US Weekly Kickstart

Elevated borrow costs weighed on S&P 500 profitability in 1H as impact of higher yields began to take hold

S&P 500 return on equity (ROE) (ex-Financials) has fallen by 69 bp this year to 23.4% but still ranks at the 97th percentile since 1975. Increased interest expense was the primary headwind to aggregate ROE and was also a headwind across every sector this year despite historically being a tailwind for profitability. We expect S&P 500 ex-Financials ROE will stabilize in 2024 as decelerating input cost growth and price inflation support EBIT margins. The key risk for profitability in the new 'higher for longer' rate environment will be higher interest expenses and lower leverage. We highlight a screen of stocks which are less vulnerable to rising rates and rebalance our ROE growth basket (GSTHGROE) in this report (Exhibit 6).

Performance

The S&P 500 was down 0.7% this week. Energy was the bestperforming sector (+3.5%) while Utilities was the worst-performing sector (-7.2%). We expect the S&P 500 will end 2023 at 4500 (+4.7%).

S&P 500 earnings and valuation

	Goldma Portfolio		Consensus Bottom-Up			
	2023E	2024E	2023E	2024E		
EPS	\$224	\$237	\$223	\$247		
Growth	1 %	5 %	1 %	11 %		
	NTM	2023E	NTM	2023E		
P/E	18.4x	18.2x	18.1x	19.3x		

Source: I/B/E/S, FirstCall, Goldman Sachs Investment Research

Table of Contents

Markets and money flow	6
Market performance	7
Sector performance	8
Style and size	13
Strategy baskets	14
Earnings, sales, and revisions	19
Valuation	20
Factors	22
Fund flows, fund performance, and short interest	23
Correlation, breadth, and dispersion	24
Economics	25
Goldman Sachs macro forecasts	26

EQUITY BASKETS



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Conversations we are having with clients: Higher borrow costs challenge S&P 500 profitability

S&P 500 profitability (ex-Financials) has continued its decline this year from its peak in 2Q 2022. S&P 500 ex-Financials trailing four-quarter return on equity (ROE) equals 23.4%, 69 bp lower than at year-end 2022 and 176 bp below its peak in 2Q 2022 (Exhibit 1). Including Financials, S&P 500 ROE ticked up to 20.8% in 2Q. However, the upswing in Financials ROE was disproportionally driven by a large rebound in Berkshire Hathaway investment income. Excluding BRK, the path of overall S&P 500 ROE more closely resembles the trajectory of S&P 500 ex-Financials ROE.

Increased interest expense has been the largest drag on S&P 500 ex-Financials ROE this year. We utilize a five-factor DuPont decomposition to analyze the drivers of ROE change. Of the 69 bp of contraction in ROE, 31 bp of compression stemmed from higher interest expense. Interest expense also dragged down ROE across every sector this year with Financials experiencing the largest drag (-159 bp) and Energy the smallest (-5 bp). Reduced leverage, lower asset turnover, and a contraction in EBIT margins also weighed on S&P 500 ex-Financials ROE, contributing -42 bp total.

Despite falling in aggregate, ROE has risen in 6 of 11 sectors this year. Consumer Discretionary has grown ROE by 718 bp this year, more than any other sector and driven by 683 bp of EBIT margin expansion. Conversely, Energy experienced the largest decline (570 bp) driven by lower asset turnover. Despite declines in ROE over the past year, 9 of 11 sectors' levels of ROE remain above their respective historical averages, while Utilities and Real Estate are below average.

Most sectors trade near the valuation implied by their expected ROE. Notable exceptions include Info Tech, Consumer Discretionary, and Energy (Exhibit 3). Consumer Discretionary and Info Tech currently trade slightly above the P/B multiple implied by their expected profitability, in part due to the outsized influence of five of the largest stocks (AAPL, AMZN, MSFT, NVDA, TSLA) which account for 57% of the combined Info Tech and Consumer Discretionary market cap and which have been beneficiaries of recent investor optimism surrounding Artificial Intelligence (AI).

In contrast, Energy trades below the P/B valuation implied by its level of expected profitability. If Brent oil prices rise to our commodities strategists' 12-month target of \$100, 19% above current 12-month ahead Brent futures prices, the sector would return +4% based on the relationship between the sector and oil prices.

Looking forward, we expect S&P 500 ex-Financials ROE will stabilize in 2024 but the likelihood of substantial expansion remains low. EBIT margins will likely be constrained as the economy remains on track for a soft-landing. EBIT margins generally track the balance between input cost growth and price inflation, which should stabilize as both wage inflation and price inflation continue to decelerate. Furthermore, near trend GDP growth will mean subdued revenue growth, placing a constraint on meaningful EBIT margin expansion via operating leverage. <u>Our EBIT margin model</u> incorporates these macro drivers and points to roughly flat EBIT margins in 2024.

In the new 'higher for longer' rates environment, the key risk for S&P 500 ROE will be higher interest expenses and lower leverage. Our rates strategists recently raised their forecast for the nominal 10Y UST and now expect rates to end 2023 at 4.3% and then rise to 4.6% in 1H 2024 before receding back to 4.3% at the end of 2024. Although the long-maturity, fixed-rate debt structures of S&P 500 companies generally insulate them from higher rates, borrow costs for S&P 500 companies have ticked up on a year/year basis by the largest amount in nearly two decades (Exhibit 4). If rates continue to rise or stay higher for longer, increased borrow costs would disincentivize companies to take on greater amounts of leverage.

A scenario in which interest expense and leverage persistently weigh on ROE would be a departure from the historical trend. The decades-long decline in rates has allowed companies to reduce their interest expense and utilize greater leverage to boost ROE. Since 1975, falling interest expense and greater leverage have contributed 18.5 pp of the overall 8.8 pp increase in S&P 500 ROE, while lower taxes have contributed 8.9 pp, higher EBIT margins contributed 5.9 pp, and lower asset turnover contributed -24.5 pp during the same period. A recent Fed paper similarly found that lower interest expenses and corporate tax rates explain more than 40% of the real growth in corporate profits from 1989 to 2019. Our own analysis of the long-term drivers of profitability found that declining cost of goods sold (COGS) has driven the remainder of the profit margin increases not driven by taxes or rates.

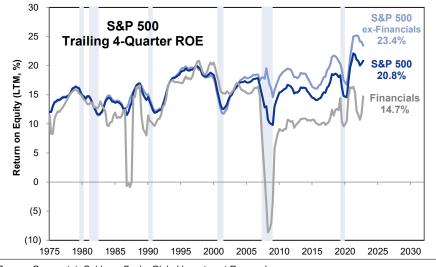
Artificial intelligence currently represents the most likely potential long-term catalyst for much higher profitability. Although the ROE for S&P 500 companies sits in the 97th percentile vs. history, <u>our analysis suggests</u> an Al-driven increase in revenues and productivity could lift the trajectory of S&P 500 annual average EPS growth over the next 20 years by 50 bp to 5.4%. While there is significant uncertainty around the timing of Al's impact, several companies have already <u>begun to discuss</u> ways in which Al will be able to enhance productivity and reduce costs. We recently introduced a basket of stocks with the largest potential EPS boost from Al adoption.

Despite outperformance this year, ROE growth stocks may struggle amid concerns over higher rates and a reacceleration in inflation due to oil prices. The performance of our ROE growth basket (GSTHGROE) relative to the equal-weight S&P 500 is positively correlated with our long/short Growth factor which has underperformed over the past month and which <u>we have previously shown</u> struggles when rates and inflation expectations rise. Instead, we expect investors will reward stocks which are less vulnerable to rising rates and which offer <u>stability amid greater</u> <u>macro uncertainty</u>. We highlight a screen of S&P 500 stocks with low leverage, high interest coverage, and low EBITDA growth variability relative to the index (Exhibit 5).

We rebalance our ROE growth basket (GSTHGROE) in this report. The basket is sector-neutral to the S&P 500 and contains the 50 stocks (including 25 new constituents) with the highest consensus expected ROE growth during the next 12 months. The median basket constituent is expected to grow its ROE by 12% and 2024 EPS by 25% vs. 0% and 10% for the median S&P 500 stock (Exhibit 6).

