4%	-225bp	2.0%	-147bp	6%	-42bp	17.4	28%
Average		2.4			-268bp		-54bp		-34bp		9%
Average recession		1.9			-295bp		-55bp		-10bp		5%
Average no recession		3.4			-213bp		-51bp		-106bp		18%

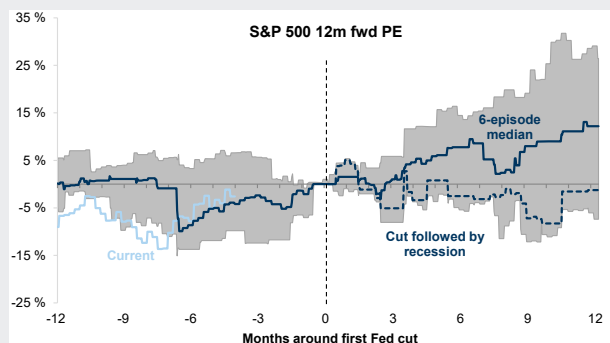
Source: Datastream, Goldman Sachs Global Investment Research

**Exhibit 20: ECB cutting cycles boosted SXXP 12m fwd PE by an average of 19% 12m after the first cut**

Dates				ECB deposit rate			German 10 year sov. yields		Cost of equity		SXXP 12m fwd PE	
First cut	Last cut	Length of cutting cycle (years)	Recession?	Level at the start of the cutting cycle	At the end of the cutting cycle	Total change (bp)	Level at the start of the cutting cycle	12m after the start	Level at the start of the cutting cycle	12m after the start	Level at the start of the cutting cycle	12m after the start
May-01	Jun-03	2.1	Yes	3.8%	1.0%	-275bp	4.9%	27bp	6.3%	41bp	17.6	-5%
Oct-08	Apr-09	0.5	Yes	3.3%	0.3%	-300bp	3.8%	-57bp	9.3%	-136bp	8.8	48%
Nov-11	Mar-16	4.4	Yes	0.8%	-0.5%	-125bp	1.8%	-38bp	9.1%	-102bp	9.5	16%
Average		2.3				-233bp		-23bp		-66bp		19%

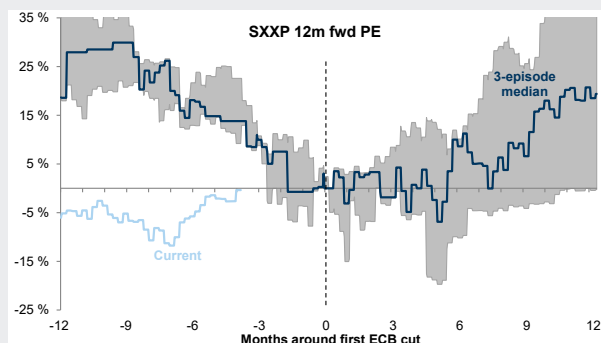
Source: Datastream, Goldman Sachs Global Investment Research

**Exhibit 21: Normalisation cuts boosted S&P 500 12m fwd PE by an average of 18% 12m after the start of the cutting cycle**



Source: Datastream, Goldman Sachs Global Investment Research

**Exhibit 22: ECB cutting cycles boosted SXXP 12m fwd PE by an average of 19% 12m after the first cut**



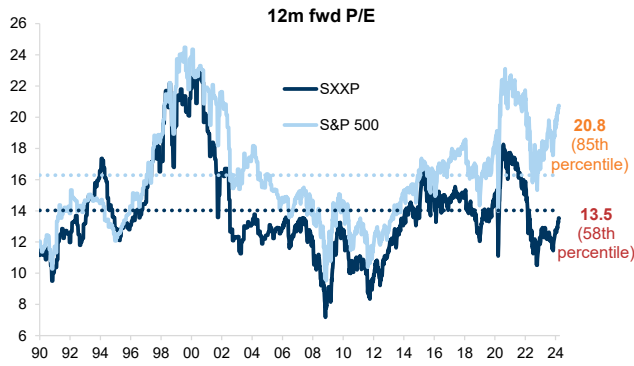
Source: Datastream, Goldman Sachs Global Investment Research

## Europe has room to catch up with the US

**Over the past two years, the valuation gap between Europe and the US has considerably widened.** From a 15% average discount, European equities now trade around their deepest discount (36%) in history. **European equities trade at about average, while US equities trade at around their 85th percentile,** whether we look at 12m fwd PE, PE adjusted of expected growth or cyclically adjusted PE (Price / 10y average EPS growth). Even excluding the Magnificent 7, the S&P 500 trades at 18.5x, around the top of its historical range.

