



Global Investment Research

The Goldman Sachs Group, Inc.

Where to Invest Now

Magnificent Market

March 2024

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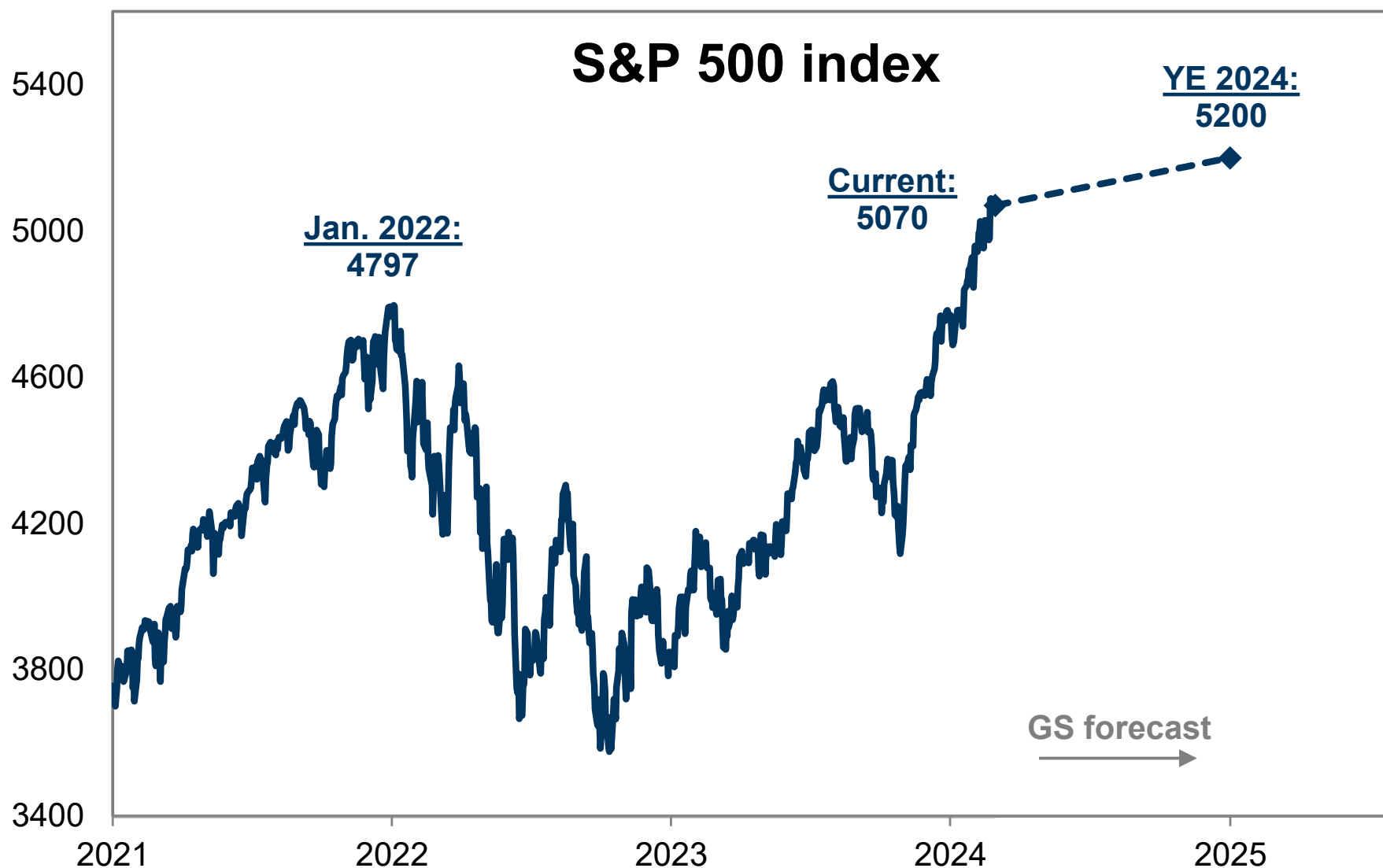
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S&P 500 index path to 5200 at year-end 2024

We expect the index to rise to 5200 by year-end alongside 8% earnings growth



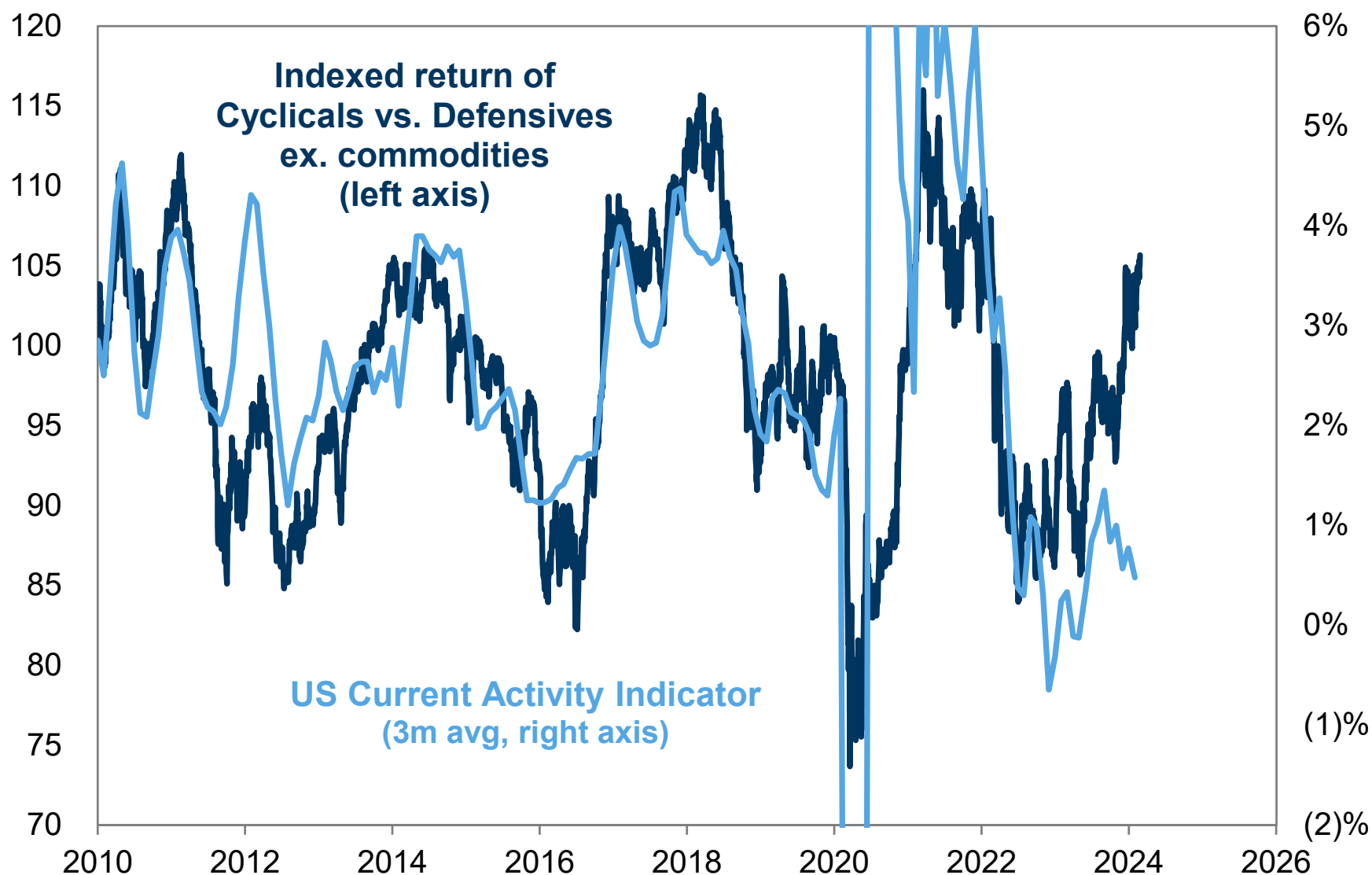
S&P 500 index forecast at year-end 2024

We expect the index will reach 5200 by year-end 2024 in our baseline scenario

	Baseline
2024 EPS growth	8 %
Equal-weight P/E	15 x
%ile rank vs. history	79%
Aggregate P/E	20 x
%ile rank vs. history	90%
Real 10-yr UST yield	1.6 %
S&P 500 level	5200
<i>% total return vs. current</i>	4 %

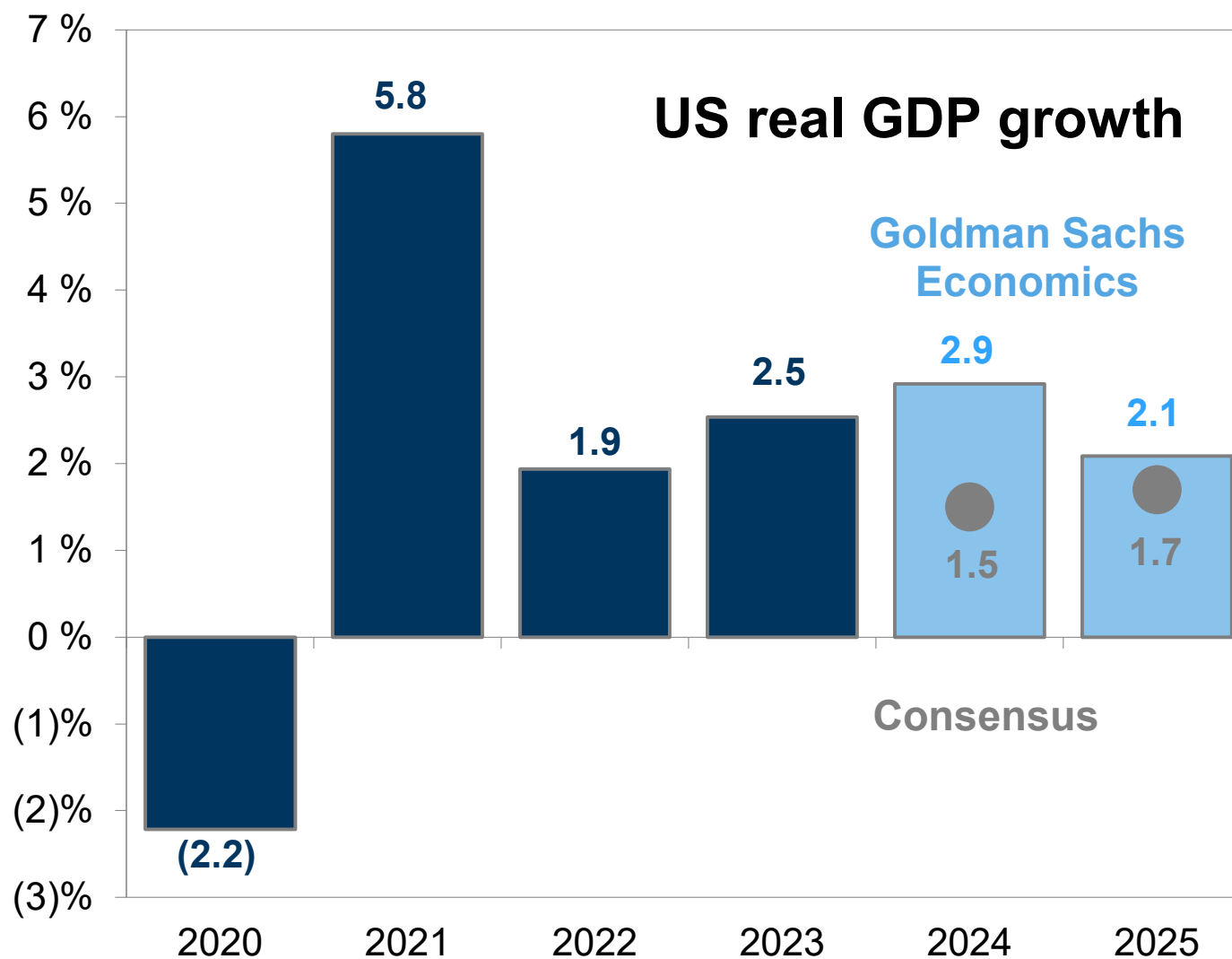
Equity market pricing of US economic growth

Cyclicals vs. Defensives performance consistent with 3%+ real US GDP growth



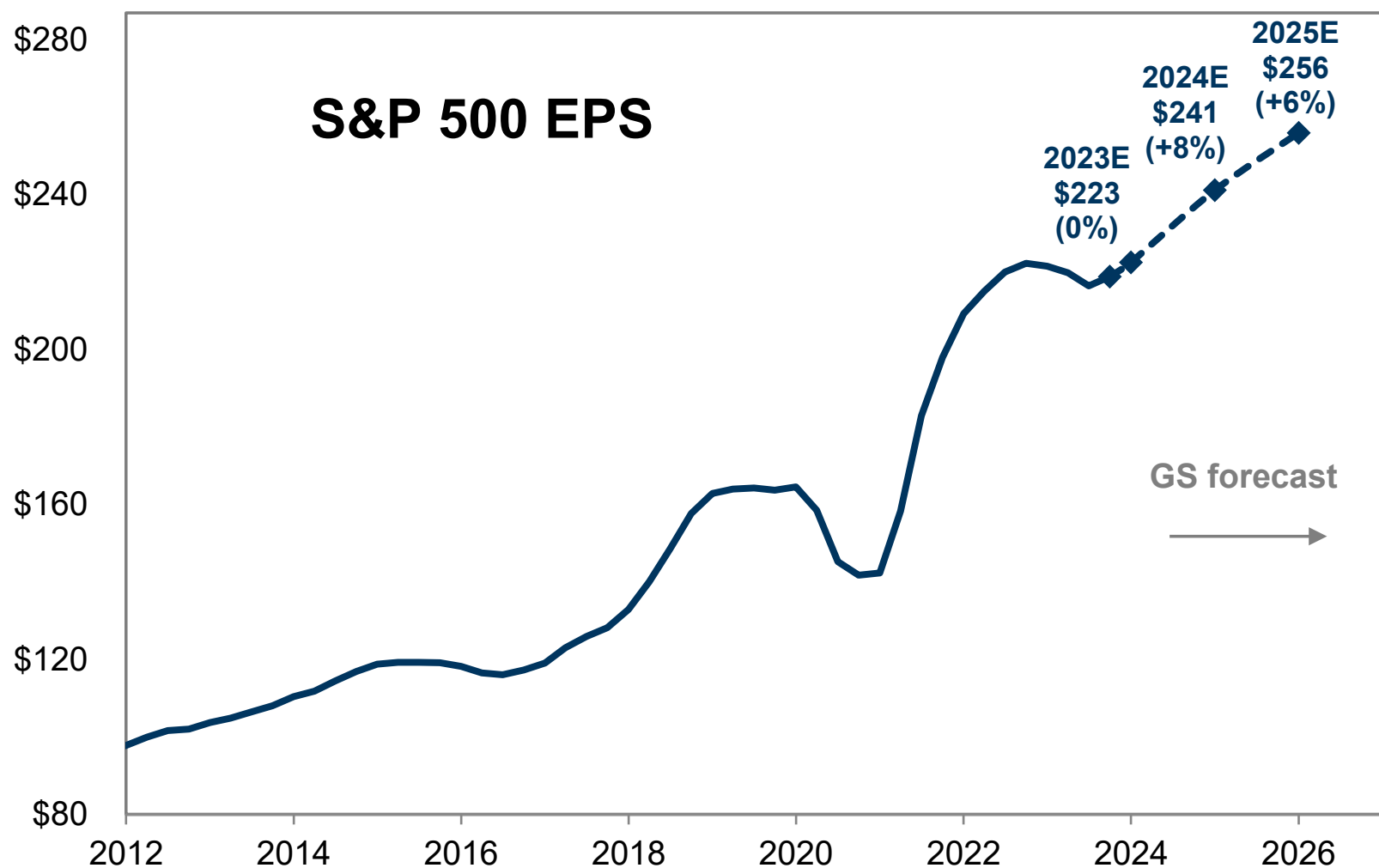
US economic outlook: GS Economics vs. consensus