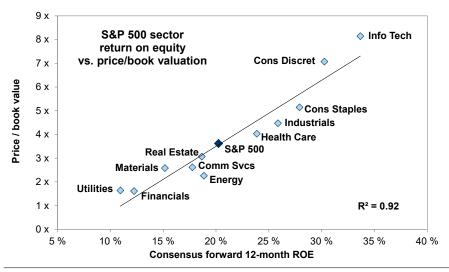
Charts we are watching: Index & sector level profitability weighed down by borrow costs in 1H

Exhibit 1: S&P 500 ex-Financials LTM ROE has fallen by 69 bp this year as of 2Q 2023



Source: Compustat, Goldman Sachs Global Investment Research

Exhibit 3: Most sectors are valued in line with expected near-term profitability as of September 28, 2023



Source: FactSet, Goldman Sachs Global Investment Research

Exhibit 2: Higher interest expense was a drag on ROE across all sectors as of 2Q 2023

		Attribution to 2023 YTD ROE change					Current ROE	
	ROE change	EBIT					Current	percentile
Sector	YTD	margin	Turnover	Interest	Leverage	Тах	ROE	vs. history
Discretionary	718 bp	683 bp	61 bp	(59) bp	(25) bp	58 bp	30 %	96 %
Financials	404	278	315	(159)	(11)	(20)	15	62
Industrials	199	186	91	(34)	(72)	28	28	96
Comm. Svcs.	55	31	46	(18)	(1)	(3)	18	77
Staples	39	32	36	(32)	34	(31)	28	77
Utilities	35	145	(8)	(93)	9	(17)	11	23
Real Estate	(77)	(23)	(13)	(33)	(16)	7	9	31
Health Care	(206)	(187)	(10)	(33)	18	6	23	72
Info Tech	(276)	(108)	(127)	(23)	(51)	33	32	91
Materials	(306)	(178)	(102)	(32)	(16)	22	16	64
Energy	(570)	(70)	(327)	(5)	(103)	(65)	26	95
S&P 500	81 bp	107 bp	81 bp	(72) bp	(32) bp	(3) bp	21 %	98 %
S&P 500 ex. Financials	(69)	(6)	(18)	(31)	(18)	4	23	97

Source: Compustat, Goldman Sachs Global Investment Research

Exhibit 4: Borrow costs for S&P 500 companies have ticked up over the past year as of 2Q 2023



Source: Compustat, Goldman Sachs Global Investment Research

Screen of stable S&P 500 stocks with low vulnerability to higher borrow costs

Exhibit 5: S&P 500 stocks with low leverage, high interest coverage, and low EBITDA growth variability

as of September 28, 2023; stocks with net debt to EBITDA below 1x, EBIT to interest expense in top quartile among S&P 500 stocks, and with EBITDA growth variability in bottom quartile

									10-year
						3 month			EBITDA
			Mkt cap	YTD	NTM	2024E EPS	Net	Interest	growth
Name	Ticker	Sector	(\$ bn)	return	P/E	revision	leverage	coverage	variability
Cisco Systems, Inc.	CSCO	Information Technology	\$218	16 %	13 x	0 %	(1.0)x	36 x	10 pp
Costco Wholesale Corporation	COST	Consumer Staples	252	25	36	1	(0.6)	51	9
Paychex, Inc.	PAYX	Industrials	42	4	24	2	(0.3)	55	9
Cadence Design Systems, Inc.	CDNS	Information Technology	64	46	41	1	(0.2)	33	15
Cognizant Technology Solutions Corporation	CTSH	Information Technology	34	20	15	(0)	(0.2)	89	12
Visa Inc.	V	Financials	472	12	24	1	(0.0)	35	12
Fastenal Company	FAST	Industrials	32	20	27	(1)	0.2	94	6
Automatic Data Processing, Inc.	ADP	Industrials	100	4	26	1	0.3	18	10
Snap-on Incorporated	SNA	Industrials	14	15	14	2	0.3	25	14
BlackRock, Inc.	BLK	Financials	96	(7)	16	0	0.4	25	12
Cardinal Health, Inc.	CAH	Health Care	22	16	13	2	0.4	18	15
Jack Henry & Associates, Inc.	JKHY	Financials	11	(13)	30	(6)	0.5	32	8
Johnson & Johnson	JNJ	Health Care	378	(9)	15	(1)	0.5	16	11
CME Group Inc.	CME	Financials	73	22	22	3	0.5	20	15
J.B. Hunt Transport Services, Inc.	JBHT	Industrials	19	8	21	(6)	0.6	22	14
Mastercard Incorporated	MA	Financials	376	15	29	(0)	0.6	26	14
Rollins, Inc.	ROL	Industrials	19	4	40	(0)	0.7	82	8
IDEXX Laboratories, Inc.	IDXX	Health Care	36	7	40	0	0.9	20	14
McKesson Corporation	MCK	Health Care	60	18	15	2	0.9	18	12
AMETEK, Inc.	AME	Industrials	34	7	23	2	0.9	19	10
Amphenol Corporation	APH	Information Technology	50	11	27	1	0.9	18	12
Screen median			\$50	12 %	24 x	1 %	0.4 x	25 x	12 pp
S&P 500 median			30	3	17	0	2.1	8	28

Note: Negative net leverage indicates a company with excess cash and cash equivalents on its balance sheet.

Constituents of our ROE Growth basket (GSTHGROE)