**The one valuation metric on which Europe has historically traded in line with the US is the PEG ratio** (12m fwd PE / FY3 EPS growth, [Exhibit 25](#)). In other words, the PE premium paid by investors on US equities was explained by better long-term profit growth expectations. **However, this is not true anymore and the US PEG ratio has risen more than the European one.** Divergence in long-term economic growth expectations between the two regions does not justify this. As [Exhibit 26](#) shows, US long-term economic growth expectations have always been higher but the gap has not widened of late. The decoupling in the US PEG ratio owes to that of Technology names in the stock market, which have seen their PEG rise more than the market ([Exhibit 27](#)).

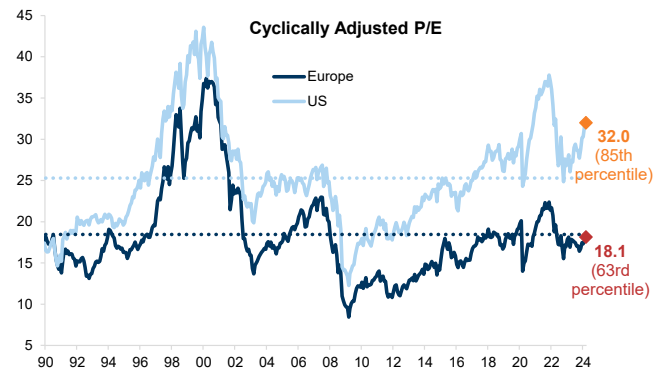
**Exhibit 23: Based on 12m fwd PE, Europe equities trade just below average while US equities stand in their 85th percentile**



Source: IBES, Datastream, Goldman Sachs Global Investment Research

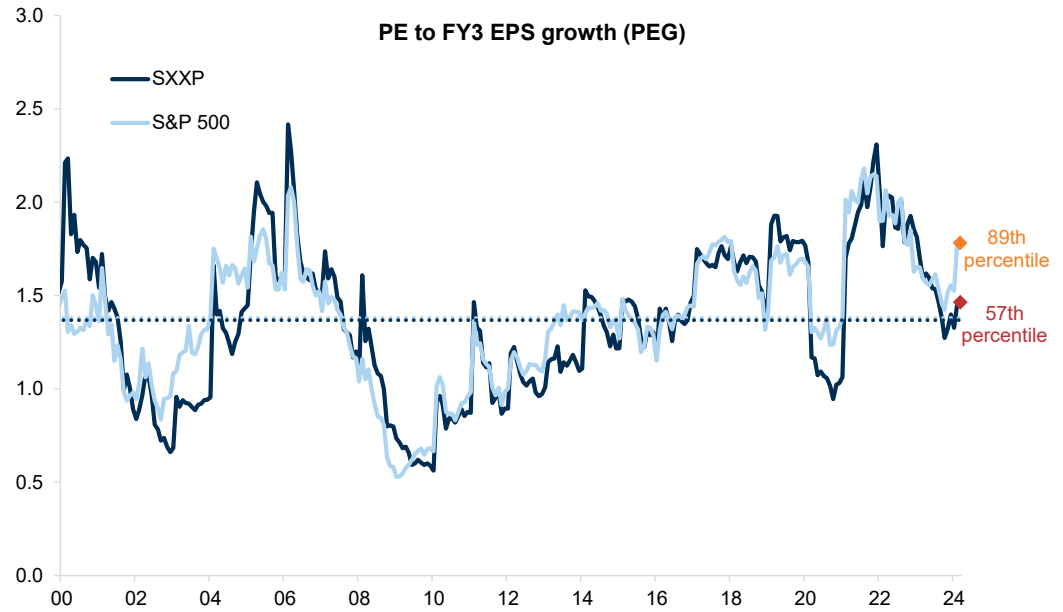
**Exhibit 24: On a Shiller PE basis, Europe remains on lower valuation than the US**