GS Economics forecasts 2024 growth of 2.9% vs. consensus estimate of 1.5%



We forecast 8% EPS growth in 2024, 6% in 2025

Combination of strong sales growth and modest margin expansion



S&P 500 EPS will grow by 8% in 2024 and 6% in 2025

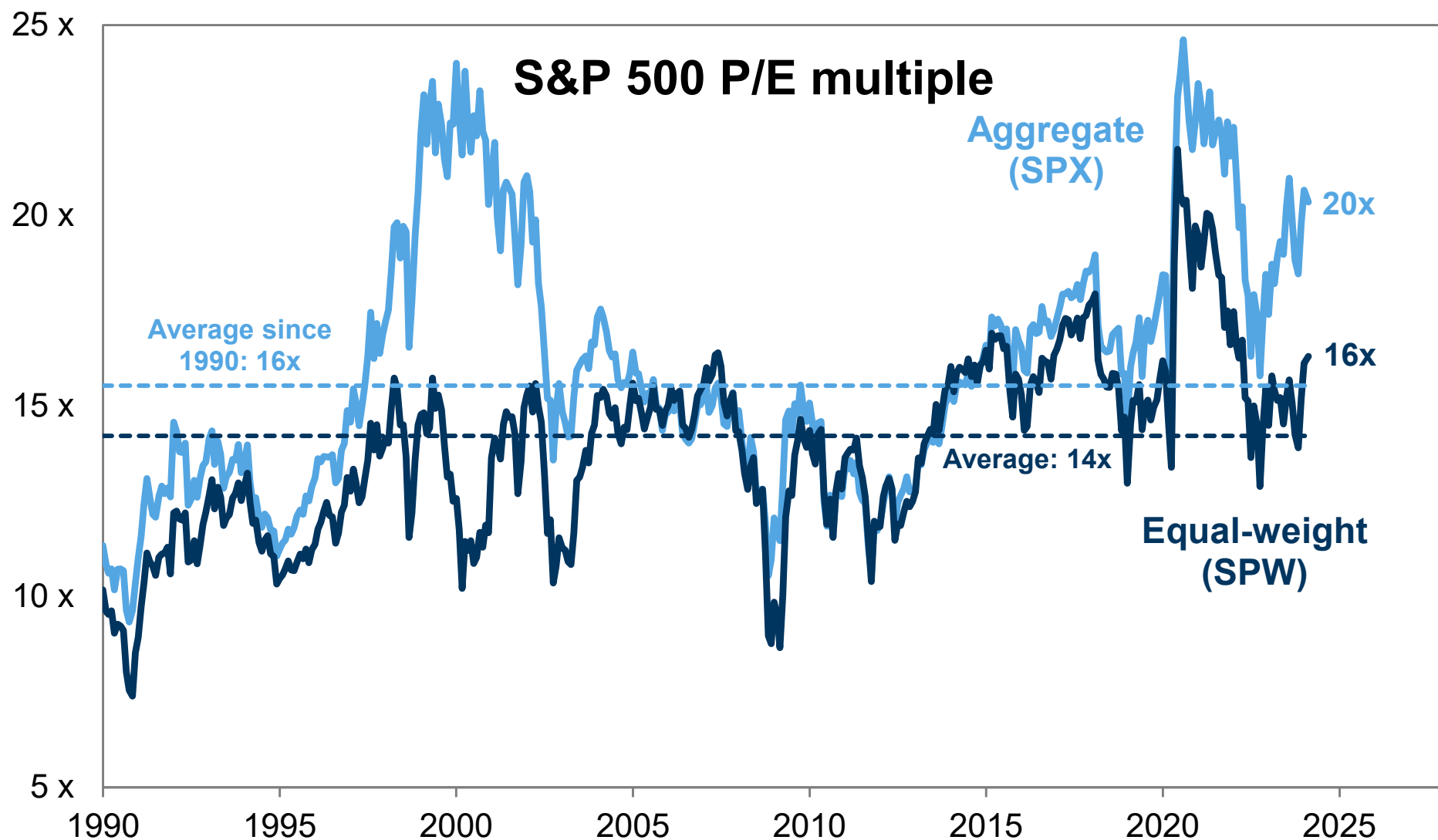
Goldman Sachs top-down EPS forecast vs. top-down and bottom-up consensus

		GS top-down			Cons. BOTTOM-UP		
2022		2023E	2024E	2025E	2023E	2024E	2025E
S&P 500 ex. Fin, RE, Utils							
Sales Per Share	\$1486	\$1530	\$1616	\$1689	\$1530	\$1603	\$1700
Sales growth	13 %	3 %	6 %	4 %	3 %	5 %	6 %
Profit Margin	11.6%	11.1%	11.5%	11.7%	11.1%	11.7%	12.6%
Year/Year growth	(21)bp	(53)bp	39 bp	24 bp	(53)bp	57 bp	92 bp
S&P 500 adjusted EPS	\$222	\$223	\$241	\$256	\$223	\$243	\$275
Year/Year growth	6 %	0 %	8 %	6 %	0 %	9 %	13 %

Cons. TOP-DOWN		
2023E	2024E	2025E
\$223	\$235	NA
0 %	6 %	NA

S&P 500 P/E multiple: aggregate vs. equal weight

Aggregate index (SPX) trades at P/E of 20x vs. 16x for equal-weight index (SPW)



S&P 500 valuation decomposed into two components

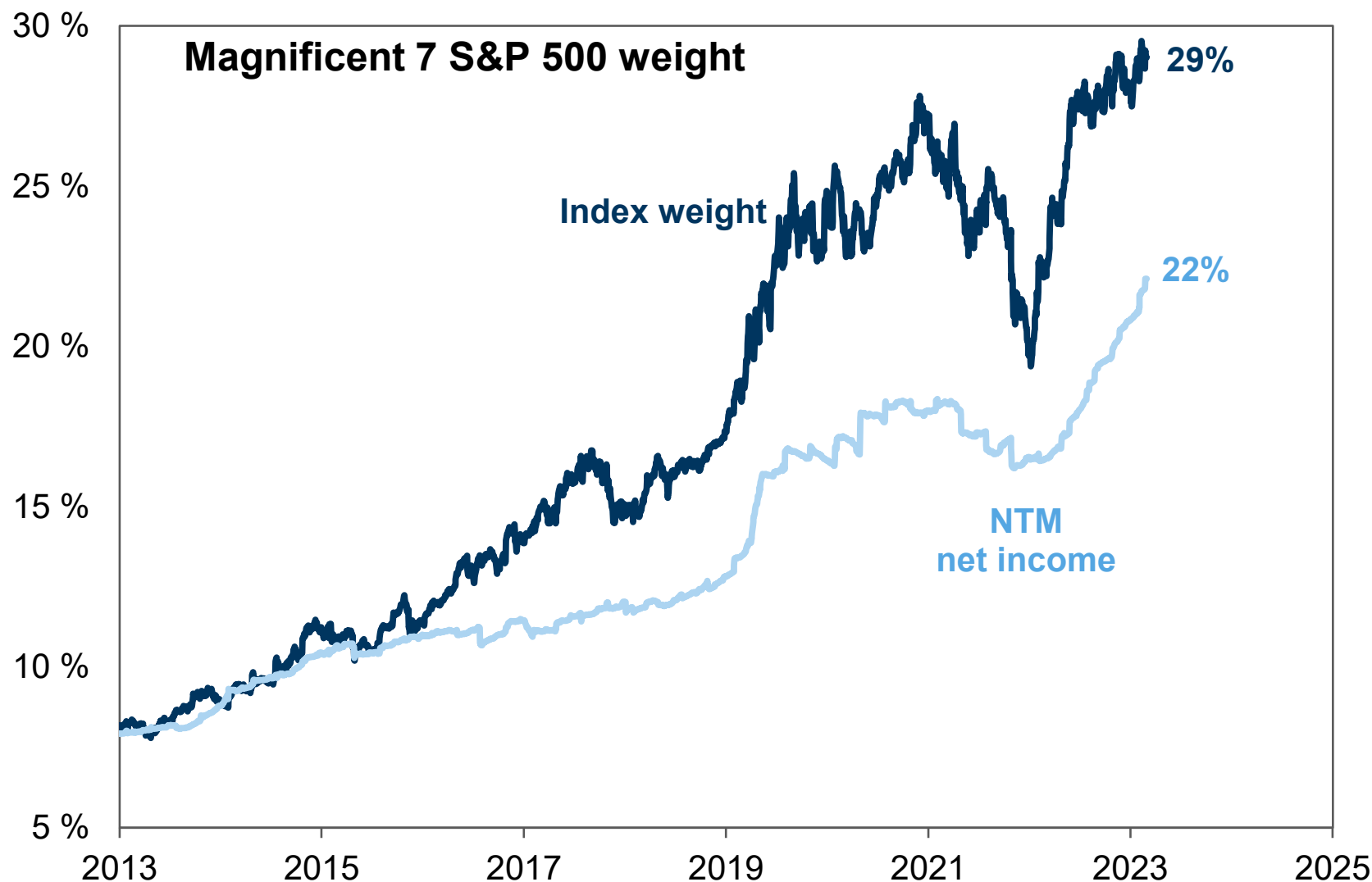
Sensitivity of aggregate S&P 500 P/E to equal-weight P/E & aggregate premium

S&P 500 aggregate P/E

			S&P 500 equal weight P/E			
			14 x	15 x	16 x	17 x
			48%	66%	85%	93%
Aggregate v. Equal-weight P/E premium	%ile					
	20%	74%	17 x	18 x	19 x	20 x
	25%	82%	18 x	19 x	Current 20 x	21 x
	30%	85%	18 x	20 x	21 x	22 x

S&P 500 market cap concentration in top 7 stocks

Magnificent 7 comprise 29% of the S&P 500 index and 22% of net income



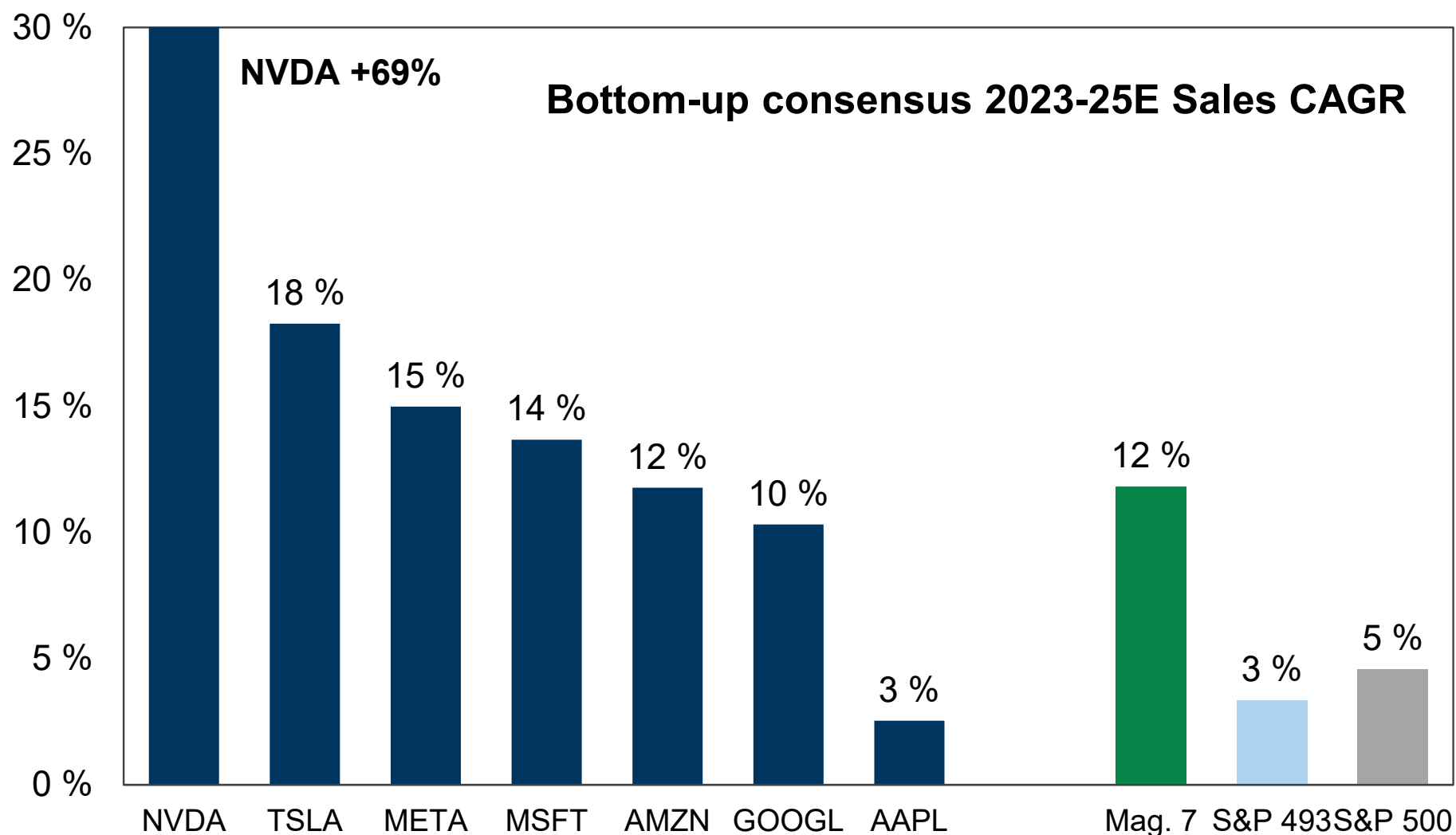
“Magnificent 7” stocks led the way in 4Q 2023

52% EPS growth for Mag 7 vs. -5% for remaining 493 stocks

Ticker	Name	4Q 2023 results					2023-25E Sales CAGR
		Sales		Net margins		EPS	
		Level (\$ bn)	Yr/yr growth	Level (%)	Yr/yr growth	Yr/yr growth	
NVDA	NVIDIA	\$21	240 %	54 %	1774 bp	406 %	69 %
META	Meta Platforms	40	25	27	1511	177	15
MSFT	Microsoft	62	18	35	232	26	14
GOOGL	Alphabet	86	13	21	515	51	10
AMZN	Amazon.com	150	15	5	469	NM	12
TSLA	Tesla	22	6	9	(648)	(39)	18
AAPL	Apple	112	2	27	176	9	3
Magnificent 7		\$493	15 %	21 %	500 bp	52 %	12 %
S&P 493		3,470	3	10	(89)	(5)	3
S&P 500		3,354	5	11	(20)	3	5

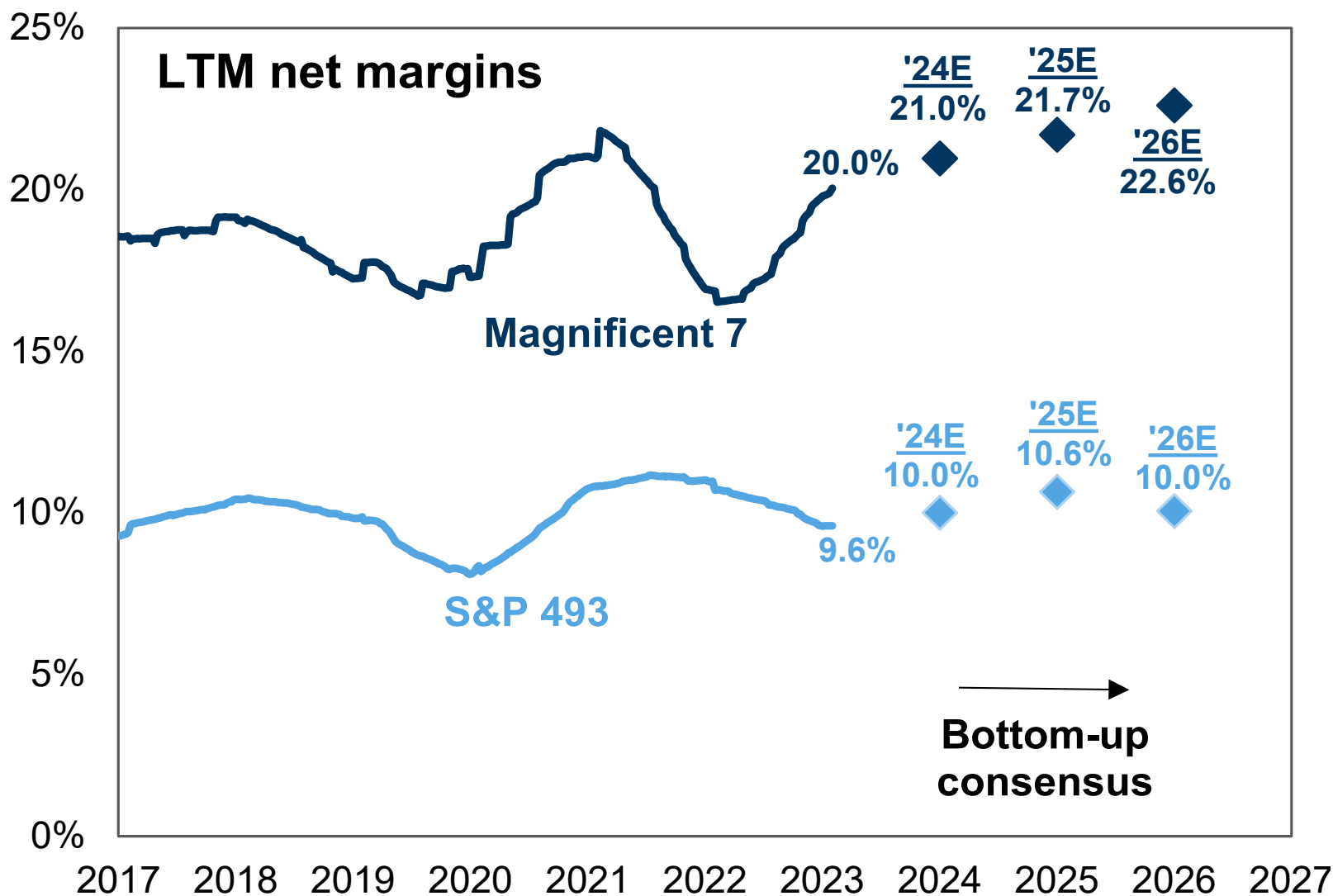
Premium expected 3-year sales growth: 12% vs. 3%