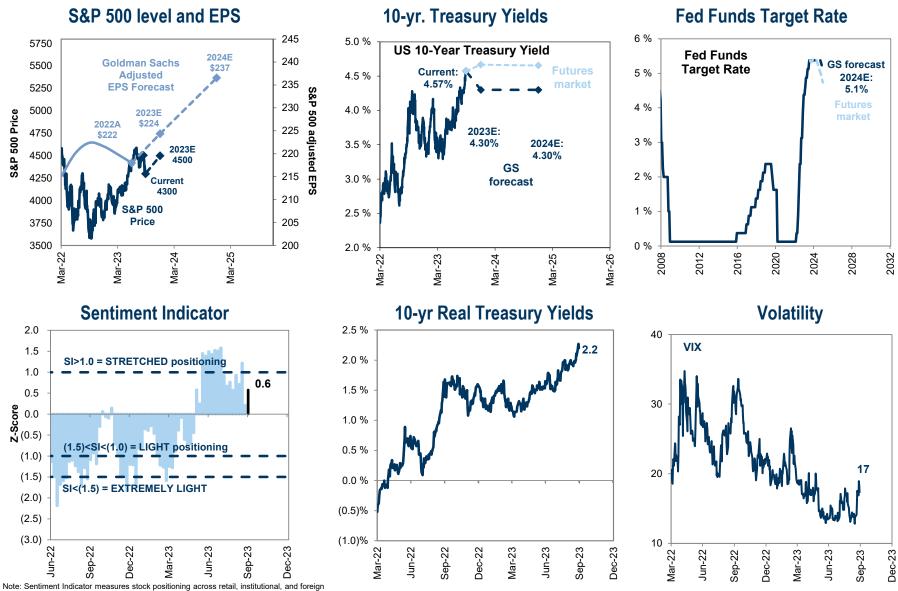
Exhibit 6: Constituents of GSTHGROE

as of September 28, 2023; bold indicates a new basket constituent

		YTD Total	Price to	ROE	2024E EPS	Cons Forward	ensus ROE			YTD Total	Price to	ROE	2024E EPS	Cons Forward	ensus ROE
Company Name	Ticker	Return	Book	LTM	growth	ROE	Growth	Company Name	Ticker	Return	Book	LTM	growth	ROE	Growth
COMMUNICATION SERVICES								HEALTH CARE							
News Corp.	NWSA	11 %	1.4x	4 %	66 %	5 %	30 %	Merck & Co. Inc.	MRK	(4)%	6.0x	23 %	178 %	34 %	45 %
Paramount Global	PARA	(23)	0.4	2	170	3	28	Insulet Corp.	PODD	(44)	23.3	12	36	15	23
Walt Disney	DIS	(8)	1.5	7	32	8	21	Incyte Corp.	INCY	(27)	3.0	12	31	14	11
Netflix Inc.	NFLX	28	7.8	22	30	23	7	DexCom Inc.	DXCM	(16)	17.9	18	31	20	10
Charter Communications	CHTR	31	7.0	41	20	42	4	DENTSPLY SIRONA	XRAY	8	2.0	12	16	13	9
Charter Communications	CHIK	31	7.0	41	20	42	4	Baxter Inti	BAX	(25)	3.3	12	19	17	8
Sector Median		4 %	3.1x	21 %	18 %	19 %	1 %	Becton, Dickinson	BDX	(25)	3.0	14	13	15	8
CONSUMER DISCRETIONARY								Sector Median		(7)%	3.7x	17 %	10 %	16 %	(5)%
Amazon.com Inc.	AMZN	50 %	8.6x	9 %	43 %	13 %	46 %	Dector median		(1)/0	0.7 X	17 /0	10 /0	10 /0	(3)/0
NIKE Inc.	NKE	(23)	7.6	38	43 %	46	48 %	INDUSTRIALS							
Aptiv PLC	APTV		3.2	13	32	40	18	Ceridian HCM Holding	CDAY	6 %	4.9x	8 %	31 %	10 %	33 %
		6													
Hasbro Inc.	HAS	11	3.3	22	25	25	11	Southwest Airlines	LUV	(17)	1.5	9	43	11	28
Expedia Group Inc.	EXPE	17	6.9	54	22	58	9	General Dynamics	GD	(9)	3.2	16	18	19	18
								FedEx Corp.	FDX	56	2.6	15	17	17	11
Sector Median		11 %	3.3x	27 %	10 %	26 %	(3)%								
CONSUMER STAPLES								Sector Median		7 %	4.9x	25 %	11 %	24 %	(3)%
Kenvue Inc.	KVUE	NM	2.3x	18 %	0 %	20 %	11 %	INFORMATION TECHNOLOGY							
Target Corp.	TGT	(25)	4.4	27	22	20 %	11 %	Advanced Micro Devices	AMD	59 %	3.0x	9 %	49 %	11 %	25 %
Campbell Soup	CPB	(26)	3.4	25	9	28	10	Teradyne Inc.	TER	14	6.4	21	62	25	21
o / u					• • •		(0)0(Salesforce Inc.	CRM	53	3.4	12	17	13	15
Sector Median		(11)%	3.9x	21 %	8 %	22 %	(0)%	Corning Inc.	GLW	(3)	2.2	14	26	16	14
								Juniper Networks	JNPR	(11)	2.0	16	6	16	5
ENERGY								Qorvo Inc.	QRVO	5	2.3	14	75	15	5
EQT Corp.	EQT	21 %	1.3x	6 %	106 %	8 %	43 %	Roper Technologies	ROP	13	3.3	10	9	11	4
Baker Hughes	BKR	26	2.5	10	33	13	34	TE Connectivity	TEL	9	3.5	18	12	19	3
								Synopsys Inc.	SNPS	44	12.2	27	13	28	2
Sector Median		9 %	2.5x	22 %	17 %	19 %	(7)%	SolarEdge Technologies	SEDG	(54)	3.3	19	17	20	2
								Broadcom Inc.	AVGO	52	15.2	75	9	76	1
FINANCIALS								PTC Inc.	PTC	18	6.8	19	22	19	1
Progressive Corp.	PGR	8 %	5.3x	15 %	56 %	19 %	27 %	Tyler Technologies	TYL	21	6.2	11	14	12	1
Travelers Companies	TRV	(9)	1.8	12	40	14	18	Gen Digital Inc.	GEN	(15)	6.0	50	14	49	(1)
Cincinnati Financial	CINE	3	1.6	7	22	8	15			()					(-)
S&P Global Inc.	SPGI	11	3.3	11	15	12	14	Sector Median		14 %	6.1x	24 %	11 %	24 %	(6)%
Blackstone Inc.	BX	50	10.4	42	40	48	13				••••	/0	,.	/0	(0)/0
American Intl Group	AIG	(1)	1.1	11	16	12	11	REAL ESTATE							
Morgan Stanley	MS	(1)	1.5	11	25	12	11	Alexandria Real Estate Equities	ARE	(30)%	0.9x	2 %	43 %	3 %	31 %
Molgan Stanley	WIG	(1)	1.5		25	12			ANL	(30)/8	0.5X	2 /0	4J /0	J /0	51 /0
Sector Median		(4)%	1.7x	14 %	11 %	14 %	(1)%	Sector Median		(4)%	2.1x	8 %	1 %	7 %	(1)%
MATERIALS								UTILITIES							
Newmont Corp.	NEM	(19)%	1.5x	8 %	34 %	10 %	26 %	NRG Energy Inc.	NRG	24 %	2.5x	27 %	44 %	32 %	19 %
Sector Median		5 %	2.5x	18 %	13 %	18 %	(1)%	Sector Median		(13)%	1.8x	10 %	7 %	10 %	2 %
								ROE Basket Median		6 %	3.3x	14 %	25 %	16 %	12 %
								S&P 500 Median		0	3.1	18	10	18	0
								<u></u>							

Source: FactSet, Goldman Sachs Global Investment Research.

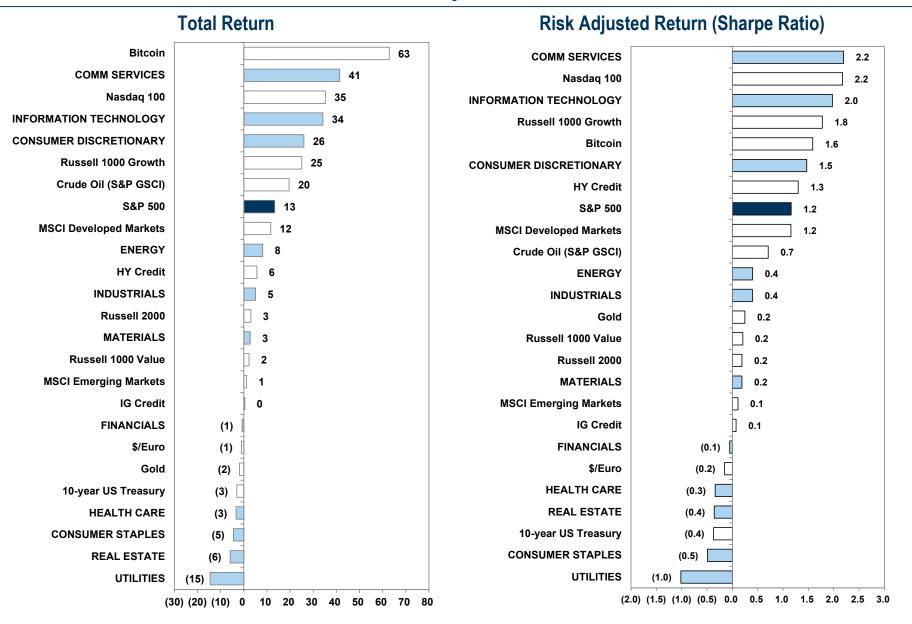
Markets and Money Flow



Note: Sentiment Indicator measures stock positioning across retail, institutional, and foreigi investors versus the past 12 months. Readings below -1.0 or above +1.0 indicate extreme positions that are significant in predicting future returns.

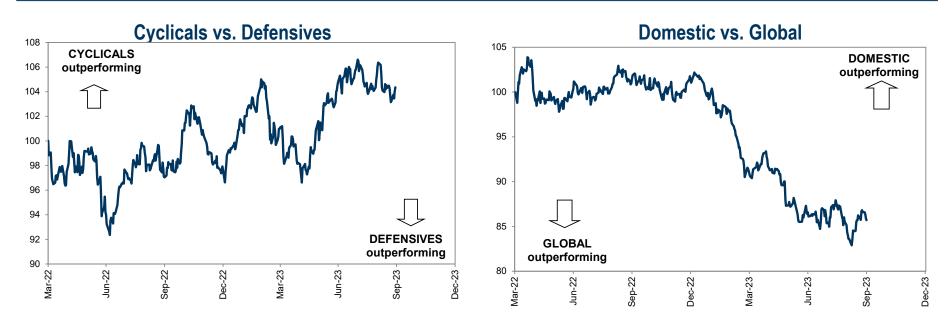
Source: Haver, EPFR, FactSet, CFTC, and Goldman Sachs Global Investment Research.

Market Performance: YTD absolute and risk-adjusted returns



Note: Crude Oil (S&P GSCI) return represents S&P GSCI Crude Oil Index total return. Spot change equals 8% YTD.

Sector Baskets Performance



Performance and fundamentals of our sector baskets

	Bloomberg Ticker	# of	% of S&P 500		Non-US	Earning	s Growth	Sales (Growth	NTM	LTM	Div		Tot	al Retur	'n	
Basket	<gssbxxxx></gssbxxxx>	Stocks	Сар	Beta	Sales	2023E	2024E	2023E	2024E	P/E	P/B	Yield	1 Wk	1 Mo	3 Mo	LTM	YTD
Cyclicals	CYCL	291	55 %	1.1	35%	1 %	12 %	(2)%	5 %	17.5x	3.9x	1.5 %	(0.1)%	(3)%	(1)%	22 %	17 %
Defensives	DEFS	209	45	0.9	23	(0)	13	4	5	19.0	4.5	1.7	(1.4)	(3)	(2)	13	9
Global	GLBL	274	66 %	1.1	45%	(4)%	14 %	(1)%	5 %	19.3x	5.7x	1.4 %	(0.3)%	(3)%	(1)%	24 %	19 %
Domestic	DOMS	226	34	0.9	15	8	10	5	5	16.2	2.8	2.0	(1.6)	(3)	(2)	5	2
Global Cyclicals	GCYC	173	34 %	1.2	45%	(7)%	13 %	(3)%	5 %	18.7x	5.4x	1.4 %	0.6 %	(3)%	(2)%	26 %	24 %
Global Defensives	GDEF	101	32	1.0	45	(0)	15	2	6	20.0	6.0	1.4	(1.2)	(3)	(1)	22	16
Domestic Cyclicals	DCYC	118	21	1.0	21	12	11	3	6	15.8	2.7	1.7	(1.6)	(3)	(1)	16	5
Domestic Defensives	DDEF	108	13	0.8	10	1	8	6	5	17.0	2.9	2.6	(1.7)	(2)	(4)	(2)	(2)
Services-providing	SERV	287	55 %	1.1	20%	13 %	11 %	6 %	6 %	17.8x	3.6x	1.6 %	(1.3)%	(3)%	(1)%	16 %	13 %
Goods-producing	GOOD	213	45	1.0	42	(12)	13	(4)	4	18.5	5.2	1.7	(0.1)	(3)	(2)	18	13
S&P 500		500	100 %	1.0	29%	1 %	11 %	3 %	4 %	18.1x	4.2x	1.6 %	(0.7)%	(3)%	(1)%	18 %	13 %