Real Price / 10y average real EPS



Source: IBES, Datastream, Goldman Sachs Global Investment Research

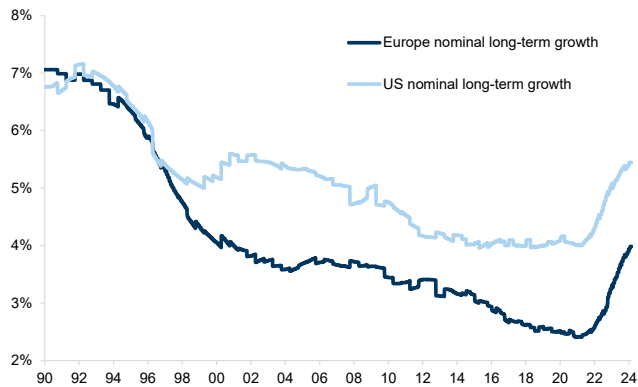
**Exhibit 25: While Europe and the US used to trade on a similar PEG ratio, US PE has risen more than expected EPS growth**



Source: IBES, Datastream, Goldman Sachs Global Investment Research

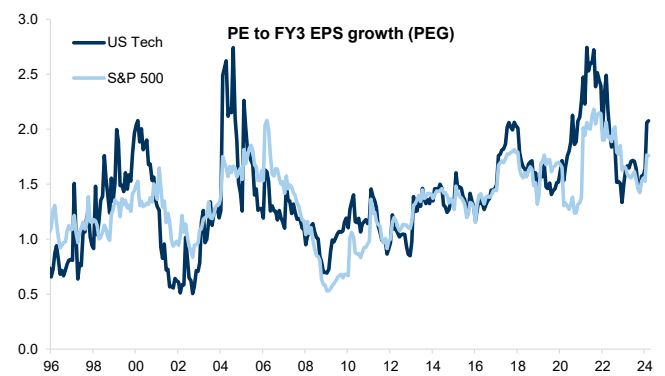
For the exclusive use of ANGELA.GAMMINO@COMMUNITY.IT

**Exhibit 26: While Europe long-term growth expectations remain lower than in the US, they have increased in a similar fashion**



Source: Consensus Economics, Goldman Sachs Global Investment Research

**Exhibit 27: US Tech have pushed up the S&P 500 PEG ratio**



Source: IBES, Datastream, Goldman Sachs Global Investment Research

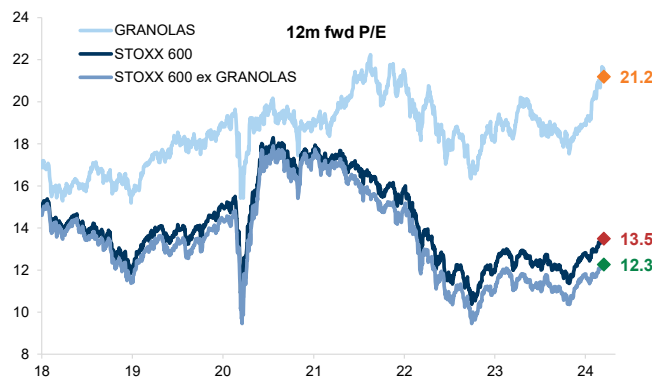
### Breaking down the European market

How much cheaper does Europe look excluding the GRANOLAS? Not much. Excluding them, SXXP 12m fwd PE drops from 13.5x to 12.3x (Exhibit 28).

Finally, even excluding some of the cheapest sectors such as Financials and Resources, Europe trades on 15.9x, in line with its historical average excluding these sectors (Exhibit 29).