Consensus expects the Magnificent 7 to grow sales at 4x the rate of S&P 493



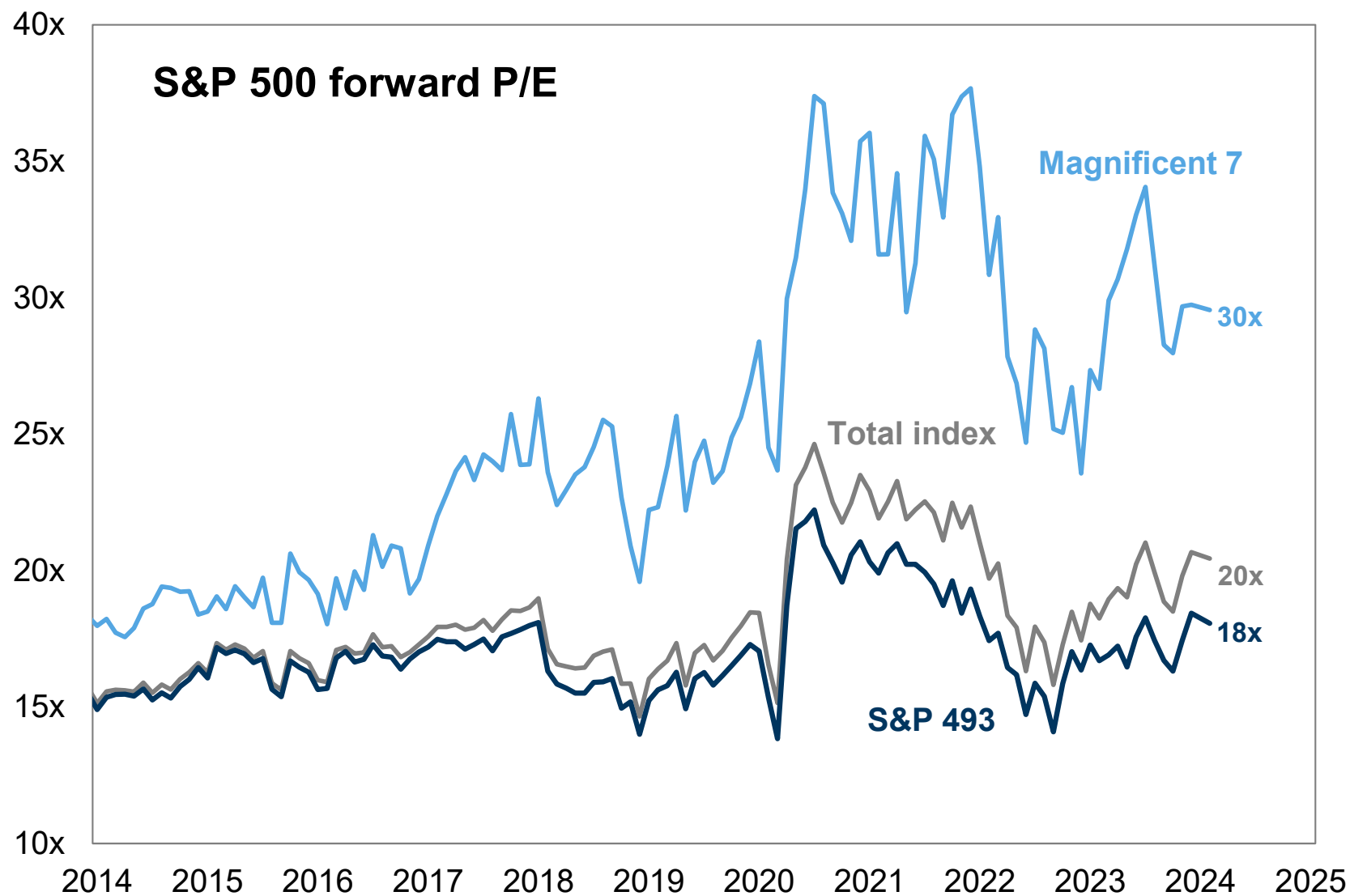
Magnificent 7 margins of 20% are 2x the S&P 493

Mag 7 margins forecast to expand by 260 bp by 2026 vs. 40 bp for S&P 493



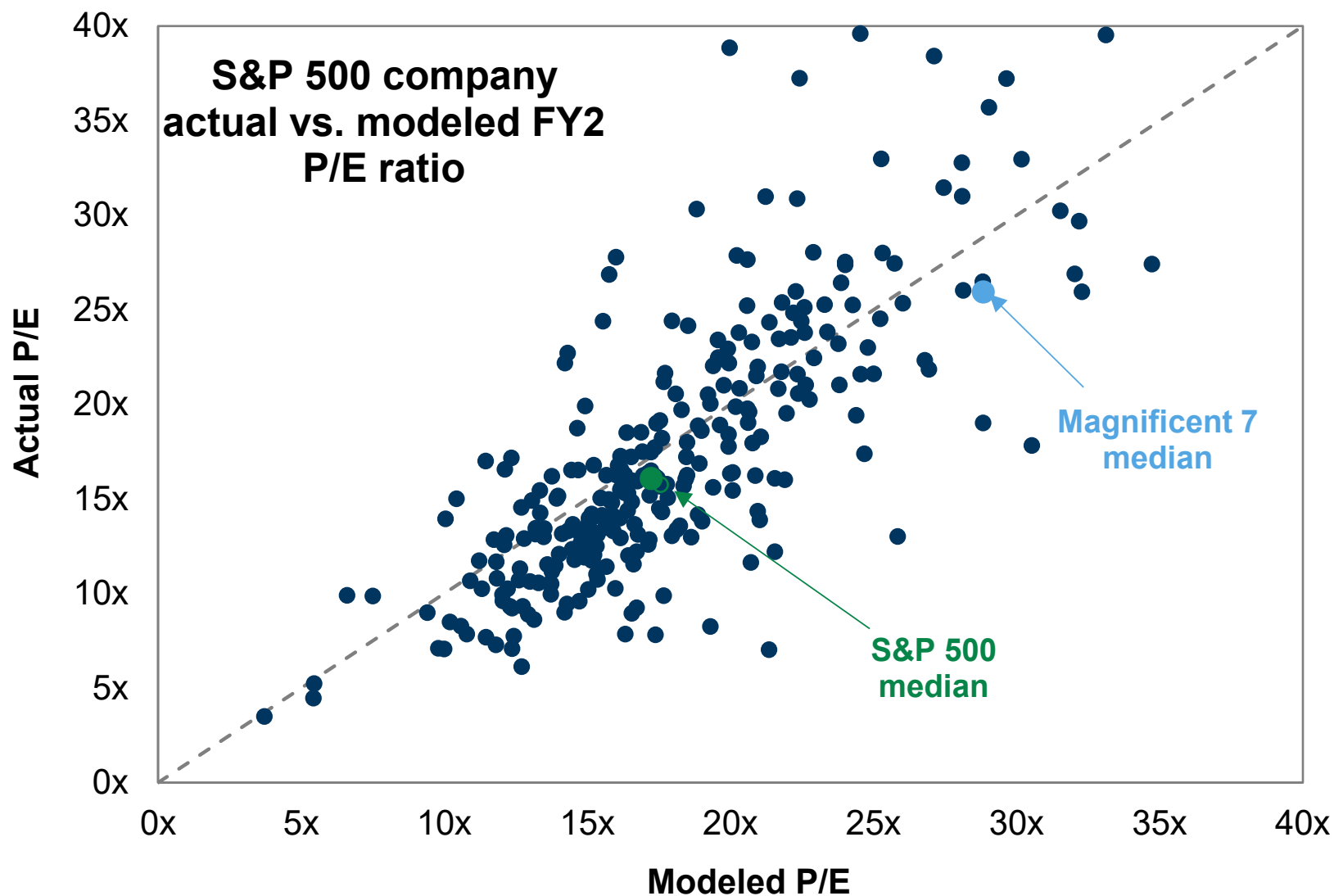
Valuation of the “Magnificent 7” vs. S&P 493

P/E multiple of 30x for “Magnificent 7” vs. 18x multiple for remaining 493 stocks



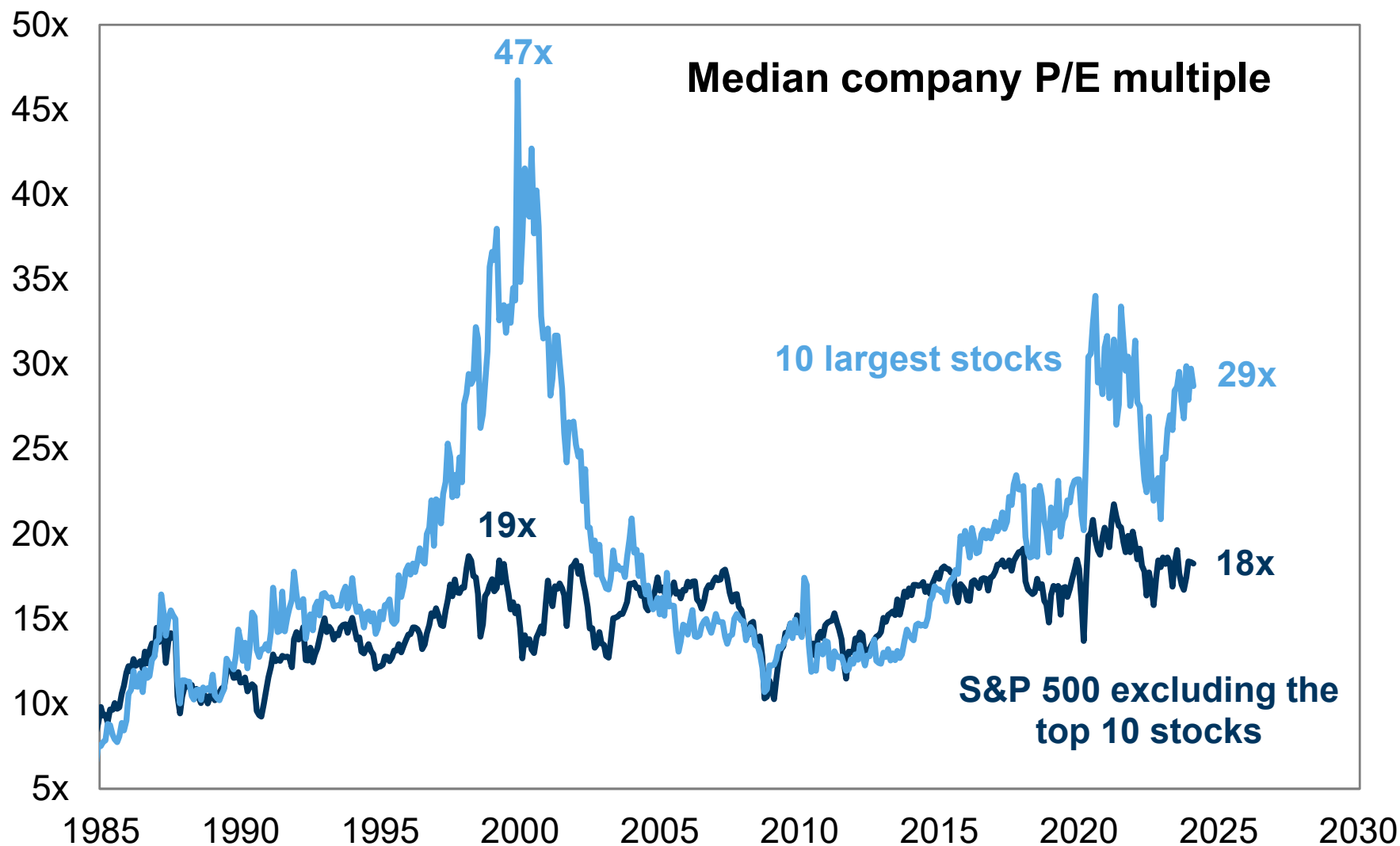
S&P 500 company-level valuation: modeled vs. actual

Our valuation model suggests Magnificent 7 stocks collectively are fairly-valued



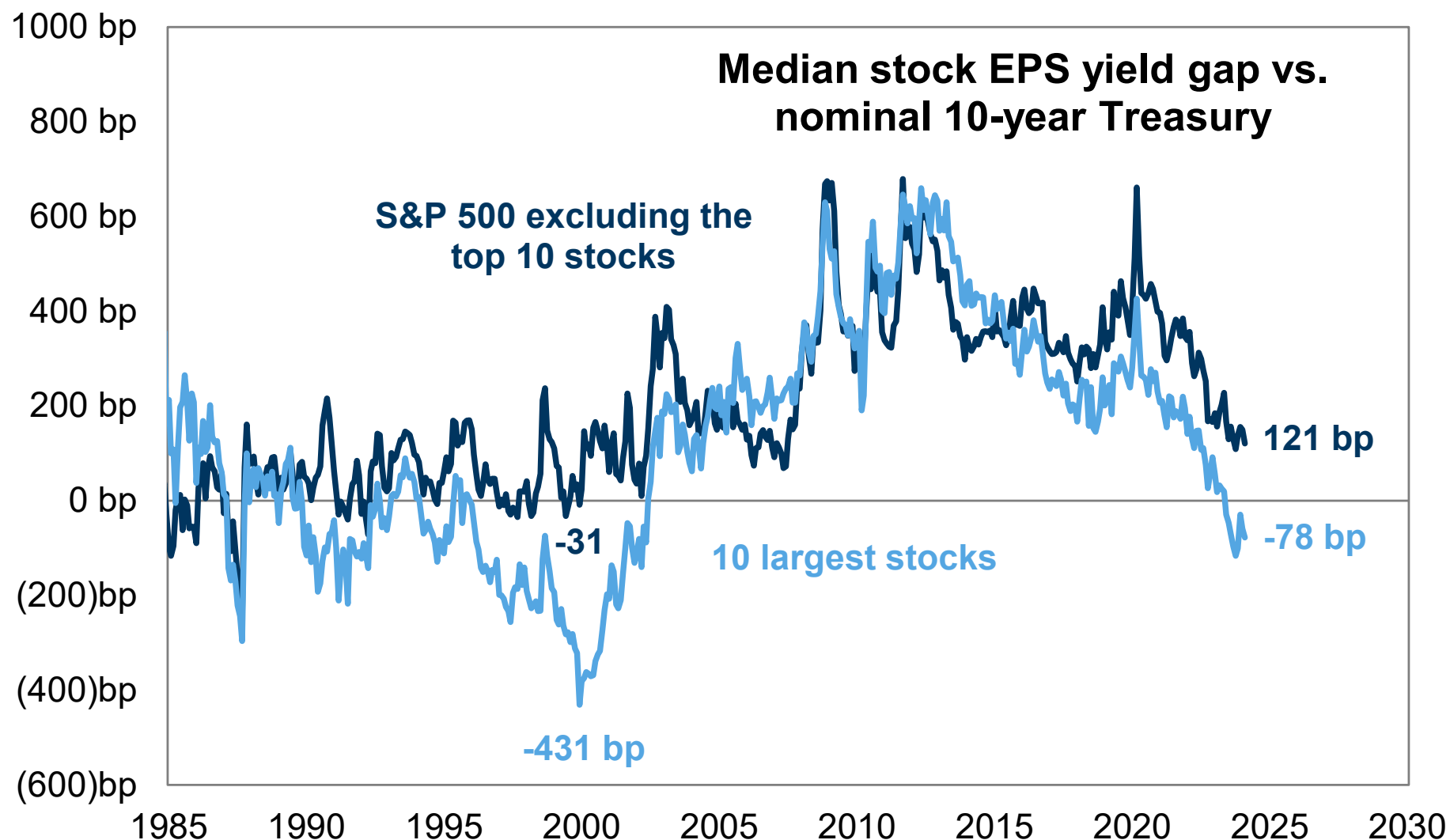
Valuation of largest stocks today is below DotCom peak