Sectors – Relative Performance vs. S&P 500



Industry Groups – Relative Performance vs. S&P 500 and 3 largest stocks

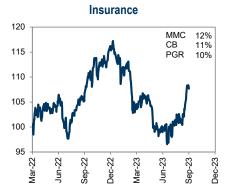




Technology Hardware & Equipment







Semiconductors & Semiconductor Equipment

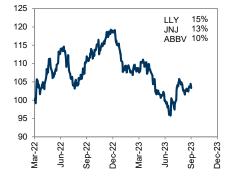




Software & Services



Pharmaceuticals Biotechnology & Life Sciences



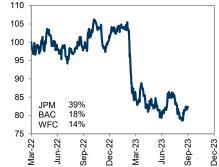




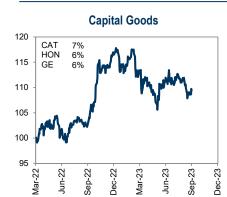
Telecommunication Services

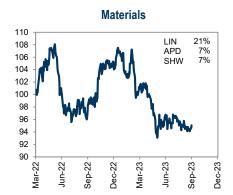






Industry Groups – Relative Performance vs. S&P 500 and 3 largest stocks (continued)





Equity Real Estate Investment Trusts (REITs)



Commercial & Professional Services

100

98

Mar-22

Jun-22

Sep-22

WM

Jun-23 Sep-23 Dec-23

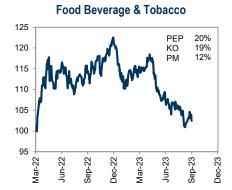
Mar-23

Dec-22

CTAS

13%

9%

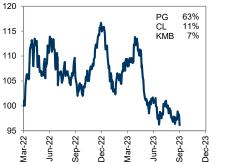


Consumer Discretionary Distribution & Retail

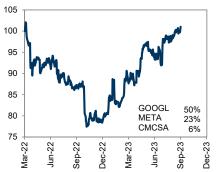




Household & Personal Products



Media & Entertainment

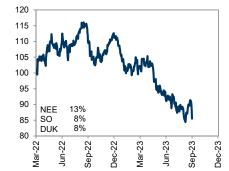




Health Care Equipment & Services







S&P 500 Sector and Industry Group Performance

		Weight	1 Week	1 Month	3 Months	Last 12 Months	YTD		
	S&P 500	100 %	(0.7)%	(2.9)%	(1)%	18 %	13 %		
	Energy	5 %	3.5 %	5.7 %	16 %	31 %	8 %	Тор	quartile
	Communication Services	9	0.6	0.3	4	34	41	Botto	om quartile
S	Materials	2	0.3	(2.8)	(2)	16	3		
E	Industrials	8	(0.2)	(4.7)	(3)	21	5		
С	Information Technology	27	(0.2)	(4.1)	(4)	34	34		
Т	Health Care	13	(0.5)	(2.6)	(0)	7	(3)		
Ο	Financials	13	(1.4)	(1.6)	2	10	(1)		
R	Consumer Discretionary	11	(1.7)	(3.4)	(4)	7	26		
	Consumer Staples	7	(2.2)	(4.1)	(5)	4	(5)		
	Real Estate	2	(2.5)	(6.7)	(8)	(4)	(6)		
	Utilities	2	(7.2)	(6.8)	(8)	(13)	(15)	Region	Cycle
	Energy	5 %	3.5 %	5.7 %	16 %	31 %	8 %	Global	Cyclicals
	Semiconductors & Semiconductor Equipment	7	3.3	(4.7)	(1)	75	64	Global	Cyclicals
	Media & Entertainment	8	0.9	0.2	5	40	52	Global	Defensives
	Materials	2	0.3	(2.8)	(2)	16	3	Global	Cyclicals
	Health Care Equipment & Services	6	0.2	(1.0)	(3)	6	(3)	Domestic	Defensives
1	Capital Goods	6	0.1	(4.7)	(3)	25	4	Global	Cyclicals
Ν	Consumer Staples Distribution & Retail	2	0.0	(1.1)	(2)	4	3	Domestic	Defensives
D	Commercial & Professional Services	1	(0.1)	(3.0)	1	16	12	Domestic	Cyclicals
U	Consumer Services	2	(0.1)	(4.2)	(3)	26	15	Global	Cyclicals
S	Consumer Durables & Apparel	1	(0.8)	(6.5)	(13)	10	(5)	Global	Cyclicals
Т	Banks	3	(1.0)	(1.7)	2	(1)	(9)	Domestic	Cyclicals
R	Insurance	2	(1.0)	3.1	8	19	4	Domestic	Cyclicals
Y	Pharmaceuticals Biotechnology & Life Sciences	8	(1.1)	(3.7)	2	7	(3)	Global	Defensives
	Transportation	2	(1.2)	(5.8)	(6)	11	3	Domestic	Cyclicals
G	Technology Hardware & Equipment	9	(1.4)	(4.8)	(8)	16	27	Global	Cyclicals
R	Software & Services	11	(1.5)	(3.2)	(4)	31	26	Global	Defensives
0	Telecommunication Services	1	(1.7)	1.3	(5)	(6)	(11)	Domestic	Defensives
U	Financial Services	8	(1.7)	(2.9)	1	15	3	Domestic	Cyclicals
Р	Consumer Discretionary Distribution & Retail	5	(1.9)	(5.1)	(2)	10	22	Domestic	Cyclicals
	Equity Real Estate Investment Trusts (REITs)	2	(2.5)	(6.7)	(8)	(4)	(6)	Domestic	Defensives
	Food Beverage & Tobacco	3	(2.8)	(5.0)	(6)	3	(7)	Global	Defensives
	Automobiles & Components	2	(2.8)	3.0	(5)	(11)	75	Global	Cyclicals
	Household & Personal Products	2	(3.5)	(5.8)	(6)	5	(7)	Global	Defensives
	Utilities	2	(7.2)	(6.8)	(8)	(13)	(15)	Domestic	Defensives

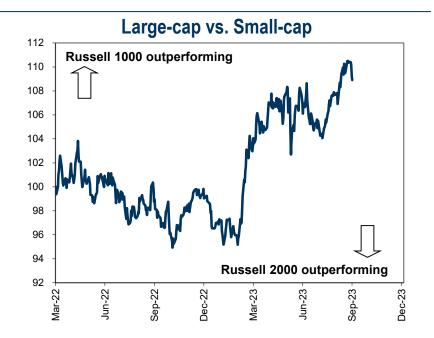
Style and Size



Sectors: Russell 1000 Growth vs. Value

	1-We	ek (% R	eturn)	YTD (% Return)				
Russell Sector	Growth	Value	Δ (bps)	Growth	Value	Δ (bps)		
Utilities	(3)	(7)	422	(2)	(14)	1,132		
Health Care	0	(1)	147	5	(9)	1,344		
Financials	(1)	(1)	44	12	0	1,248		
Energy	4	3	28	(4)	8	(1,280)		
Technology	0	0	17	43	42	102		
Materials	0	0	(6)	8	2	574		
Consumer Staples	(3)	(3)	(39)	(5)	(7)	212		
Industrials	(1)	0	(85)	7	6	74		
Cons Discretionary	(1)	(1)	(90)	30	4	2,621		
Index	(0)	(1)	55	25	2	2,274		

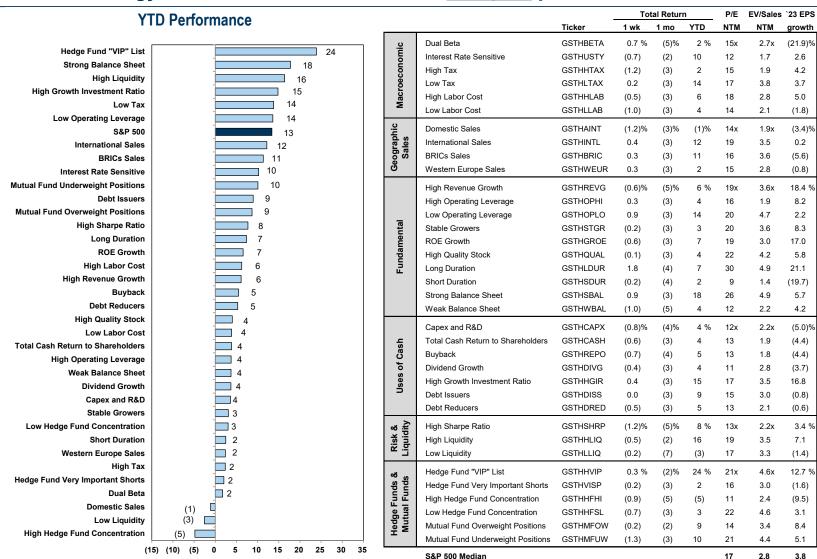
Source: FactSet and Goldman Sachs Global Investment Research.