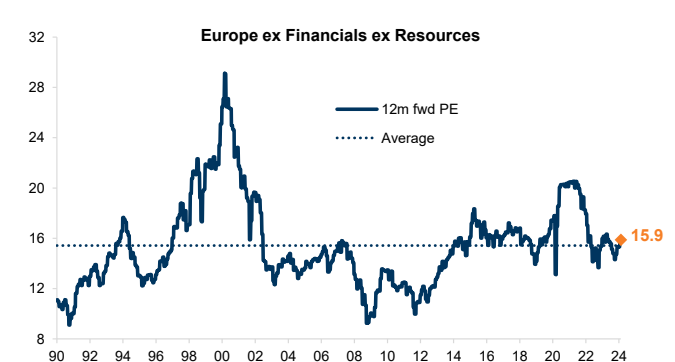
When making Europe sector composition similar to that of S&P 500, Europe's discount to the US reduces but is still the deepest historically.

**Exhibit 28: Excluding the GRANOLAS, Europe is 1.2 PE points lower 12m fwd PE**



Source: Datastream, IBES, Goldman Sachs Global Investment Research

**Exhibit 29: Even excluding some of the cheapest sectors, Europe trades in line with its historical average**



Source: Datastream, Worldscope, Goldman Sachs Global Investment Research

### What could go wrong?

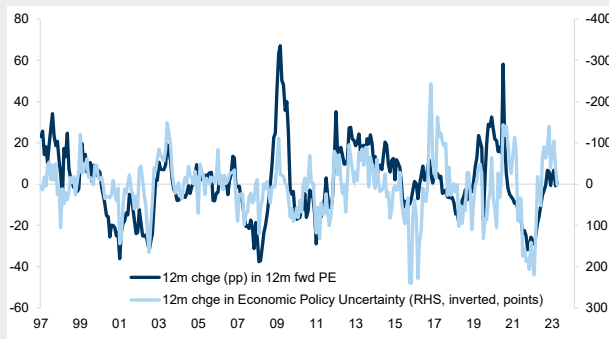
- **Rising geopolitical risk.** Europe equities are sensitive to international trade, geopolitics and economic policy uncertainty. As we discussed recently, the prospect of tariffs on exports to the US (a Trump proposal) and any reduction in funding for Ukraine (gaining support among Republicans) would both be

significant negatives for European stocks (*Strategy Espresso: Trade, Trump, Geopolitics and Europe*, 24 January 2024). European valuations are especially sensitive to measures of risk, such as the equity risk premium, risk appetite, the gold price, or sovereign yield spreads. Our PE model uses the Economic Policy Uncertainty index (EPU) as a “risk measure” and Exhibit 34 shows that this variable is as important as economic growth in driving valuations. The EPU is a newspaper-based index counting relevant key words and our 2024 PE forecast assumes that the EPU stays flat (we do not forecast it). As an example, if EPU were to get back to levels last seen around the election of Trump in 2016 (+75 points), our PE model implies valuations could fall by 6%. Valuations are also very sensitive to the equity risk premium: we find that **a 50bp rise in the ERP lowers 12m fwd PE by 3.9%**. We did not include the ERP in our macro model because of circularity. The way we estimate the ERP is linked to market valuations given it is the rate which sets the current market price equal to fair value in our DDM.

- **Reflation.** delaying rate cuts beyond the Summer would likely put upward pressure on long-term bond yields given current market pricing. This would put downward pressure on equity valuations. While not the base case of our economists (*Global Views: Cutting Through the Noise*, 18 March 2024), reasons could be reaccelerating commodity prices (the oil price is up 14% YTD), a tight labour market keeping wage growth elevated or supply shocks.
- **Lower equity demand.** our US colleagues showed that demographics, in other words the share of the population owning equities, does impact S&P 500 valuations. *US Equity Views - Fed cuts, real yields, and S&P 500 valuation*, 6 December 2023). In Europe, only 23% of the equity market is owned by Households, while more than 30% of the US equity market is owned by retail investors. This means that European multiples are less sensitive to demographics than their US peers.