10 largest stocks trade at P/E of 29x vs. 47x at peak of DotCom bubble in 2000



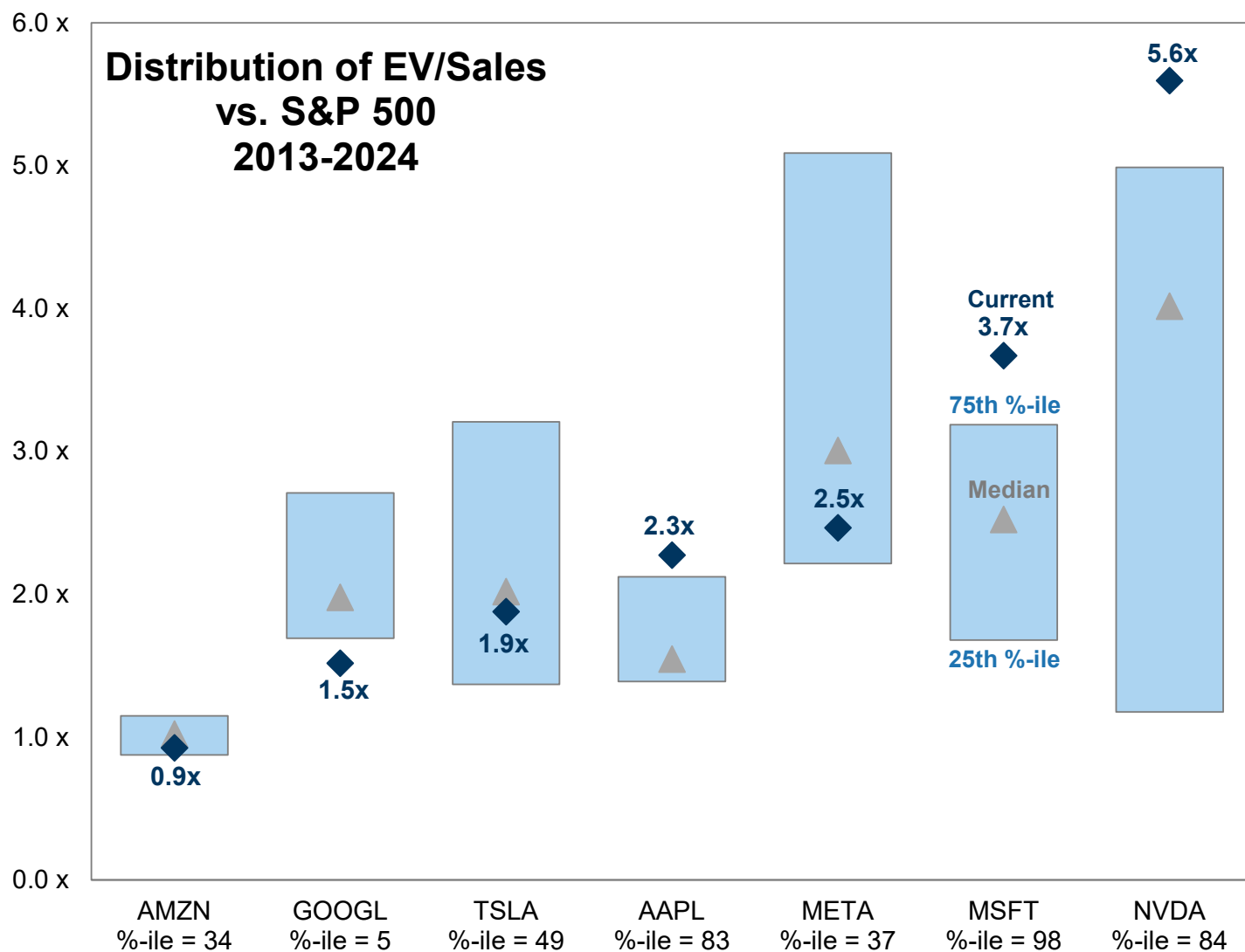
Relative valuation of 10 largest stocks vs. S&P 490

Current yield gap of largest stocks equals -78 bp vs. -431 bp in 2000



Relative EV/Sales multiple of the “Magnificent 7”

4 of Magnificent 7 stocks trade below median historical relative EV/sales multiple



2000 Dot Com bubble vs. 2023 AI euphoria

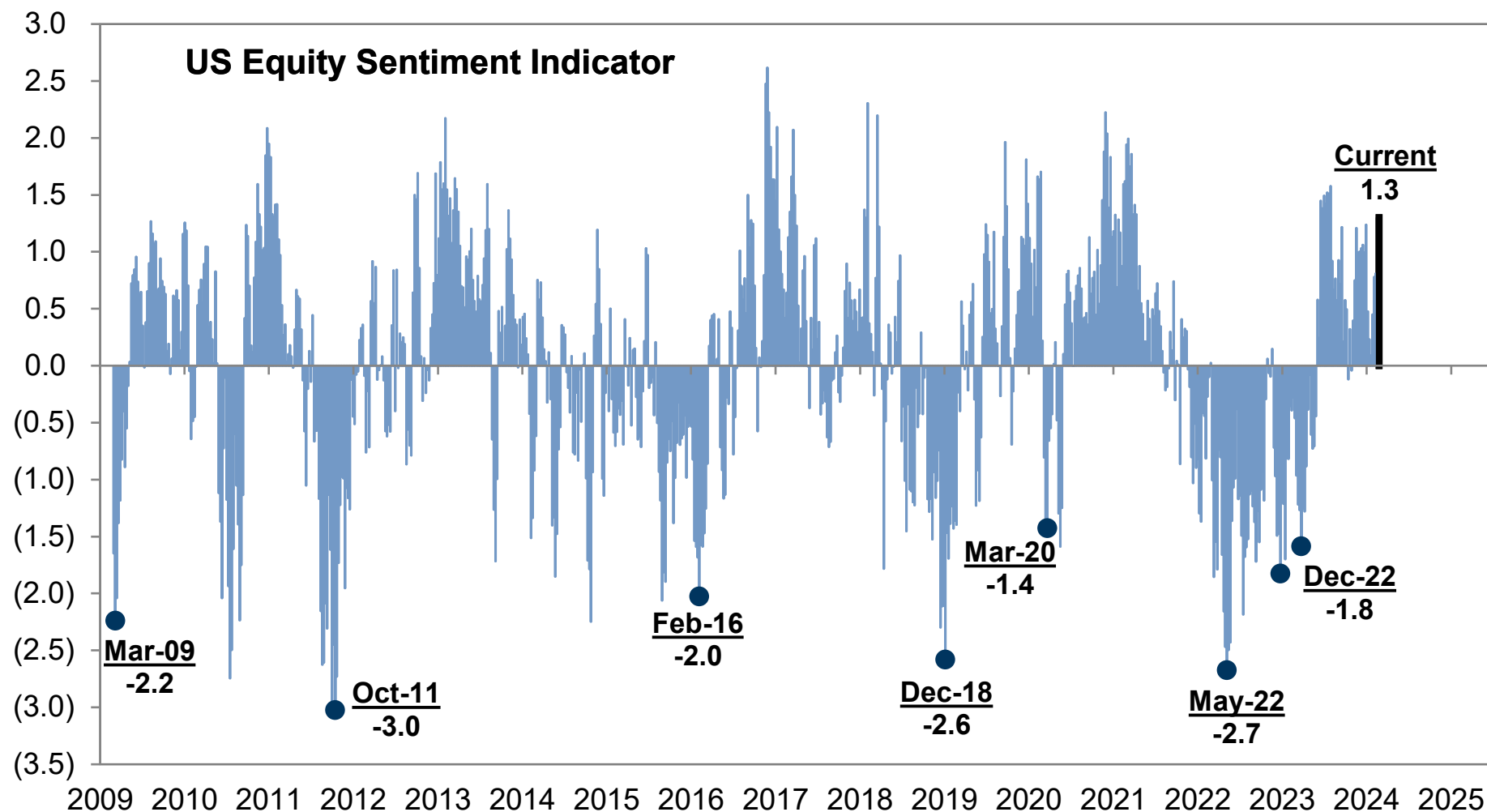
Failure to meet lofty growth expectations ended the Dot Com valuation boom

Dot Com Boom beneficiaries						
Company	Ticker	Sales CAGR (as of Jan. 2000)		NTM P/E		
		1999-2001	Realized	Jan. 2000	Jan. 2001	Change
Cisco	CSCO	28 %	11 %	97 x	43 x	(55)%
Microsoft Corp	MSFT	16	10	65	22	(66)
Intel	INTC	17	(5)	31	19	(40)

AI Adoption beneficiaries						
Company	Ticker	Sales CAGR		NTM P/E		
		2023E-2025E	Realized	Jan. 2024	Jan. 2025	Change
NVIDIA Corp	NVDA	69 %		27 x		
Microsoft Corp	MSFT	14		31		
Amazon.com, Inc.	AMZN	12		42		
Alphabet Inc.	GOOGL	10		21		

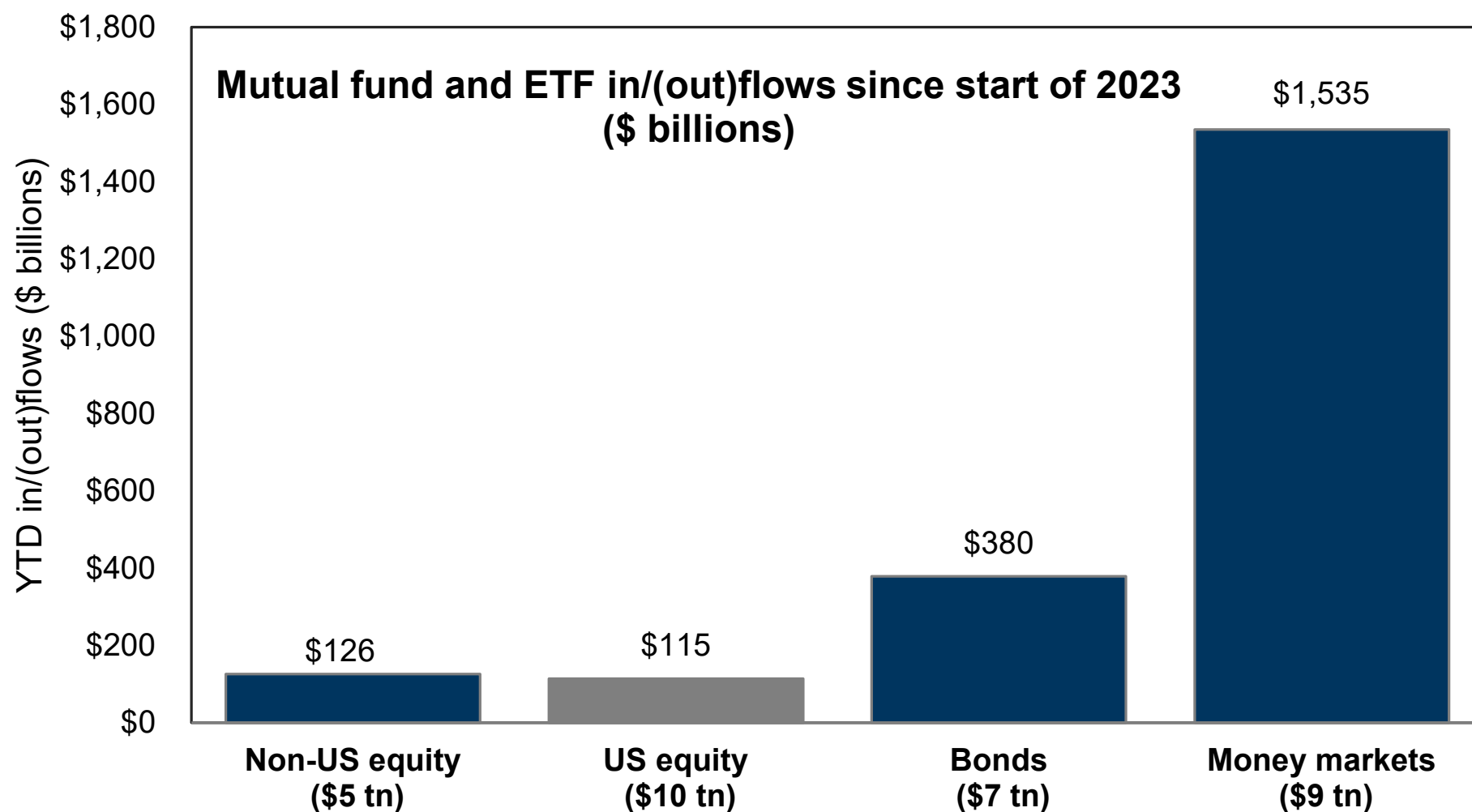
Goldman Sachs US Equity Sentiment Indicator

Near-term investor positioning across various ownership categories is elevated



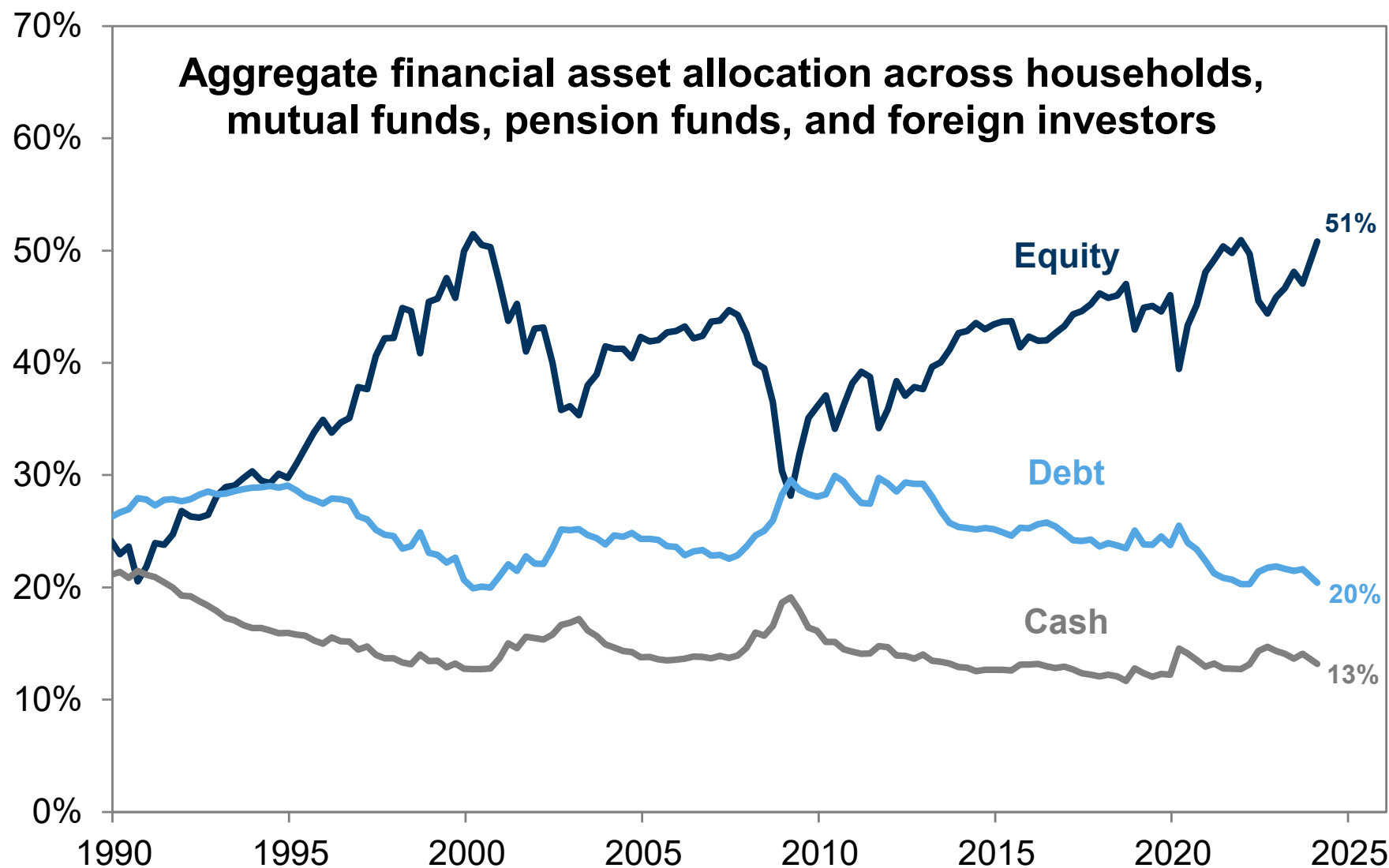
Money market inflows total \$1.5 trillion in 14 months

US equity inflows total only \$115 billion while Bonds purchases total \$380 billion