Sectors: Russell 1000 vs. Russell 2000

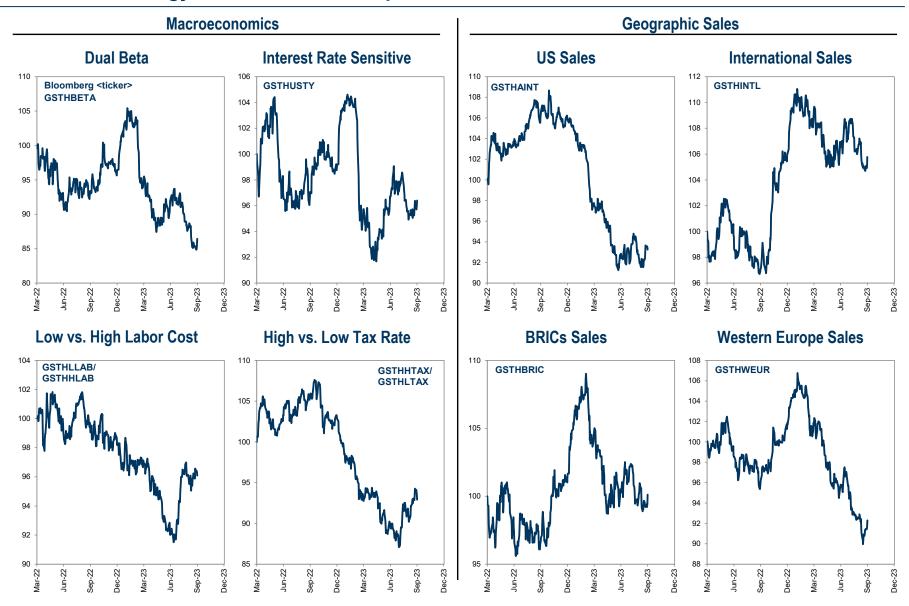
	1-We	ek (% R	eturn)	YTD (% Return)					
Russell Sector	R1000	R2000	Δ (bps)	R1000	R2000	Δ (bps)			
Health Care	(0)	(0)	(45)	(3)	(6)	308			
Materials	0	1	(80)	3	2	84			
Consumer Staples	(3)	(2)	(100)	(6)	1	(657)			
Energy	4	5	(110)	6	17	(1,089)			
Financials	(1)	0	(124)	2	(9)	1,078			
Industrials	(0)	1	(162)	6	15	(819)			
Cons Discretionary	(1)	1	(172)	20	9	1,119			
Technology	0	2	(189)	43	12	3,112			
Utilities	(7)	(4)	(229)	(13)	(13)	19			
Index	(1)	1	(131)	13	3	1,022			

US Portfolio Strategy Baskets are available on GS Marquee platform

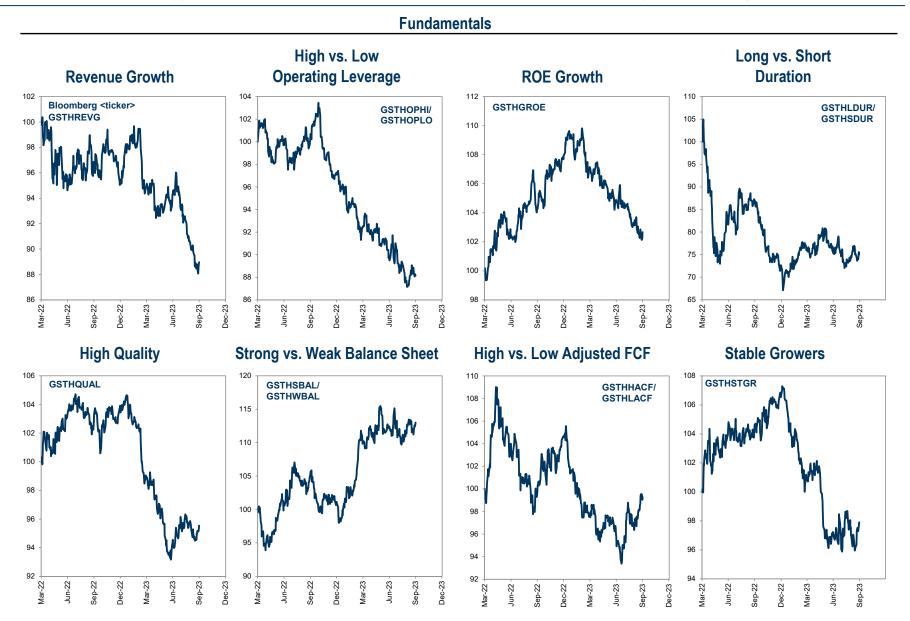


For details and constituents of our baskets see Anatomy of our US Portfolio Strategy Thematic and Sector Baskets, March 8, 2023

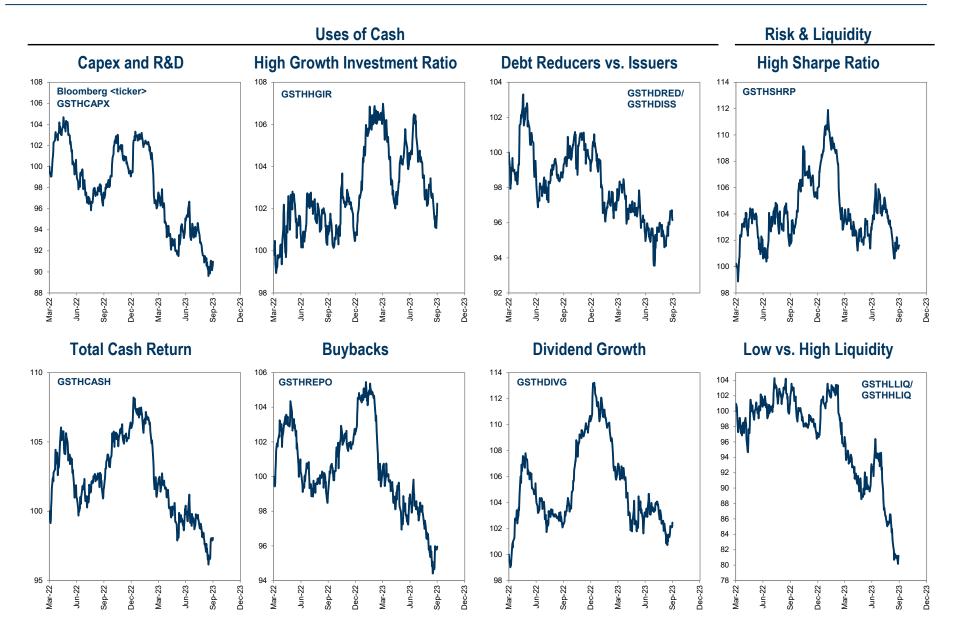
US Portfolio Strategy Baskets – Relative performance vs. S&P 500



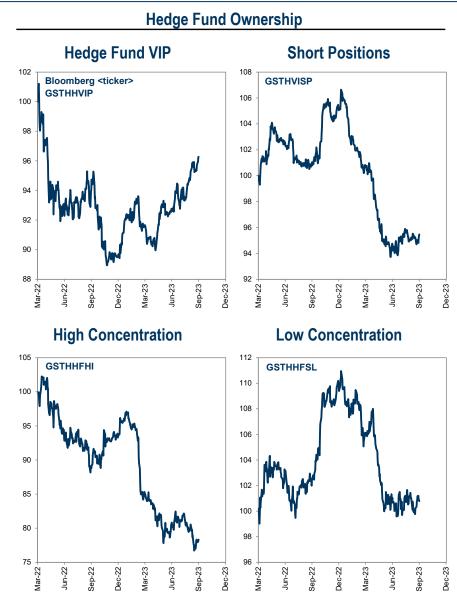
US Portfolio Strategy Baskets – Relative performance vs. S&P 500 (continued)



US Portfolio Strategy Baskets – Relative performance vs. S&P 500 (continued)



US Portfolio Strategy Baskets – Relative performance vs. S&P 500 (continued)





S&P 500 Earnings, Sales and Revisions

GS Top-Down EPS & Consensus Bottom-Up EPS

				ted EPS p-Down		Adjusted EPS Consensus Bottom-Up					
		Contri	bution	EPS g	rowth	Contri	bution	EPS growth			
	2022A	2023E	2024E	2023E	2024E	2023E	2024E	2023E	2024E		
Information Technology	\$42	\$43	\$47	2 %	10 %	\$43	\$51	3 %	17 %		
Financials	37	38	40	4	5	39	42	7	7		
Health Care	37	35	37	(6)	6	33	35	(11)	8		
Communication Services	18	21	22	14	6	21	24	13	18		
Industrials	17	19	19	9	2	19	21	10	13		
Consumer Discretionary	14	15	16	10	6	18	20	26	14		
Consumer Staples	13	15	15	12	3	14	16	7	9		
Materials	7	7	7	(2)	(0)	6	6	(19)	7		
Utilities	6	6	7	5	7	7	7	11	4		
Real Estate	6	6	6	(3)	3	6	7	1	8		
S&P 500 ex-Energy	198	205	217	4	6	206	230	4	12		
Energy	24	19	20	(19)	0	17	18	(29)	3		
S&P 500 EPS	\$222	\$224	\$237	1 %	5 %	\$223	\$247	1 %	11 %		