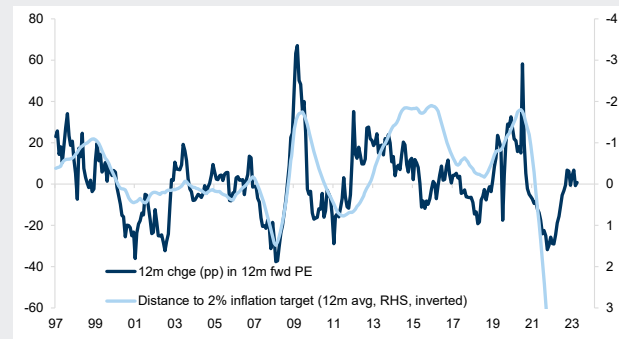
**Exhibit 30: SXXP valuations are sensitive to economic and geopolitical risks**

The Economic Policy Uncertainty index is a newsbased index counting keywords related to risks



Source: Datastream, IBES, Goldman Sachs Global Investment Research

**Exhibit 31: Higher inflation weighs on equity valuations**



Source: Haver Analytics, Datastream, IBES, Goldman Sachs Global Investment Research

## Appendix: Our GS top-down PE model

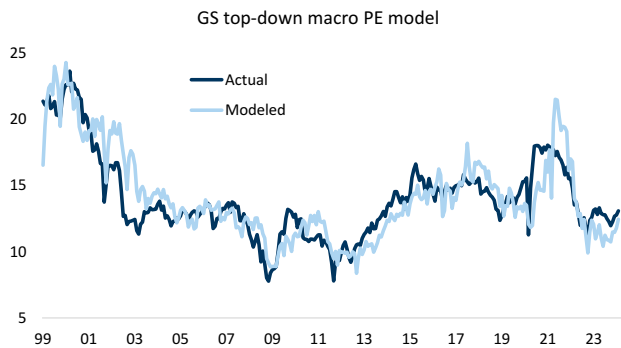
**Our top-down macro model explains half the variation in the SXXP 12m fwd PE (adj. R2 0.494).** Exhibit 33 shows the sensitivity of valuations to macro variables,

For the exclusive use of ANGELA.GAMMINO@COMMUNITY.IT

namely changes in Global manufacturing PMI, changes in German 10-year bond yields, changes in Economic policy uncertainty, and Euro area inflation (its distance to the 2% target). All variables are statistically significant at the 1% confidence level. We look at annual changes on a monthly basis since 1998.

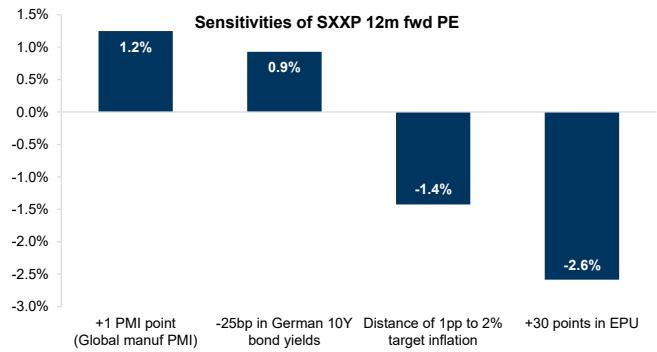
Exhibit 34 shows the importance of each explanatory variable (we normalised the betas): **growth and policy uncertainty are the most important variables.**

**Exhibit 32: Our top-down 12m fwd PE model for the SXXP explains half of the variation in valuations**



Source: Goldman Sachs Global Investment Research

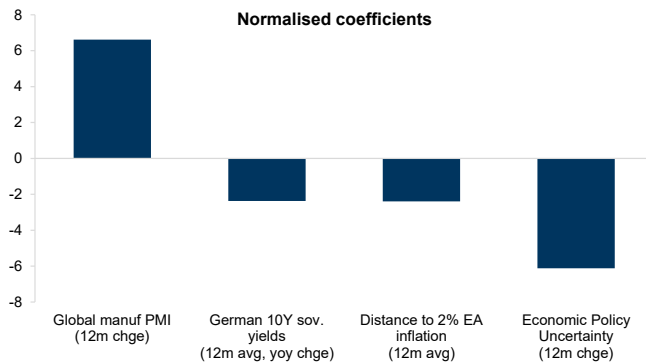
**Exhibit 33: Sensitivities of SXXP 12m fwd PE to macro variables**  
Coefficients from our multivariate regression-based model