Investor allocations to equity remain elevated

Regime change from “TINA” to “TARA” supports household asset rotation



Equity allocations relative to history since 1952

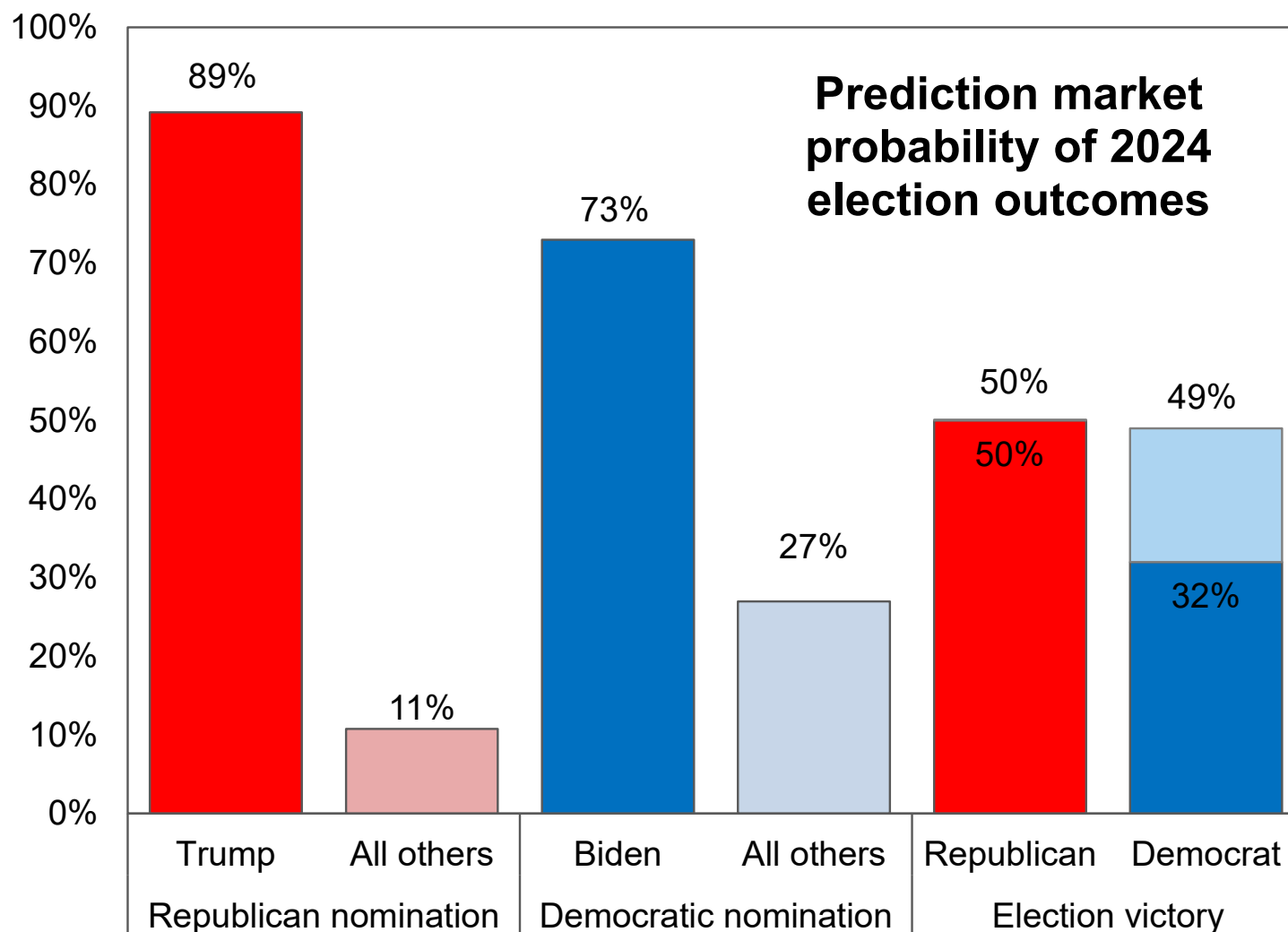
Real money investor allocations to equities generally remain elevated

Holder	EQUITY		DEBT		CASH	
	% of total assets		% of total assets		% of total assets	
	Current	%-ile since '52	Current	%-ile since '52	Current	%-ile since '52
Foreign investors	60 %	99 %	27 %	6 %	8 %	6 %
Mutual funds	55	53	19	48	24	62
Pension funds	52	85	26	11	2	3
Households	46	99	17	46	15	15
Total	51 %	99 %	20 %	44 %	13 %	12 %



Prediction markets imply general election is a toss-up

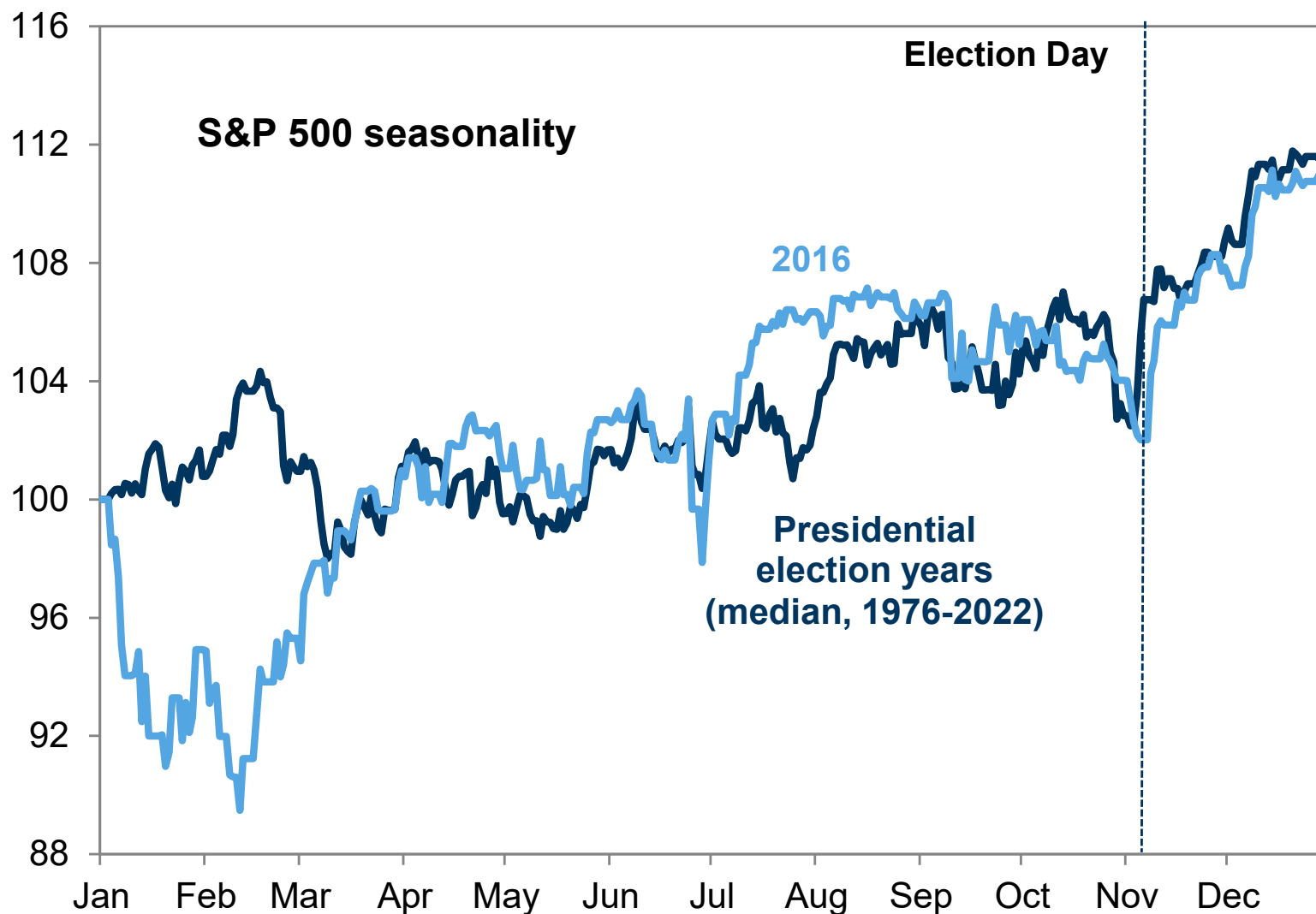
8 months until the 2024 US presidential election on November 5th



Republican nomination "All others" led by Nikki Haley. Democratic nomination "All others" led by Gavin Newsom and Kamala Harris.

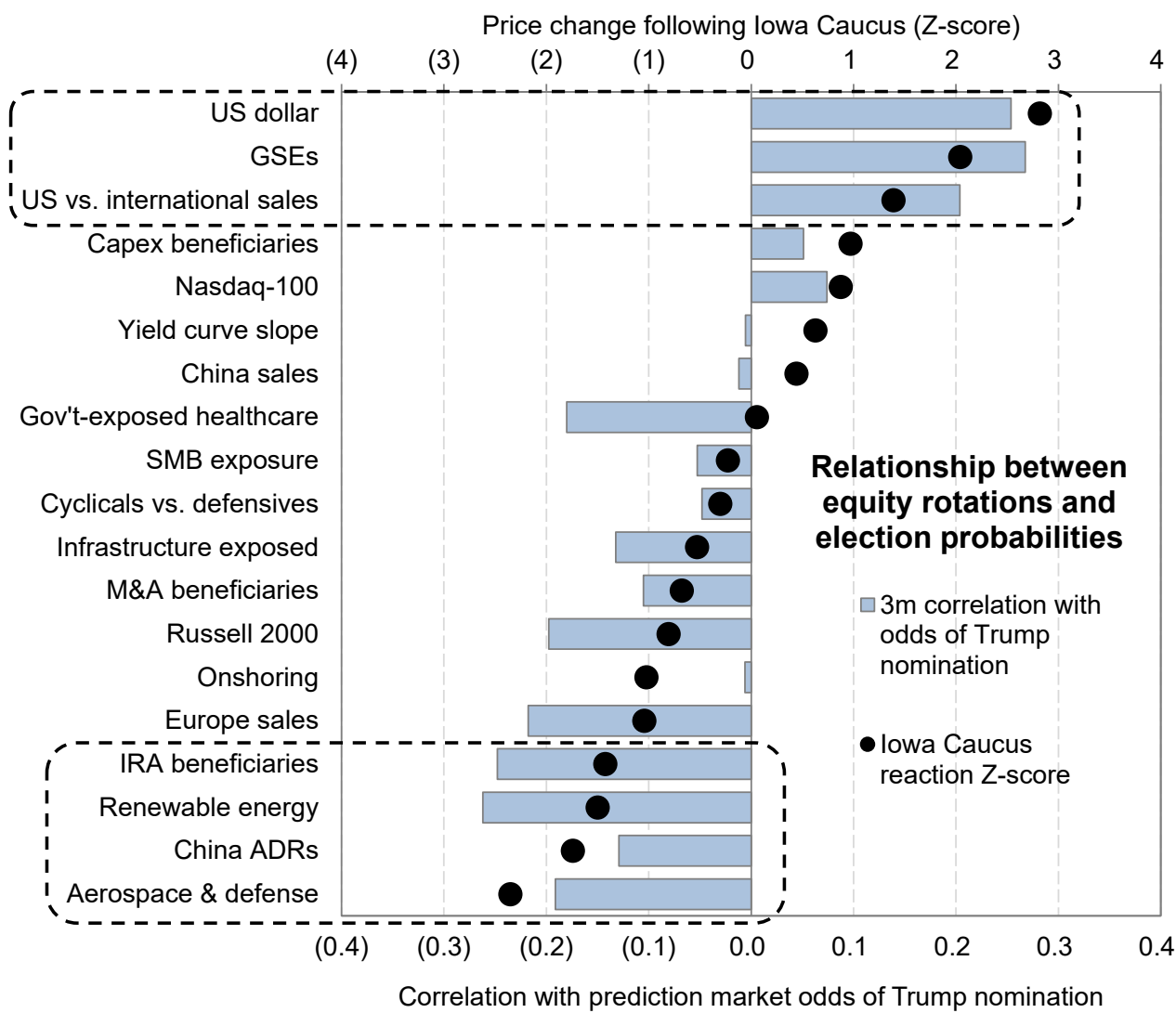
Presidential election year seasonality

Equities typically rally following Election Day as policy uncertainty is resolved



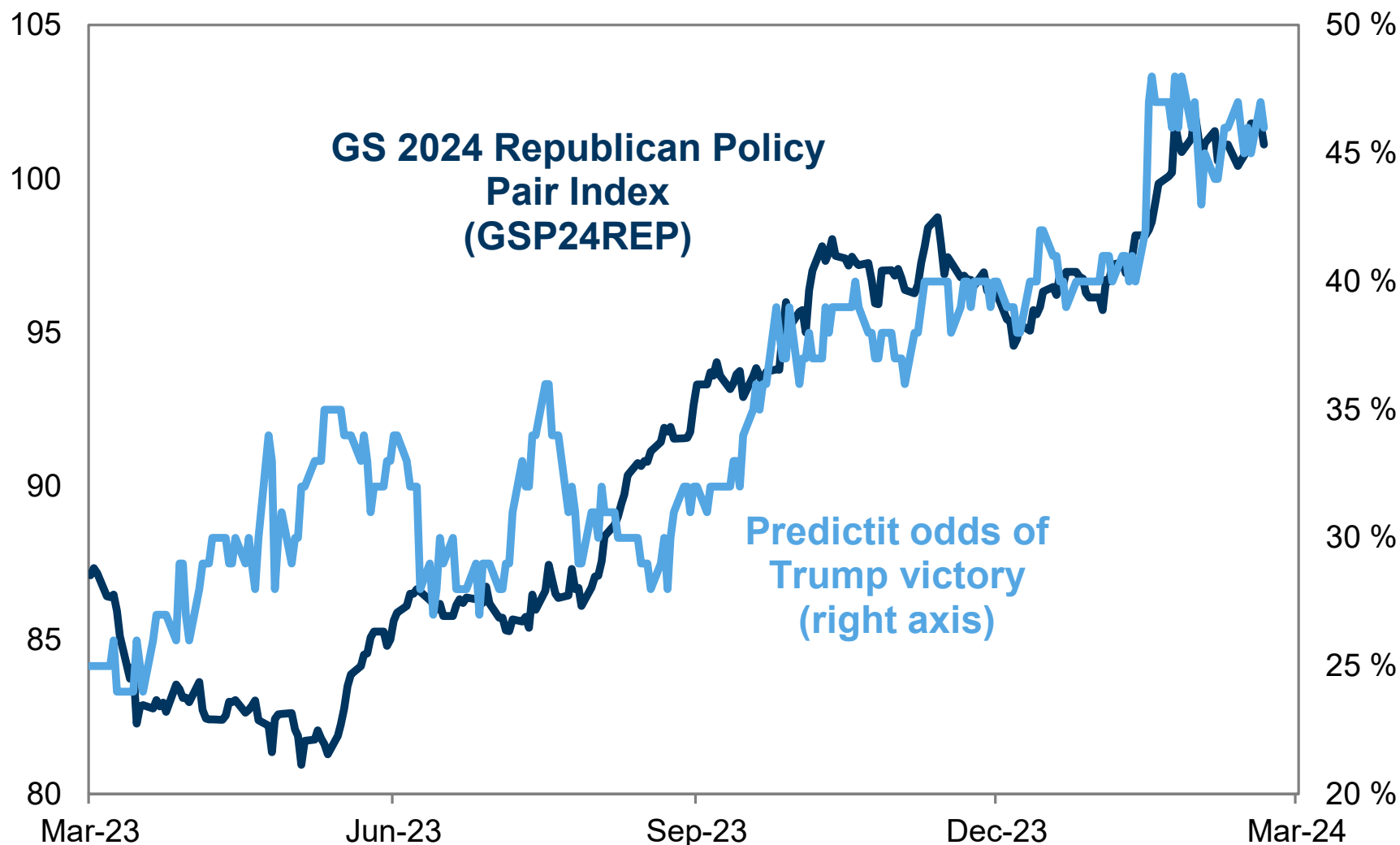
Pockets of the equity market reflecting election risk

USD strength is the clearest consensus “Trump trade”



Performance of Republican policy basket trade

Republican Policy Outperformers (long) vs. Underperformers (short)



Constituents of GS Republican Policy Outperformers

GS24REPL based on categories defined by GBM Baskets desk

Financials (16%)

Companies benefit from easing capital rules and antitrust, encouraged deal-making environment, as well as additional trading revenue during election years.

C	FNMA	PJT
CBRE	JEF	RJF
CG	JLL	SF
CMA	JPM	SNV
DFS	MC	TPG
EVR	MS	WFC
FHN	PIPR	

Steel (12%)

US-listed equities that are perceived to benefit from additional steel manufacturing in the US.

ATI	GGB	RYI
CLF	MT	STLD
CMC	NUE	VALE
CRS	RS	WS

Domestic Security & Law Enforcement (12%)

Plans to deliver record funding to hire and retrain police officers, strengthen protections for police officers.

AXON	GEN	S
CRWD	GEO	ZS
CXW	PANW	
CYBR	PSN	

Onshore Production & Enablers (24%)

Companies that rely on domestic supply chain, have a high manufacturing footprint in the country, or have announced initiatives to move operations to the US.

AMAT	JBL	RRX
APH	KLAC	TEL
AVGO	LRCX	TXN
FLEX	MHK	
INTC	ROK	

Border Construction (12%)

Companies in this category were involved in constructing tighter borders during the last Republican presidency.

ACM	FLR	MLM
CAT	GVA	PWR
CX	J	VMC
EXP	KBR	

Small-Business Exposed (10%)

Companies that have close to 100% of sales generated from small businesses. Small business optimism tends to improve during Republican presidencies.

ACVA	DE	PYCR
ADP	DOCN	SQSP
AGCO	IDXX	TOST
BILL	PAYO	UPWK
CTVA	PAYX	YELP

Energy (10%)

Sensitive to commodity supply and demand levels, but is also a net beneficiary of Republican policies that favor traditional commodity production in the country.