		EPS REV	ISIONS		SALES REVISIONS					
	1 month		3 mo	nth	1 mo	onth	3 mo	onth		
	23E	24E	23E	24E	23E	24E	23E	24E		
Energy	2.3 %	3.8 %	(0.8)%	2.7 %	0.1 %	0.4 %	(3.0)%	(1.8)%		
Consumer Discretionary	0.2	0.1	8.6	5.2	(0.3)	(0.4)	1.0	0.7		
Financials	0.1	(0.3)	0.4	(0.9)	NM	NM	NM	NM		
Materials	0.1	(0.1)	(3.3)	(3.1)	(0.1)	(0.3)	(3.3)	(2.3)		
Information Technology	0.0	(0.1)	2.5	3.0	0.1	0.0	0.5	0.9		
S&P 500	(0.1)	(0.0)	0.6	1.0	(0.1)	(0.2)	(0.0)	0.1		
S&P 500 ex. Energy	(0.3)	(0.3)	0.7	0.9	(0.1)	(0.2)	0.3	0.4		
Utilities	(0.5)	(0.2)	(0.9)	(0.1)	NM	NM	NM	NM		
Real Estate	(0.6)	(0.8)	2.8	(2.4)	NM	NM	NM	NM		
Health Care	(0.7)	(0.6)	(4.9)	(1.4)	(0.4)	(0.5)	0.4	0.3		
Communication Services	(0.7)	0.0	3.4	4.1	(0.0)	(0.0)	0.6	1.0		
Industrials	(0.9)	(0.7)	0.1	(0.3)	0.1	0.3	0.5	0.8		
Consumer Staples	(1.1)	(0.5)	(0.5)	(0.8)	(0.0)	(0.3)	(0.1)	(0.4)		

Earnings & Sales Revisions (Consensus)

Earnings Growth (consensus bottom-up)

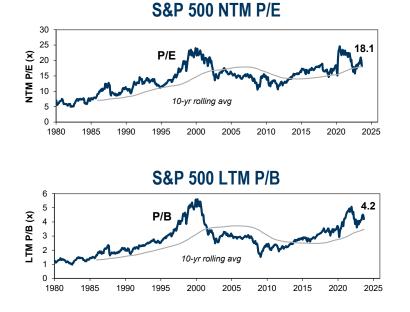
	2023 Ea	rnings Pe	Browth	Anr	nual	
	1QA	2QE	3QE	4QE	2023E	2024E
Consumer Discretionary	23 %	33 %	21 %	27 %	26 %	14 %
Communication Services	(16)	6	29	44	13	18
Utilities	(20)	7	22	52	11	4
Industrials	20	13	5	6	10	13
Financials	4	8	10	8	7	7
Consumer Staples	2	11	4	9	7	9
S&P 500 ex. Energy	(5)	4	5	13	4	12
Information Technology	(10)	4	5	14	3	17
Real Estate	7	3	(6)	(1)	1	8
S&P 500	(3)	(3)	(0)	9	1	11
Health Care	(16)	(14)	(12)	1	(11)	8
Materials	(21)	(24)	(17)	(9)	(19)	7
Energy	17	(51)	(38)	(23)	(29)	3

Sales Growth (consensus bottom-up)

-	2023E S	Sales Per	rowth	Annual		
	1QA	2QE	3QE	4QE	2023E	2024E
Consumer Staples	11 %	8 %	9 %	9 %	9 %	4 %
Consumer Discretionary	9	10	6	5	7	7
Health Care	6	7	6	6	6	5
S&P 500 ex. Energy	5	5	4	5	5	5
Industrials	8	4	1	2	4	2
S&P 500	4	1	2	4	3	4
Communication Services	(1)	2	3	3	2	6
Information Technology	(2)	(1)	1	6	1	9
Materials	(3)	(8)	(5)	(3)	(5)	(8)
Energy	(3)	(28)	(18)	(6)	(14)	2

Source: FirstCall, I/B/E/S, FactSet, and Goldman Sachs Global Investment Research.

Valuation: Absolute and Relative

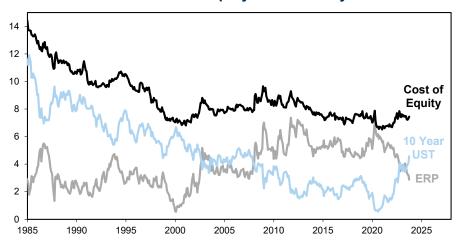


Current aggregate valuation metrics - absolute

	EV/ Sales	EV/ EBITDA	Price/ Book	FCF Yield	PEG Ratio	NTM P/E
S&P 500	2.6x	13.1x	4.2x	3.9 %	1.3x	18.1x
Energy	1.4	5.7	2.5	9.4	2.5	12.0
Financials	NM	NM	1.8	NM	1.1	13.2
Real Estate	NM	NM	2.8	NM	1.7	14.8
Utilities	NM	11.2	1.8	(7.5)	2.2	14.9
Comm Services	3.4	9.9	3.5	5.0	0.8	16.4
Health Care	1.8	13.0	4.6	5.5	2.1	16.8
Materials	2.2	10.1	2.8	4.2	2.1	17.0
Industrials	2.3	12.5	5.2	4.1	1.4	17.3
Cons Staples	1.5	13.5	5.7	4.0	2.3	18.4
Cons Discr	2.4	15.7	9.2	2.7	2.3	23.2
Info Tech	6.8	21.1	10.2	3.1	1.3	24.2

Source: FactSet, I/B/E/S, FirstCall, and Goldman Sachs Global Investment Research.

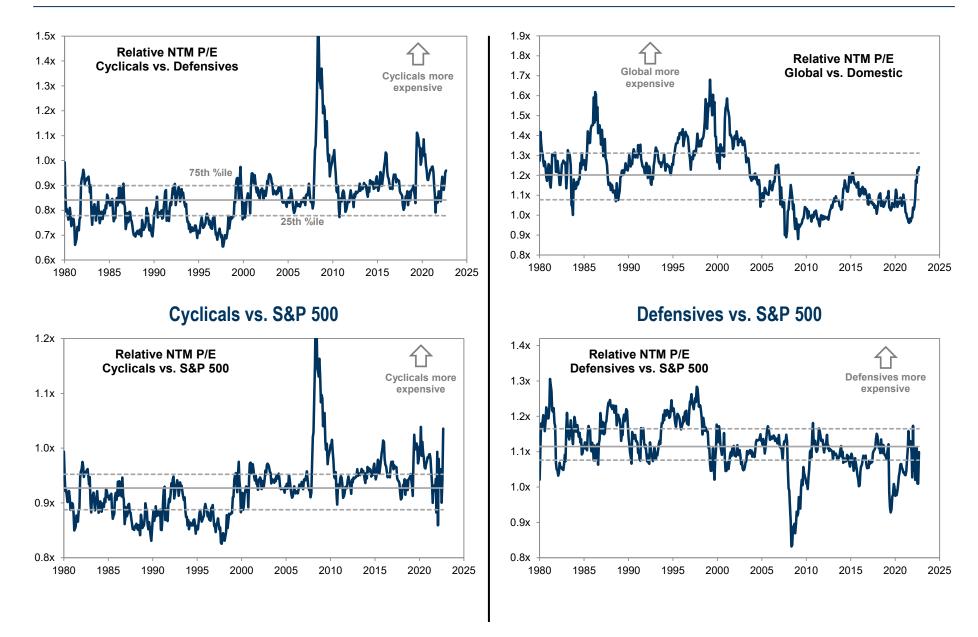
S&P 500 Cost of Equity = ERP + 10-yr UST



We estimate the equity risk premium (ERP) using our DDM framework to model expected future cash flows. We solve for the cost of equity that implies the market is at 'fair value' and then deduct the 10-year US treasury.