Source: Goldman Sachs Global Investment Research

**Exhibit 34: Economic growth and Uncertainty are the main drivers of changes in European valuations**

Normalised coefficients of explanatory variables of the 12m changes in SXXP 12m fwd PE since 2000



Source: Goldman Sachs Global Investment Research



# Disclosure Appendix

## Reg AC

We, Lilia Peytavin, Peter Oppenheimer, Sharon Bell, Guillaume Jaisson and Marcus von Scheele, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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

## Disclosures

### 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 subject company, public appearances and trading securities held 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, 951-A, Rational House, Appasaheb Marathe Marg, Prabhadevi, 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. Investment in securities market are subject to market risks. Read all the related documents carefully before investing. 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 Investor Grievance E-mail: [india-client-support@gs.com](mailto:india-client-support@gs.com). Compliance Officer: Anil Rajput | Tel: + 91 22 6616 9000 | Email: [anil.m.rajput@gs.com](mailto:anil.m.rajput@gs.com). **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, The Investment Trusts Association, Japan, and Japan Investment Advisers Association. 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.

## 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](mailto: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](mailto: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:** GSI, authorised by the PRA and regulated by the FCA and the PRA, disseminates research in the following jurisdictions within the European Economic Area: the Grand Duchy of Luxembourg, Italy, the Kingdom of Belgium, the Kingdom of Denmark, the Kingdom of Norway, the Republic of Finland and the Republic of Ireland; GSI - Succursale de Paris (Paris branch) which is authorised by the French Autorité de contrôle prudentiel et de résolution ("ACPR") and regulated by the Autorité de contrôle prudentiel et de résolution and the Autorité des marchés financiers ("AMF") disseminates research in France; GSI - Sucursal en España (Madrid branch) authorized in Spain by the Comisión Nacional del Mercado de Valores disseminates research in the Kingdom of Spain; GSI - Sweden Bankfilial (Stockholm branch) is authorized by the SFSA as a "third country branch" in accordance with Chapter 4, Section 4 of the Swedish Securities and Market Act (Sw. lag (2007:528) om värdepappersmarknaden) disseminates research in the Kingdom of Sweden; 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 in the Federal Republic of Germany and those jurisdictions within the European Economic Area where GSI is not authorised to disseminate research and additionally, GSBE, Copenhagen Branch filial af GSBE, Tyskland, supervised by the Danish Financial Authority disseminates research in the Kingdom of Denmark; GSBE - Sucursal en España (Madrid branch) subject to a limited extent) to local supervision by the Bank of Spain disseminates research in the Kingdom of Spain; GSBE - Succursale Italia (Milan branch) to the relevant applicable extent, subject to local supervision by the Bank of Italy (Banca d'Italia) and the Italian Companies and Exchange Commission (Commissione Nazionale per le Società e la Borsa "Consob") disseminates research in Italy; GSBE - Succursale de Paris (Paris branch), supervised by the AMF and by the ACPR disseminates research in France; and GSBE - Sweden Bankfilial (Stockholm branch), to a limited extent, subject to local supervision by the Swedish Financial Supervisory Authority (Finansinspektionen) disseminates research in the Kingdom of Sweden.

## 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.

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 focused on investment themes across markets, industries and sectors. It does not attempt to distinguish between the prospects or performance of, or provide analysis of, individual companies within any industry or sector we describe.

Any trading recommendation in this research relating to an equity or credit security or securities within an industry or sector is reflective of the investment theme being discussed and is not a recommendation of any such security in isolation.

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.fiadocumentation.org/fia/regulatory-disclosures\\_1/fia-uniform-futures-and-options-on-futures-risk-disclosures-booklet-pdf-version-2018](https://www.fiadocumentation.org/fia/regulatory-disclosures_1/fia-uniform-futures-and-options-on-futures-risk-disclosures-booklet-pdf-version-2018). 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.

© 2024 Goldman Sachs.

**No part of this material may be (i) copied, photocopied or duplicated in any form by any means or (ii) redistributed without the prior written consent of The Goldman Sachs Group, Inc.**