CNQ	HP	PTEN
CTRA	KMI	SLB
CVE	LNG	SM
CVX	MRO	SU
DVN	MTDR	WKC
EOG	MUR	WMB
FANG	OKE	XOM
HAL	OVV	

Coal (4%)

US-listed equities that are perceived to benefit from additional coal in the US.

BTU	CEIX	HNRG
UEC	LEU	

Constituents of GS Republican Policy Underperformers

GS24REPS based on categories defined by GBM Baskets desk

Wage Pressure (16%)

In an already tight labor market, companies with current wage pressure might face additional challenges if foreign employees expect stricter work permits.

AMN	DLTR	KR
BBY	EAT	MAR
CCRN	HCA	THC
CYH	HGV	UHS
DG		

Consumer w/ Tariff Risk (16%)

The consumer industry with the largest exposure to tariffs, due to exposure to China supply chain or heavy global manufacturing footprint, is apparel, footwear, and related.

AEO	LULU	TGT
DKS	NKE	UAA
EYE	PVH	URBN
FIGS	RL	WRBY
FND	SHOO	WSM
GPS	SKX	YETI

Industrial w/ Tariff Risk (14%)

The industrial industry with the largest exposure to tariffs, due to exposure to China supply chain or heavy global manufacturing footprint, is machinery.

EMR	IR	KMT
FLS	ITT	MMM
GGG	ITW	TKR

Technology w/ Tariff Risk (10%)

The technology industry with the largest exposure to tariffs, due to exposure to China supply chain or heavy global manufacturing footprint, is semiconductors.

ASX	QCOM	SWKS
NXPI	QRVO	TSM

Electric Vehicles (10%)

This space could be at risk in 2025 when policy makers are expected to extend tax cuts and a Republican administration could vote against EV benefits.

F	NIO	TSLA
GM	RIVN	XPEV
LEA	THRM	

Clean Electricity (10%)

The IRA expands clean energy production credits across many verticals including clean electricity across solar, green utilities, and more. The IRA benefits these companies because it introduces credits for electricity with no/less greenhouse gas emissions whereas the current credits only benefit companies based on the type of renewable energy that is produced. A change to the IRA could negatively impact this space.

AES	NEE	PEG
CMS	NEP	WM
DTE	PCG	XEL

Defense (8%)

The leading candidate of the Republican party has expressed preference towards geopolitical deal-making rather than escalating tensions.

BAH	LDOS	RTX
CACI	LHX	SAIC
GD	LMT	TDY
HII	NOC	

Battery Storage (4%)

There is high potential for stocks levered to battery storage to benefit from the IRA given that standalone energy storage will now qualify for energy investment tax credits with a higher rate of 30% instead of the prior 22%. A change to the IRA could negatively impact this space.

ENPH	FSLR	SEDG
FLNC	RUN	

Carbon Credit Beneficiary (4%)

Timber REITs currently benefit from carbon credits that could be disrupted if the IRA or other green efforts are rolled back.

PCH	RYN	WY
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Green Hydrogen (4%)

Both blue and green hydrogen stand to benefit from the IRA's 45V premium tax credit, though in different measures, with higher incentives for green. A change to the IRA could negatively impact this space.

APD	CF	LIN
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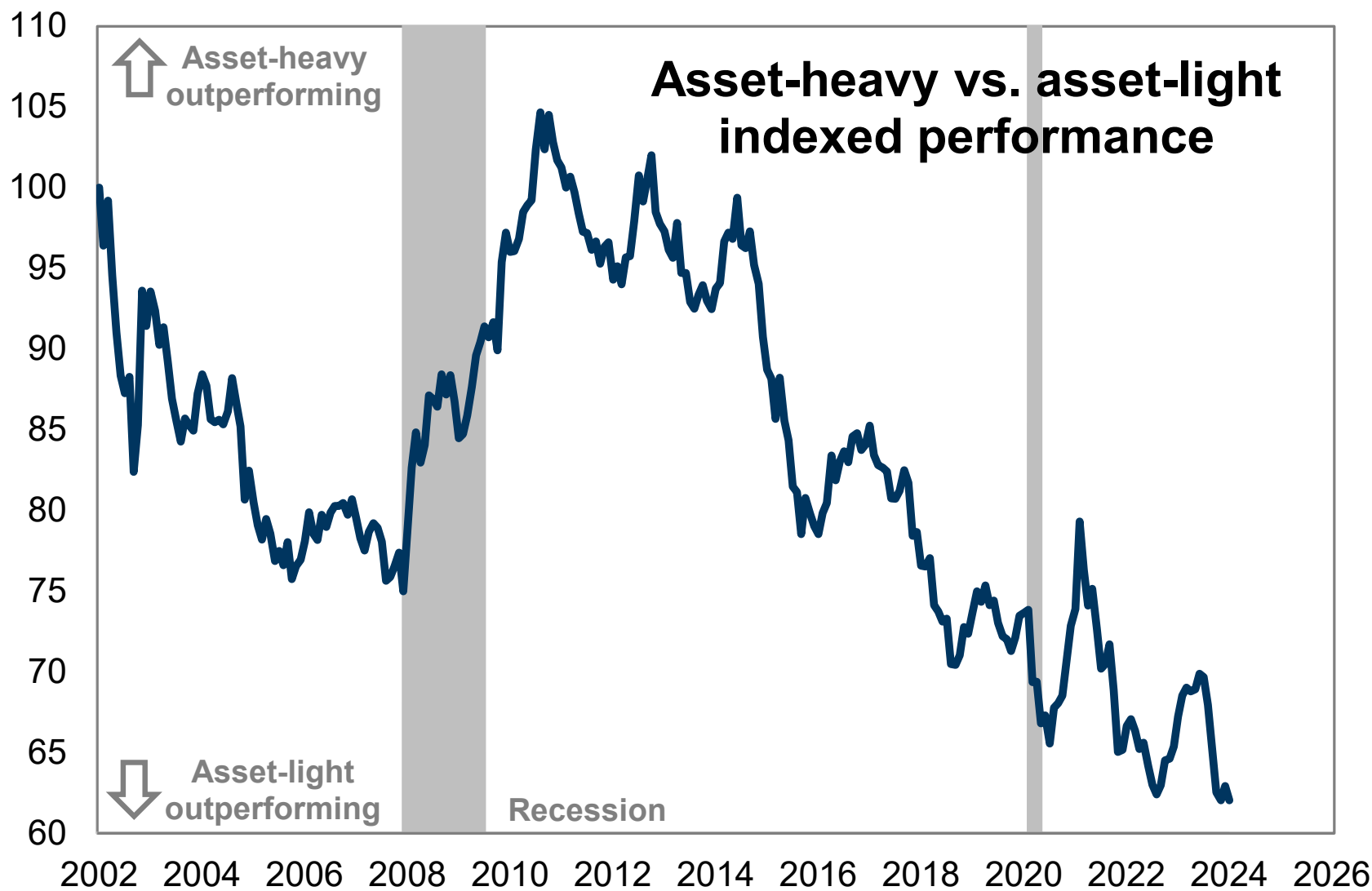
Energy Efficiency (4%)

The IRA benefits these companies because it introduces credits for electricity with no/less greenhouse gas emissions whereas the current credits only benefit companies based on the type of renewable energy that is produced. A change to the IRA could negatively impact this space.

CARR	JCI	TT
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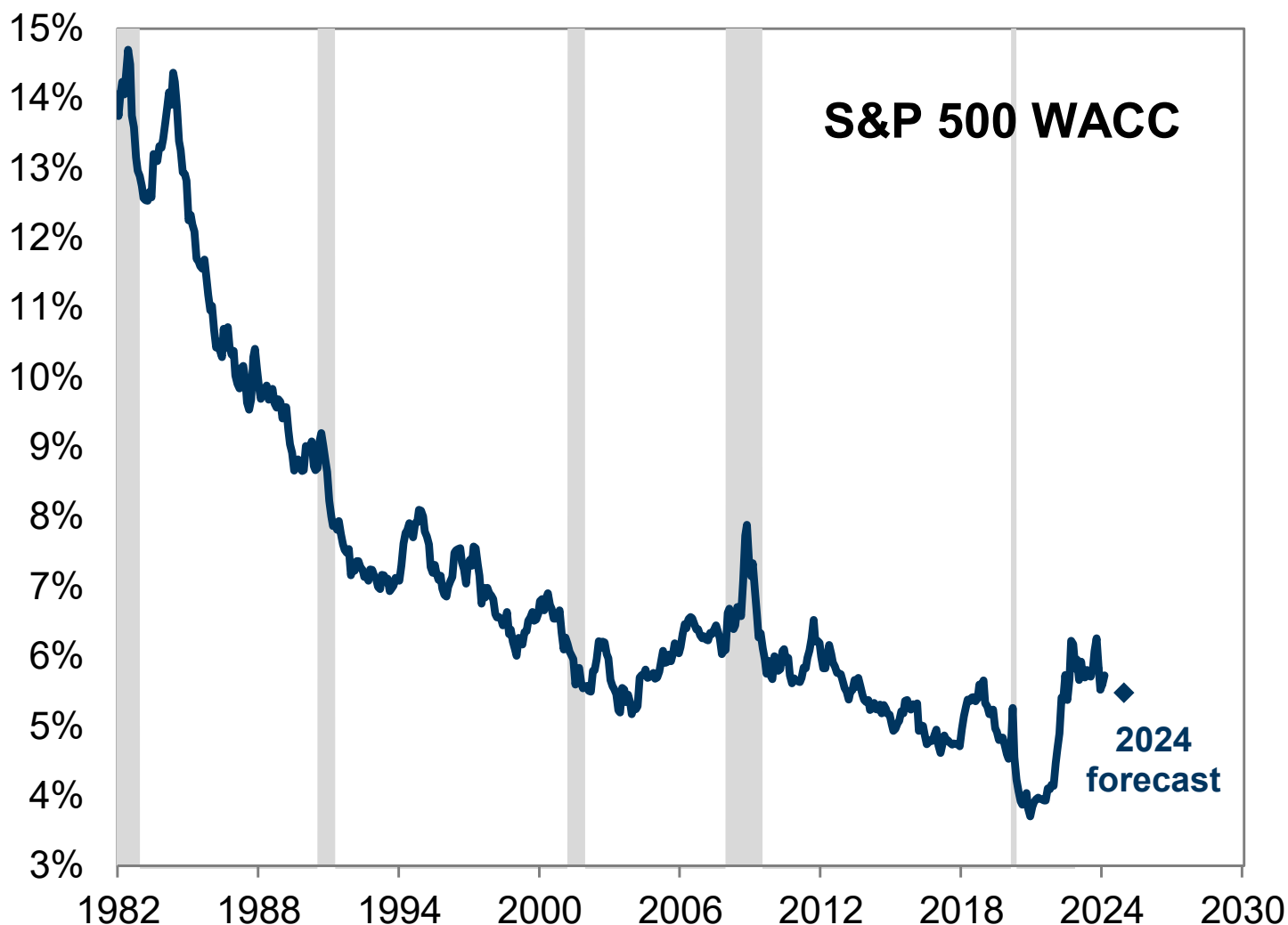
Asset intensive stocks have lagged for past 10 years

High Asset Intensive Ratio (GSTHHAIR) trailing Low Asset Intensive (GSTHLAIR)



S&P 500 WACC will fall by 25 bp to 5.5% by year-end

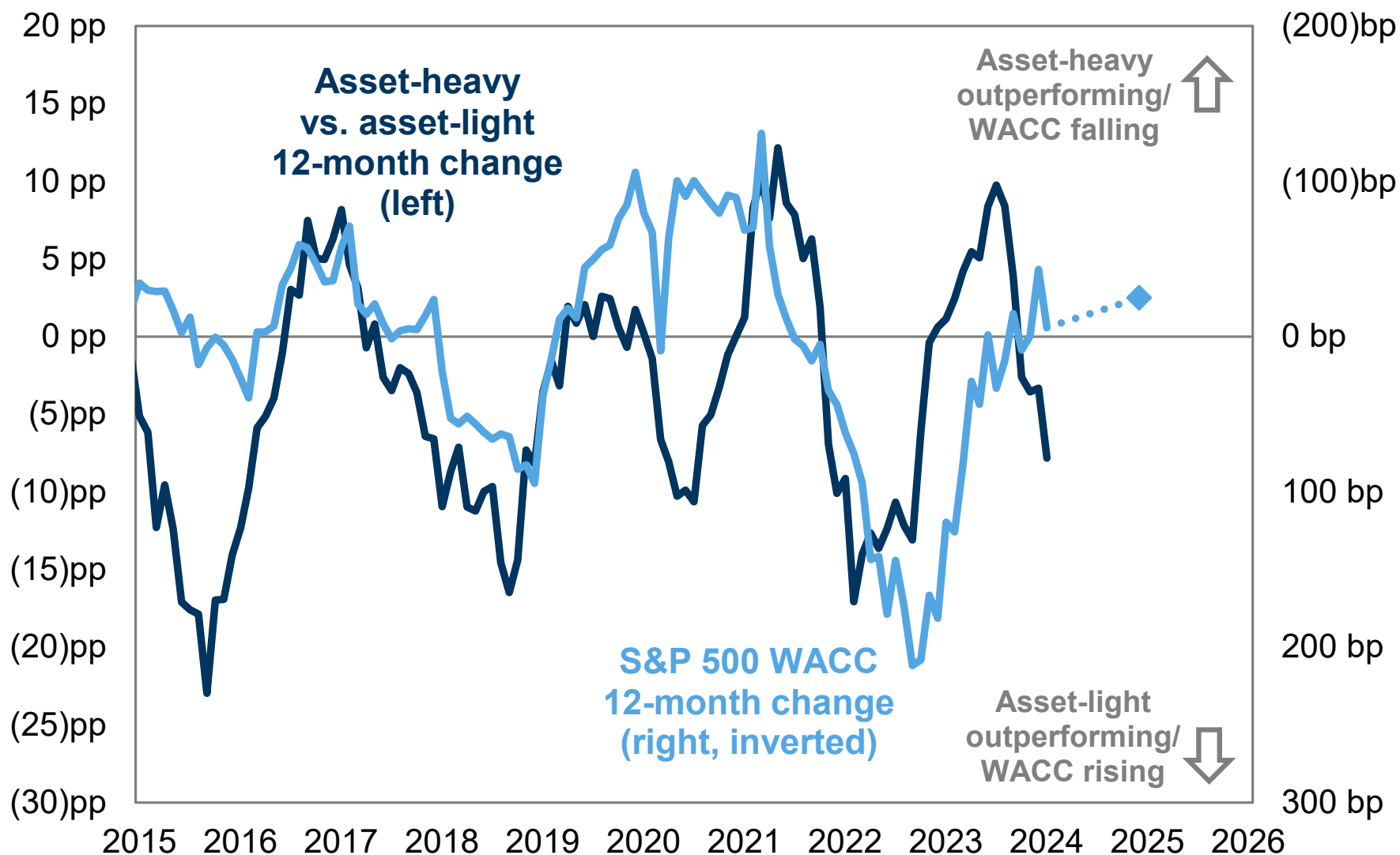
Long-term trajectory of S&P 500 weighted average cost of capital (WACC)



WACC based on implied cost of equity using GS multi-stage DDM and cost of debt based on Bloomberg IG index.