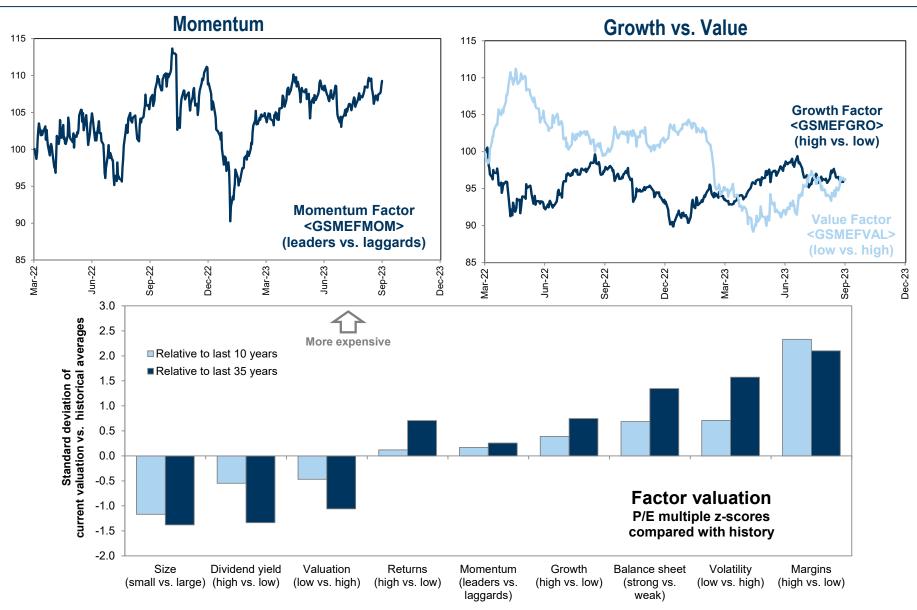
Current relative valuation vs. historical average (Z-score) 30-year 10-year EV/ EV/ Price/ FCF PEG Median Median Sales EBITDA Book Yield Ratio P/E Z-Score Z-Score S&P 500 0.7 0.9 0.0 0.1 1.1 (0.3) 0.4 0.7 Real Estate NM NM (2.5) NM (0.3) (2.3)(2.3)(0.9) **Comm Services** (1.3)(1.6)(1.8)(1.3) (1.5)(1.9)(1.9)(1.7)Financials NM NM NM (0.6)(1.0)(0.9)(1.0) (1.8) Energy (0.8) (1.0)0.4 (1.5)0.3 (0.7) (0.8)(1.1)Utilities NM (0.7)(2.4)3.7 (1.0)(0.7) (0.1)(0.1) Materials (1.5)1.7 (0.2) (0.7) (0.5) (1.0)(1.1)(0.3) 0.2 Industrials (1.2)(0.6)(1.2) (0.6)(0.3)(0.4) (0.6)Health Care (1.3)(0.3)(0.6)(0.9)(1.5)(0.9)1.8 0.1 Cons Staples (1.2)(0.3)(1.3)0.3 (0.4) (0.8) (0.6) (0.8)Cons Discr (0.3)(0.1) 0.2 0.0 3.9 (0.3) (0.0)0.9 Info Tech 2.1 2.7 1.1 (0.3)2.0 1.8 1.3 1.6

Valuation: Sector baskets



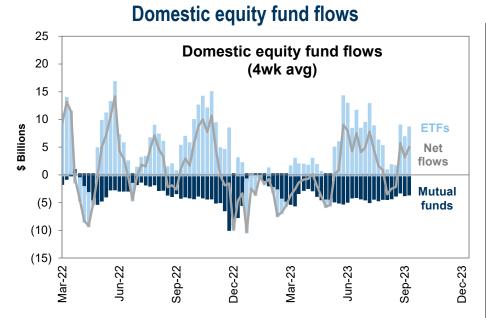
Source: Compustat, FactSet, I/B/E/S, and Goldman Sachs Global Investment Research.

Factors: Performance and Valuation



Source: Compustat, FactSet, I/B/E/S, and Goldman Sachs Global Investment Research.

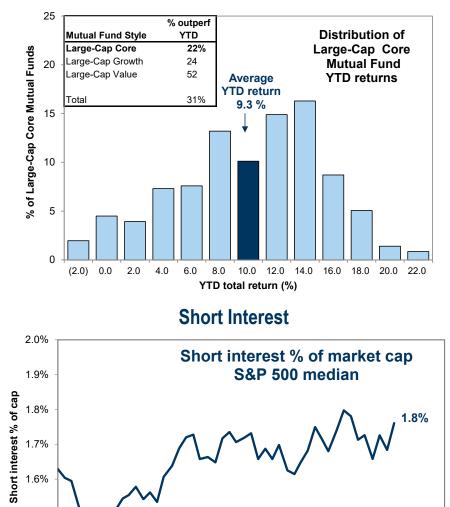
Fund Flows, Fund Performance, and Short Interest



Weekly fund flows

	EPFR Mutual Fund Flows			EPFR ETF Fund Flows			
		Total					
(\$ billions)	Total Assets	4-Wk Avg Flows	Flows YTD	Total Assets	4-Wk Avg Flows	Flows YTD	
All Equity	8,446	(6.5)	(225.8)	7,748	12.1	335.7	
U.S. Equity	3,604	(3.4)	(138.9)	4,873	8.4	142.7	
Equity Income	640	(0.9)	(19.4)	487	1.0	21.1	
Int'l Equity	4,277	(2.6)	(79.5)	2,229	3.0	151.7	
Global	566	(0.5)	(7.5)	647	0.7	41.3	
ESG/SRI	1,061	(0.2)	(0.7)	351	0.4	18.5	
All Bonds	4,680	(1.3)	17.9	1,905	3.3	221.8	
All Taxable Bond	3,926	(0.9)	2.7	1,267	(0.1)	85.4	
Gov't Treasury	389	0.5	22.8	529	3.1	130.3	
Municipal Bond	365	(0.9)	(7.6)	109	0.2	6.1	
ESG/SRI	443	0.0	11.0	88	0.3	13.3	
Money Market	7,931	20.0	1,003.2	71	0.0	8.5	

Mutual Fund Performance



1.5%

1.4%

Sep-21

Dec-21

Mar-22

Jun-22

Sep-22

Dec-22

Mar-23

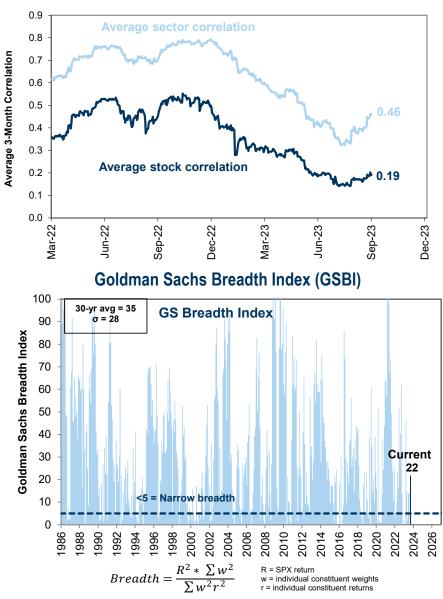
Jun-23

Sep-23

Source: FactSet, EPFR, and Goldman Sachs Global Investment Research.

Dec-23

Correlation, Breadth and Dispersion



Sector and Stock Correlation

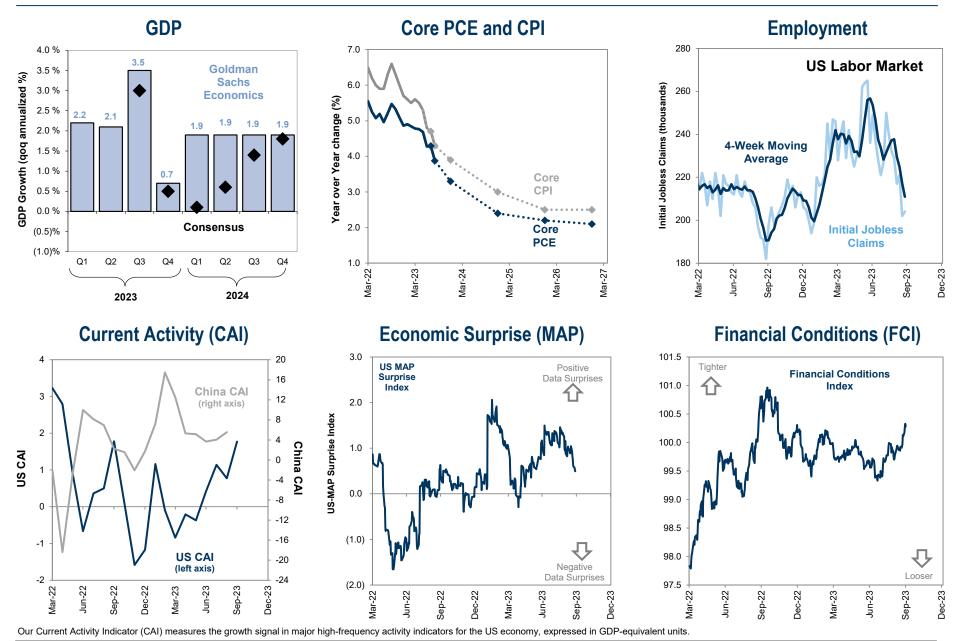
40pp S&P 500 3-month return dispersion +/- 1 standard deviation (pp) 35pp 30-year average: 30pp 28 pp 25pp 24pp 20pp 15pp Mar-22 Jun-22 Sep-22 Dec-22 Mar-23 Jun-23 Sep-23 Dec-23

S&P 500 3-month Return Dispersion

Return Dispersion

	+/- 1 Standard Deviation							
	1-N	Ionth Retu	rns	3-Month Returns				
	Current Sep 28	30-Year Average	Historical %ile	Current Sep 28	30-Year Average	Historical %ile		
S&P 500	11 pp	16 pp	10 %	24 pp	28 pp	40 %		
Materials	14 pp	14 pp	58 %	27 pp	25 pp	76 %		
Consumer Staples	14	13	70	22	22	68		
Health Care	12	15	28	25	26	57		
Utilities	9	10	57	16	17	56		
Industrials	9	13	14	22	23	56		
Communication Services	12	16	39	25	27	53		
Real Estate	8	9	57	14	15	53		
Financials	10	13	42	19	22	53		
Energy	9	14	17	19	25	29		
Information Technology	10	19	4	23	34	16		
Consumer Discretionary	11	17	4	20	29	5		