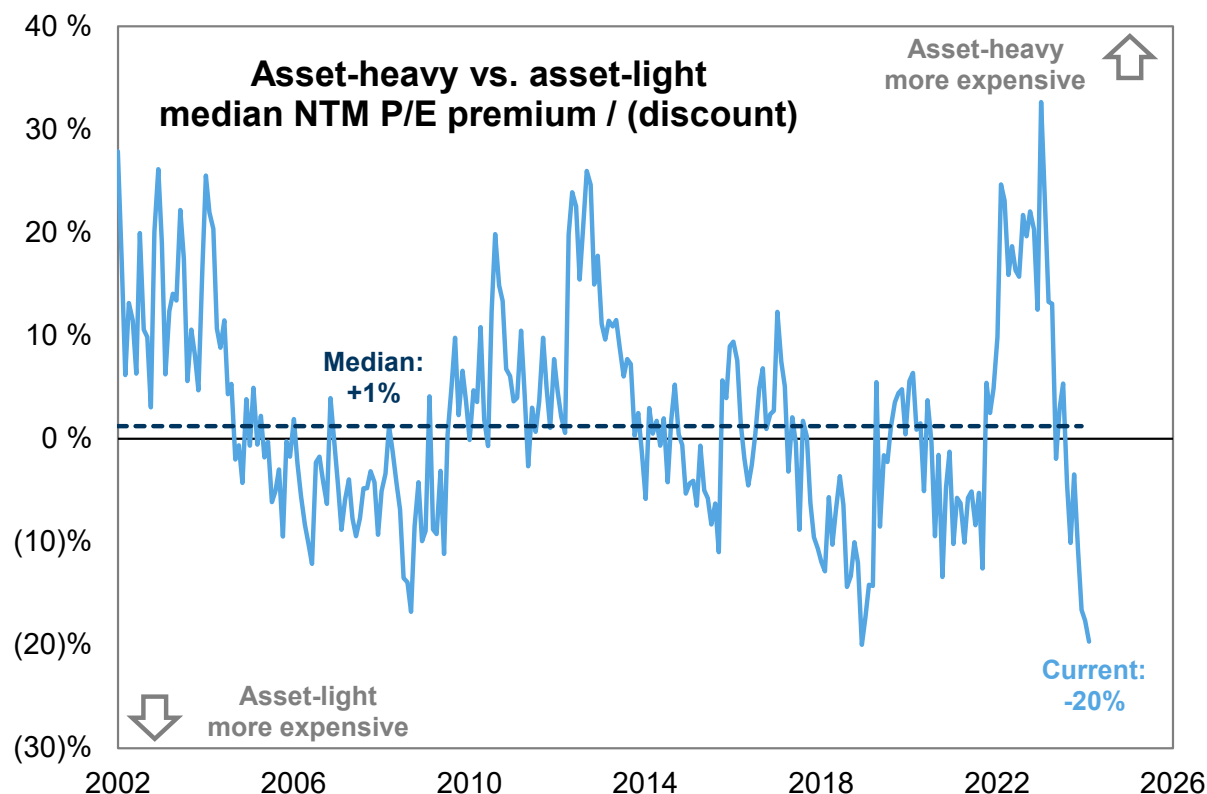
Asset-heavy outperforms asset-light when WACC falls

Changes in WACC and capex growth explain 40% of relative return of our baskets



Median asset heavy stock trades at valuation discount

High Asset Intensive Ratio (GSTHHAIR) trailing Low Asset Intensive (GSTHLAIR)



Asset Intensity Ratio baskets	YTD total return	Market cap	Consensus 2024E growth (%)		NTM ROE	Asset intensity ratio	NTM P/E
			Sales	EPS			
High (GSTHHAIR)	2 %	\$41	4 %	8 %	19 %	1.5	19x
Low (GSTHLAIR)	7	39	5	7	25	0.3	24
S&P 500	3	33	4	7	17	0.8	18

High asset intensive ratio basket (GSTHHAIR)

Median high asset intensive ratio = [(assets – cash – intangibles) / revenues] = 1.5

Ticker	Name	Subsector	YTD tot return (%)	Market cap (\$ billion)	Consensus 2024E growth (%)		NTM ROE (%)	Asset intensity ratio	NTM P/E (x)			YTD tot return (%)	Market cap (\$ billion)	Consensus 2024E growth (%)		NTM ROE (%)	Asset intensity ratio	NTM P/E (x)								
					Sales	EPS								Sales	EPS											
Communication Services												Industrials														
T	AT&T Inc.	Integrated Telecommunication Services	2	120	1	(8)	14	1.6	8		DAY	Dayforce Inc.	Human Resource & Employment Services	7	11	14	10	11	4.0	42						
VZ	Verizon Communications	Integrated Telecommunication Services	8	168	1	(3)	19	1.4	9		NSC	Norfolk Southern	Rail Transportation	7	57	3	2	19	3.2	21						
NFLX	Netflix Inc.	Movies & Entertainment	24	263	14	43	32	1.2	34		CSX	CSX Corp.	Rail Transportation	9	75	3	7	33	2.7	19						
TMUS	T-Mobile US Inc.	Wireless Telecommunication Services	3	190	3	30	18	1.2	17		UNP	Union Pacific Corp.	Rail Transportation	3	154	3	6	41	2.7	22						
PARA	Paramount Global	Broadcasting	(24)	7	4	115	3	1.2	11		ADP	Automatic Data Processing	Human Resource & Employment Services	8	103	6	10	64	2.6	26						
Consumer Discretionary												Information Technology														
RCL	Royal Caribbean Group	Hotels Resorts & Cruise Lines	(5)	32	15	48	35	2.3	12		MU	Micron Technology	Semiconductors	8	101	46	NM	7	3.3	32						
CCL.U	Carnival Corp.	Hotels Resorts & Cruise Lines	(14)	18	14	NM	17	2.1	15		INTC	Intel Corp.	Semiconductors	(15)	180	6	30	6	2.4	28						
NCLH	Norwegian Cruise Line Hldgs	Hotels Resorts & Cruise Lines	(5)	8	9	112	59	2.1	15		FSLR	First Solar Inc.	Semiconductors	(16)	15	31	73	18	2.2	10						
MGM	MGM Resorts Intl	Casinos & Gaming	(6)	14	3	(11)	20	2.0	17		GLW	Corning Inc.	Electronic Components	7	28	0	10	14	1.9	17						
MCD	McDonald's Corp.	Restaurants	(1)	213	5	4	NM	1.8	23		AKAM	Akamai Technologies	Internet Services & Infrastructure	(9)	16	7	8	20	1.3	16						
LVS	Las Vegas Sands	Casinos & Gaming	9	40	16	45	32	1.5	19		PANW	Palo Alto Networks	Systems Software	7	98	16	3	31	1.2	54						
Consumer Staples												HPE														
STZ	Constellation Brands	Distillers & Vintners	3	45	7	10	23	1.4	18		WDC	Western Digital	Technology Hardware Storage & Peripherals	(12)	19	1	(1)	11	1.2	7						
BF.B	Brown-Forman Corp.	Distillers & Vintners	1	18	4	5	26	1.2	27		NOW	ServiceNow Inc.	Systems Software	9	157	21	23	25	1.0	56						
KO	Coca-Cola Co.	Soft Drinks & Non-alcoholic Beverages	2	261	0	4	46	1.1	21		ORCL	Oracle Corp.	Systems Software	6	305	8	8	86	1.0	18						
PM	Philip Morris Intl	Tobacco	(4)	140	6	6	NM	1.0	14		ON	ON Semiconductor	Semiconductors	(8)	33	(9)	(17)	20	1.0	18						
Energy												TXN														
WMB	Williams Companies	Oil & Gas Storage & Transportation	1	43	2	(16)	19	3.8	19		MSFT	Microsoft Corp.	Systems Software	9	3,028	15	10	29	1.0	32						
FANG	Diamondback Energy	Oil & Gas Exploration & Production	15	32	4	(4)	16	3.3	10		SWKS	Skyworks Solutions	Semiconductors	(7)	17	(7)	(10)	19	0.9	14						
Health Care												TEL														
BIO	Bio-Rad Laboratories	Life Sciences Tools & Services	2	8	1	(10)	3	3.7	30		STX	Seagate Tech Holdings	Technology Hardware Storage & Peripherals	6	19	(12)	NM	NM	0.8	27						
MRNA	Moderna Inc.	Biotechnology	(3)	37	(38)	NM	(26)	1.8	NM		TER	Teradyne Inc.	Semiconductor Materials & Equipment	(7)	15	1	(0)	21	0.8	32						
COO	Cooper Companies	Health Care Supplies	(1)	19	7	8	9	1.7	26		KEYS	Keysight Technologies	Electronic Equipment & Instruments	(4)	27	(9)	(22)	22	0.8	23						
CTLT	Catalent Inc.	Pharmaceuticals	30	10	2	NM	5	1.6	50		Materials															
REGN	Regeneron Pharmaceuticals	Biotechnology	13	106	6	3	16	1.6	22		NEM	Newmont Corp.	Gold	(28)	34	36	23	7	3.1	15						
PFE	Pfizer Inc.	Pharmaceuticals	(5)	152	3	20	16	1.3	11		APD	Air Products & Chemicals	Industrial Gases	(15)	51	0	9	17	2.3	18						
LLY	Eli Lilly & Co.	Pharmaceuticals	31	726	21	98	63	1.3	57																	
ALGN	Align Technology	Health Care Supplies	14	24	5	8	18	1.2	33		Asset-heavy median									2	41	4	8	19	1.5	19
											S&P 500 median									3	33	4	7	17	0.8	18

Low asset intensive ratio basket (GSTHLAIR)

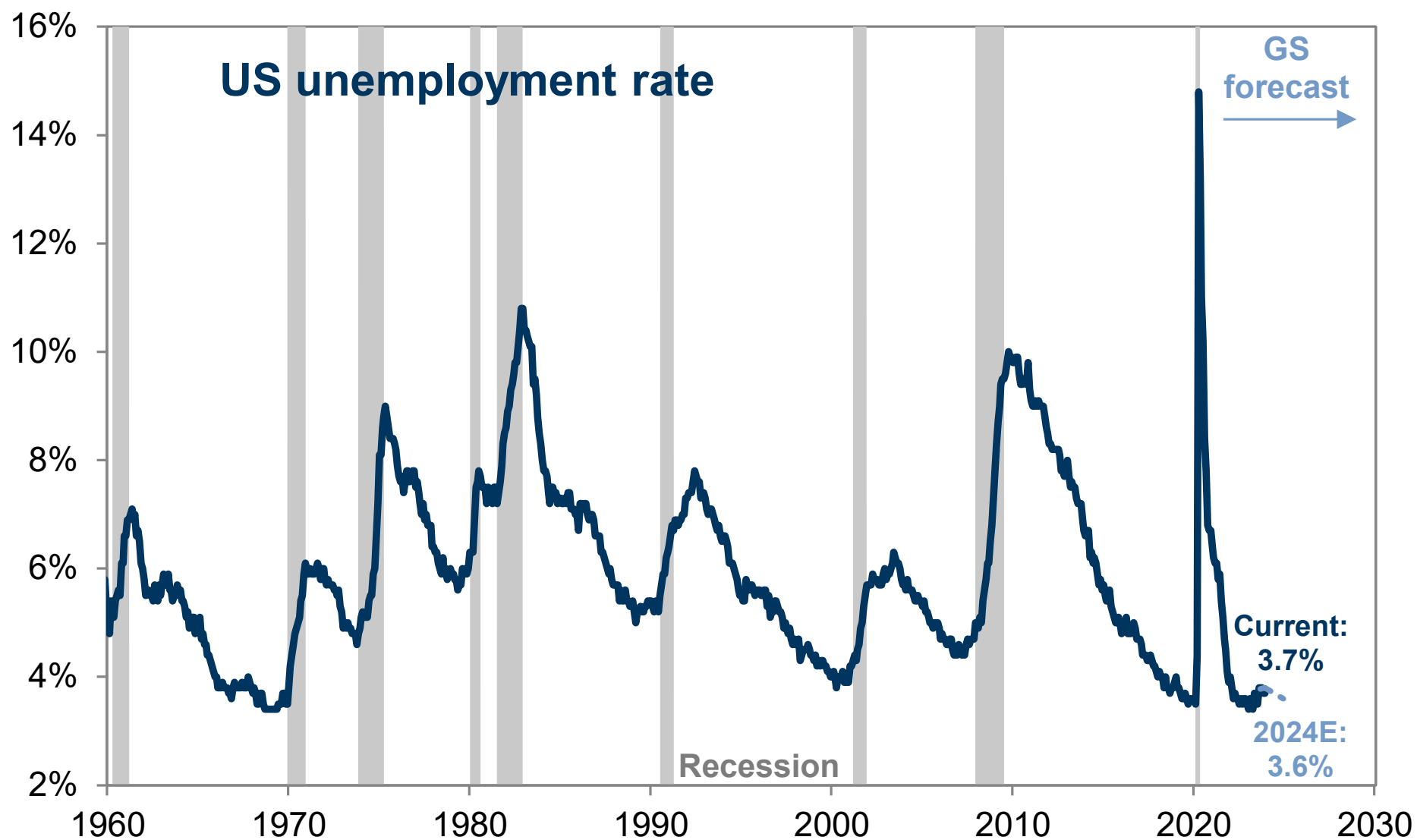
Median low asset intensive ratio = $[(\text{assets} - \text{cash} - \text{intangibles}) / \text{revenues}] = 0.3$

			YTD tot return	Market cap	Consensus 2024E growth (%)		NTM ROE	Asset intensity	NTM P/E				YTD tot return	Market cap	Consensus 2024E growth (%)		NTM ROE	Asset intensity	NTM P/E
Ticker	Name	Subsector	(%)	(\$ billion)	Sales	EPS	(%)	ratio	(x)	Ticker	Name	Subsector	(%)	(\$ billion)	Sales	EPS	(%)	ratio	(x)
Communication Services										Industrials									
MTCH	Match Group Inc.	Interactive Media & Services	2	10	7	(4)	239	0.3	17	CHRW	C.H. Robinson Worldwide	Air Freight & Logistics	(14)	9	0	(0)	29	0.2	22
LYV	Live Nation Entertainment	Movies & Entertainment	(0)	21	7	44	48	0.4	48	RHI	Robert Half Inc.	Human Resource & Employment Services	(7)	9	(3)	(13)	23	0.2	23
TTWO	Take-Two Interactive Software	Interactive Home Entertainment	(8)	25	33	15	11	0.4	26	ROL	Rollins Inc.	Environmental & Facilities Services	(2)	21	9	11	35	0.3	42
EA	Electronic Arts	Interactive Home Entertainment	2	38	3	1	25	0.6	18	J	Jacobs Solutions	Research & Consulting Services	14	19	7	1	15	0.3	17
NWSA	News Corp.	Publishing	8	13	2	17	5	0.8	33	EXPD	Expeditors Intl	Air Freight & Logistics	(7)	17	(3)	(6)	28	0.3	25
Consumer Discretionary										Information Technology									
DPZ	Domino's Pizza Inc.	Restaurants	8	16	7	7	NM	0.3	28	AVGO	Broadcom Inc.	Semiconductors	16	605	39	19	73	0.3	26
MAR	Marriott Intl	Hotels Resorts & Cruise Lines	11	73	7	(6)	NM	0.3	26	CDW	CDW Corp.	Technology Distributors	8	33	3	6	51	0.3	23
BBY	Best Buy Inc.	Computer & Electronics Retail	1	17	(2)	1	43	0.3	13	EPAM	EPAM Systems Inc.	IT Consulting & Other Services	3	18	3	(3)	15	0.3	29
ETSY	Etsy Inc.	Broadline Retail	(11)	9	4	17	NM	0.3	27	INTU	Intuit Inc.	Application Software	7	188	12	9	24	0.4	37
BKNG	Booking Holdings	Hotels Resorts & Cruise Lines	(2)	121	8	14	NM	0.3	19	ROP	Roper Technologies	Application Software	0	58	11	9	10	0.4	30
HLT	Hilton Worldwide Hldgs	Hotels Resorts & Cruise Lines	12	52	10	14	NM	0.3	28	ADBE	Adobe Inc.	Application Software	(7)	252	11	12	40	0.4	30
Consumer Staples																			
SYY	Sysco Corp.	Food Distributors	12	41	4	8	76	0.2	18	ACN	Accenture Plc	IT Consulting & Other Services	8	237	3	5	27	0.4	30
COST	Costco Wholesale	Consumer Staples Merchandise Retail	13	330	5	9	26	0.2	45	FICO	Fair Isaac Corp.	Application Software	10	32	12	23	NM	0.4	50
KR	Kroger Co.	Food Retail	6	35	(1)	(5)	23	0.3	11	CTSH	Cognizant Tech Solutions	IT Consulting & Other Services	5	40	0	2	16	0.4	17
WMT	Walmart Inc.	Consumer Staples Merchandise Retail	13	481	4	6	21	0.3	25	HPQ	HP Inc.	Technology Hardware Storage & Peripherals	(4)	28	2	4	NM	0.4	8
Energy																			
VLO	Valero Energy Corp.	Oil & Gas Refining & Marketing	11	49	(10)	(38)	17	0.4	10	NVDA	NVIDIA Corp.	Semiconductors	59	1,944	77	88	71	0.5	31
MPC	Marathon Petroleum	Oil & Gas Refining & Marketing	16	65	(9)	(36)	25	0.5	11	VRSN	VeriSign Inc.	Internet Services & Infrastructure	(6)	20	5	9	NM	0.5	24
Health Care																			
MOH	Molina Healthcare	Managed Health Care	11	23	15	13	24	0.1	17	IT	Gartner Inc.	IT Consulting & Other Services	2	36	7	1	79	0.5	40
HUM	Humana Inc.	Managed Health Care	(21)	45	4	(37)	14	0.1	19	TYL	Tyler Technologies	Application Software	4	18	9	16	12	0.5	47
CAH	Cardinal Health	Health Care Distributors	9	27	11	10	NM	0.2	14	JBL	Jabil Inc.	Electronic Manufacturing Services	12	18	(11)	3	55	0.5	15
COR	Cencora Inc.	Health Care Distributors	15	48	11	9	131	0.2	17	APH	Amphenol Corp.	Electronic Components	9	65	7	9	21	0.5	32
MCK	McKesson Corp.	Health Care Distributors	12	69	8	2	NM	0.2	17	ADSK	Autodesk Inc.	Application Software	6	55	9	8	94	0.6	31
ELV	Elevance Health	Managed Health Care	8	119	1	12	20	0.2	13	NTAP	NetApp Inc.	Technology Hardware Storage & Peripherals	(1)	18	4	7	134	0.6	14
CNC	Centene Corp.	Managed Health Care	8	43	(5)	2	13	0.3	12	Materials									
CVS	CVS Health Corp.	Health Care Services	(3)	98	3	(5)	13	0.3	9	SHW	Sherwin-Williams	Specialty Chemicals	5	84	3	10	69	0.5	28
										NUE Nucor Corp. Steel 11 47 (5) (26) 14 0.6 14									
										Asset-light median 7 39 5 7 25 0.3 24									
										S&P 500 median 3 33 4 7 17 0.8 18									