Economics



2025E

1.9%

1.9

% Annual Change

2024E

1.8%

1.8

2023E

2.2%

2.4

Goldman Sachs Global Macro Forecasts

Goldman Sachs Global Macro Forecasts

-

								Change
			units	Current	3m	6m	12m	to Target
Equities								
MXAPJ			level	487	505	530	555	14 %
TOPIX			level	2346	2500	2500	2650	13
S&P 500			level	4300	4500	4600	4700	9
STOXX Euro	pe 6	00	level	449	465	470	480	7
Ten Year Rates	s							
Japan			%	0.8	0.8	0.9	0.9	15 bp
US			%	4.6	4.3	4.6	4.5	(7)
Euro Area (G	erm	any)	%	3.0	2.8	2.6	2.3	(72)
Corporate Bon	nds							
Investment gr	rade		bp	119	118	118	NA	(1)bp
High yield			bp	398	355	355	NA	(43)
Currencies	_							
Euro / US Do	llar		EUR/\$	1.06	1.07	1.10	1.12	6 %
Sterling / US	Doll	ar	£/\$	1.22	1.18	1.20	1.25	3
US Dollar / Ye	en		\$/¥	149	150	155	150	0
Commodities								
LME Copper			\$/mt	8112	9250	9500	10000	23 %
COMEX Gold	ł		\$/troy oz	1879	2050	2050	2050	9
Brent Crude (Oil		\$/bbl	93	93	96	100	7
WTI Crude O	il		\$/bbl	90	88	91	95	6
NYMEX Nat.	Gas		\$/mmBtu	3	3	3	3	(3)
ICE TTF Nat.	Ga	S	\$/mmBtu	40	16	14	15	(64)
	EF	PS For	ecast	EPS Gr	owth	NTN	Div	
20)22	2023	2024	2023	2024	Current	YE 2023	Yield
MXAPJ \$	37	\$ 36	\$ 43	(2)%	16 %	11.9 x	13.0 x	3.0 %

12

1

0

8

5

5

13.7

18.4

12.2

15.2

19.0

12.9

2.4

1.7

3.8

	03	2.1	2.7	1.0	1.5
Total Fixed Investment	18	(0.2)	(0.4)	3.5	3.6
Business Fixed Investment	15	3.9	3.1	3.5	3.7
Structures	3	(6.6)	7.3	2.2	2.8
Equipment	6	4.3	0.0	4.6	3.4
IP Products	6	8.8	4.1	3.2	4.5
Residential Investment	3	(10.6)	(10.7)	3.6	3.2
Federal Government Spending	7	(2.5)	3.0	0.2	
State and Local Government	10	0.7	2.9	0.5	0.9
Net Exports (Bil.)	(4)	(1,357)	(1,223)	(1,281)	(1,315)
HOUSING MARKET					
Housing Starts (000s)		1,551	1,424	1,539	1,539
New Home Sales (000s)		637	694	713	716
Existing Home Sales (000s)		5,081	4,360	4,750	4,995
Case-Shiller Home Prices (%)		7.4	1.3	1.7	2.4
INFLATION					
Core CPI		5.7	3.9	3.0	2.5
Core PCE		4.6	3.3	2.4	2.2
LABOR MARKET					
Unemployment Rate		3.5	3.7	3.6	3.6
U6 Underemployment Rate		6.5	6.9	6.9	6.9
Payrolls (000s)		479	246	124	96
GOVERNMENT FINANCE					
Federal Budget (FY, Bil.)		(1375)	(1700)	(1650)	(1800)
Federal debt-to-GDP ratio (FY, %)		97	96	98	100
FINANCIAL INDICATORS					
Fed Funds Rate		4.4	5.4	5.1	4.1
10-year Treasury Rate		3.9	4.3	4.3	4.1
iv-year measury nate		0.0	7.7	7.5	7.5

Real GDP

	2022A	2023A	2024E	2025E
China	3.2 %	5.4 %	4.5 %	4.0 %
World	3.0	2.6	2.5	2.7
USA	2.1	2.2	1.8	1.9
Australia	3.7	2.0	1.8	2.4
Spain	5.8	2.4	1.5	2.0
Russia	(1.4)	2.0	1.5	1.2
Japan	1.0	2.0	1.4	1.4
Brazil	3.0	3.0	1.4	2.4
France	2.5	0.9	1.3	1.5
Euro Area	3.4	0.5	1.1	1.7
Germany	1.9	(0.3)	1.0	1.7
Italy	3.8	0.7	0.9	1.5
UK	4.1	0.3	0.6	1.2

Source: FactSet and Goldman Sachs Global Investment Research.

¥ 174

€ 37

¥ 144 ¥ 161

€ 35 € 36

\$ 222 \$ 224 \$ 237

TOPIX

S&P 500

STOXX

Europe 600

Goldman Sachs US Economics Forecasts Share

of GDP

100%

69

OUTPUT AND SPENDING

Consumer Spending

Real GDP

2022

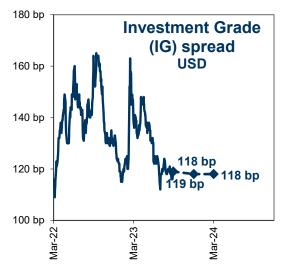
2.1%

2.7

Goldman Sachs Global Macro Forecasts

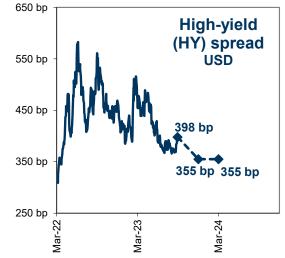


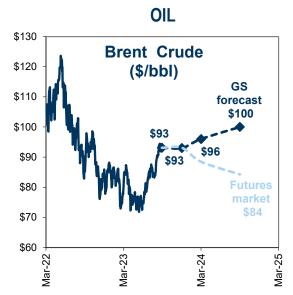
Investment Grade (IG) spread





High-Yield (HY) spread

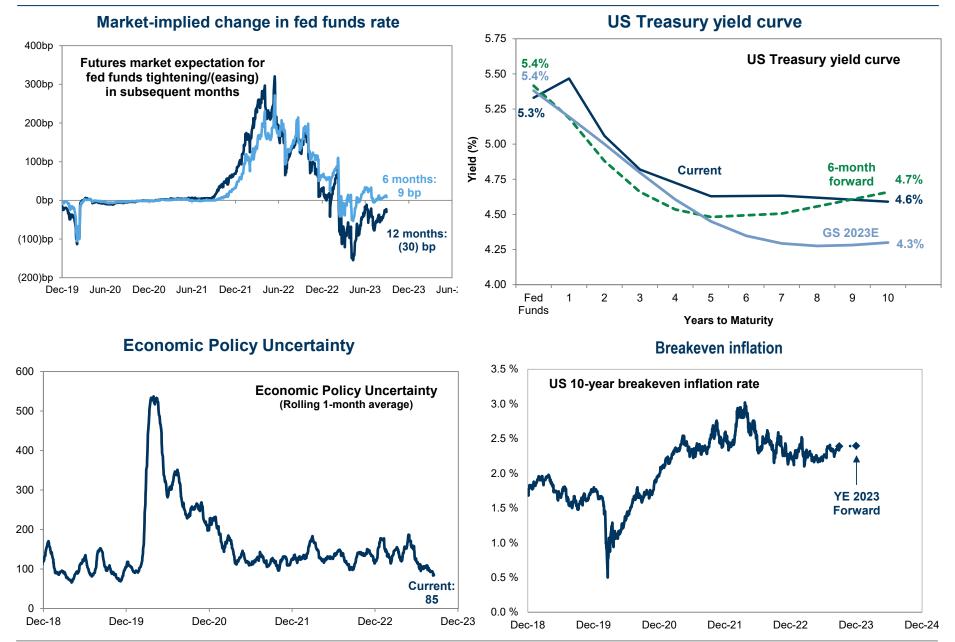




Global Equity Market performance

	Price	Local			
Market	1-Wk	1-Mo	3-Mo	YTD	Currency
Mexico (Bolsa)	(3)%	(8)%	(6)%	18 %	6 %
Spain (IBEX 35)	(2)	(3)	(4)	13	15
U.S. (S&P 500)	(1)	(3)	(2)	12	12
Brazil (Bovespa)	(3)	(4)	(5)	10	5
Japan (TOPIX)	(3)	0	(1)	10	24
Germany (Dax)	(2)	(5)	(7)	9	10
France (CAC 40)	(2)	(5)	(5)	9	10
Europe (DJ Stoxx 600)	(2)	(4)	(5)	4	6
UK (FTSE 100)	(2)	1	(2)	3	2
Korea (KOSPI)	(3)	(5)	(7)	3	10
Australia (ASX 200)	(1)	(2)	(5)	(6)	(0)
China (MSCI China)	(1)	(4)	(6)	(11)	(11)
Average	(2)%	(4)%	(5)%	6 %	7 %

Politics and policies



Source: FactSet, PolicyUncertainty.com, Federal Reserve Bank, Haver Analytics, and Goldman Sachs Global Investment Research.

Disclosure Appendix

Reg AC

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