1. Economy: US recession is not imminent

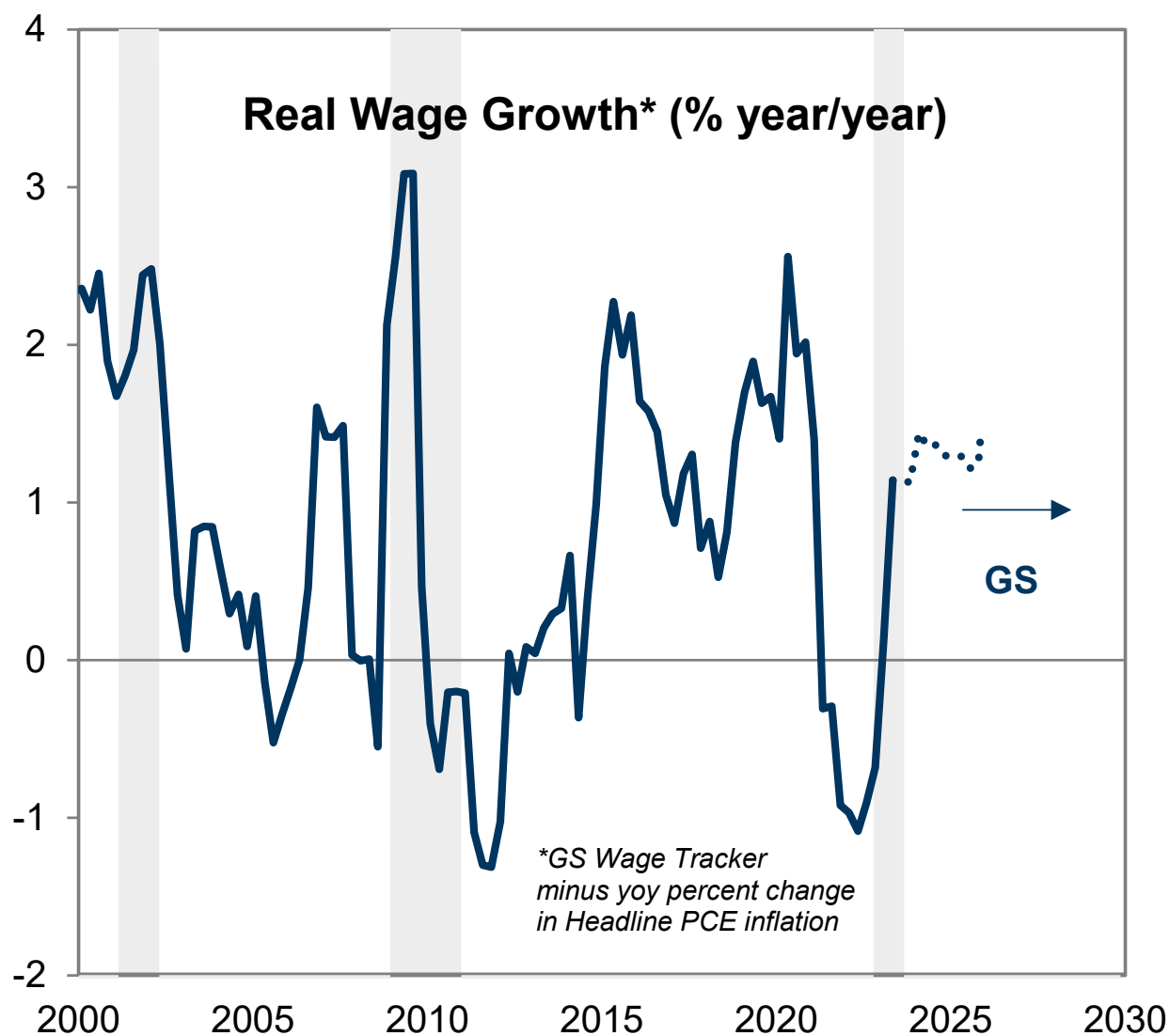
US unemployment rate currently registers 3.7%

GS Economics expects the unemployment rate to remain below 4% into 2025



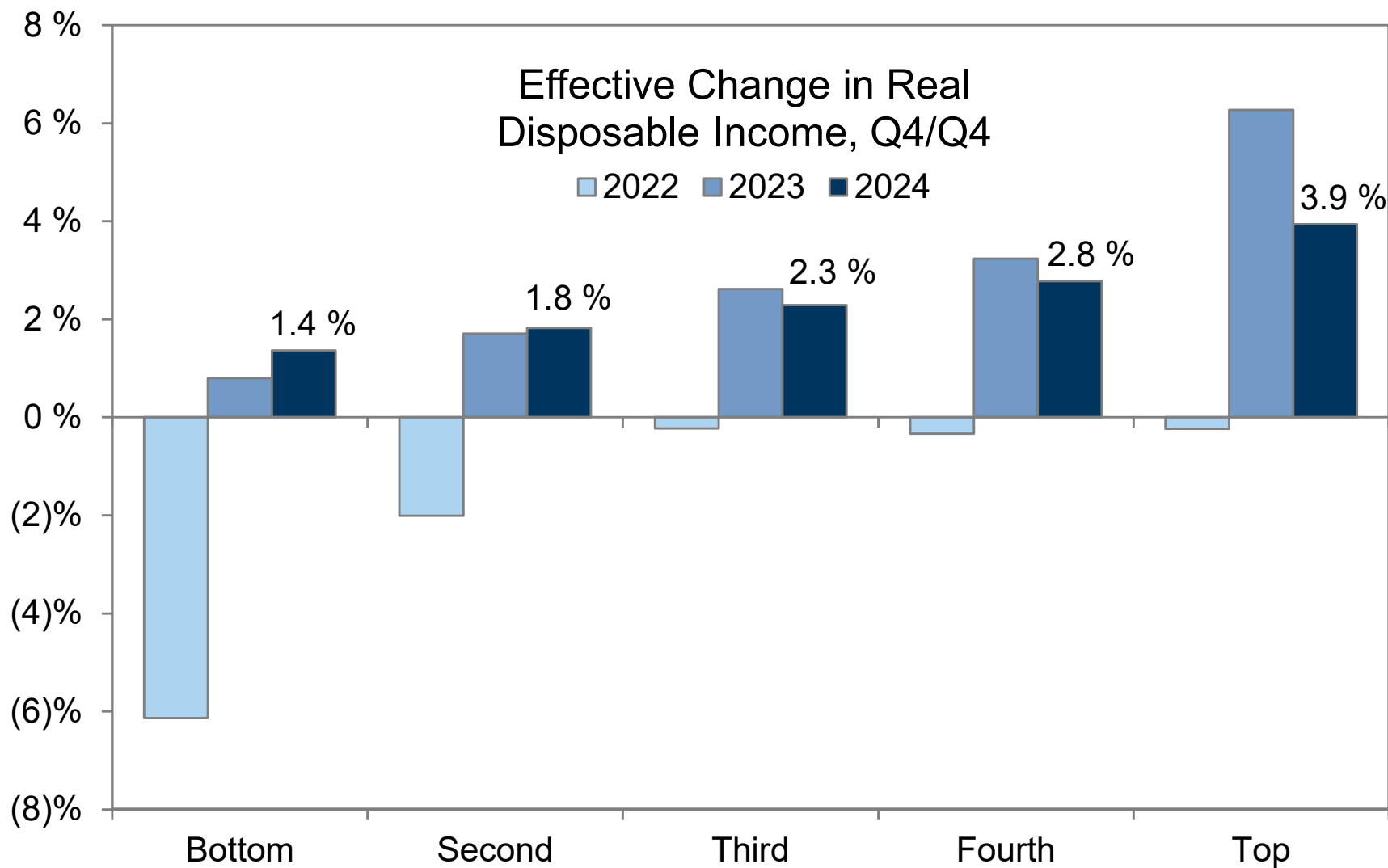
Real wage growth will stay elevated

2024 nominal wage growth will equal 3.75%; real wage growth will exceed 1%



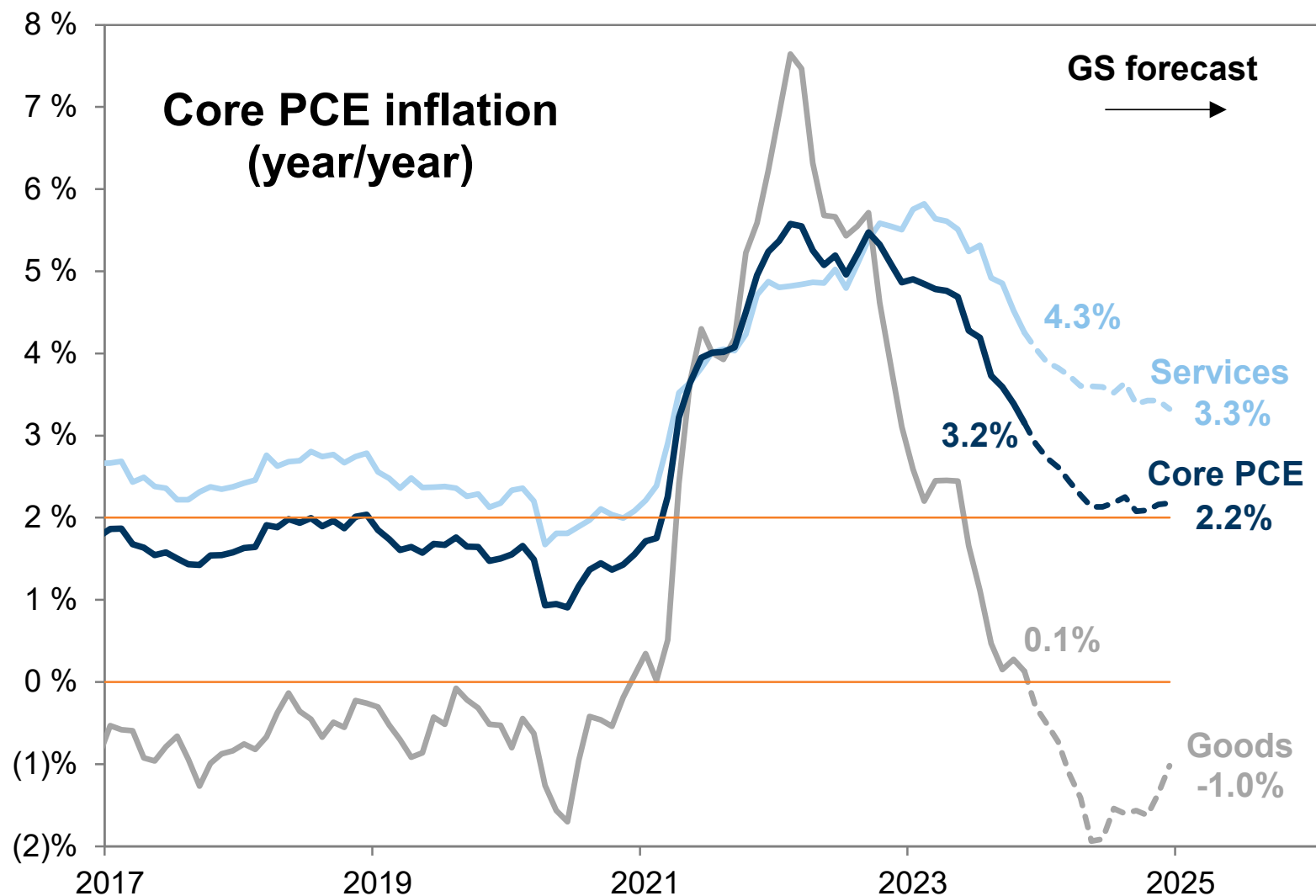
Real disposable income growth by quintile, 2022-24E

2024 growth: weaker for lower-income and stronger for high-income households



Core PCE will fall; Services inflation will stay elevated

GS expects core PCE will decelerate to 2.2% by the end of 2024



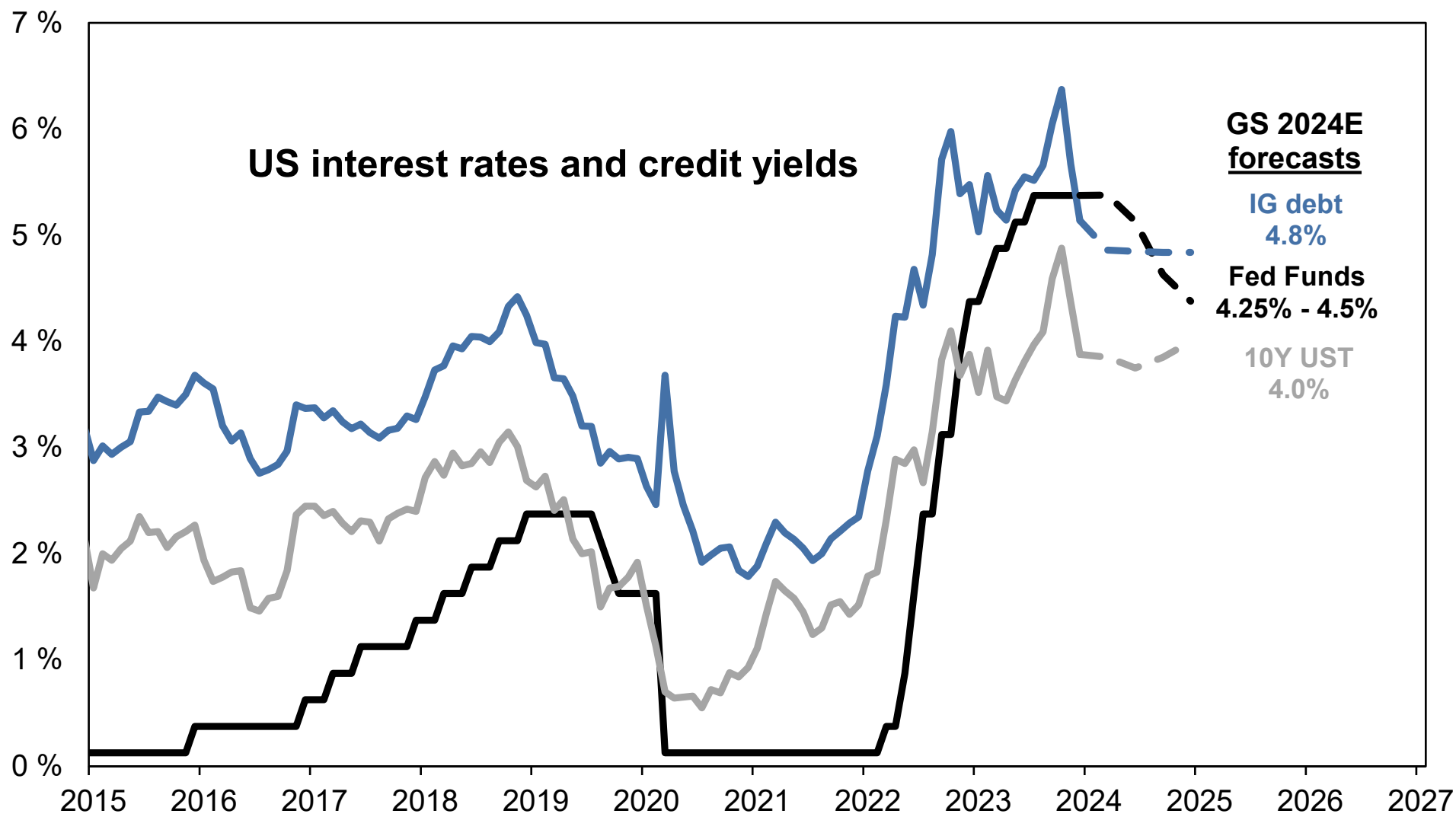
Core PCE inflation will slow to 2.2% by year-end 2024

GS forecasts disinflation in Services (74% weight) and deflation in Goods (26%)

GS Economics Core PCE Forecast (Year/Year)				
	Weight	Dec. 2021	Dec. 2023	Dec. 2024
Core PCE	100.0	4.9	2.9	2.2
Core Services	74.0	4.2	4.1	3.3
Housing	17.5	3.7	6.3	3.8
Medical Services	18.4	2.7	2.7	3.0
Financial Services & Insurance	8.0	3.5	2.9	3.3
Food Services & Accommodation	8.6	6.2	4.4	2.9
Foreign Travel	1.4	3.7	(3.4)	4.2
Ground Transportation	0.4	3.4	0.5	1.6
Air Transportation	1.2	24.0	0.6	(2.9)
Residual Core Services	18.6	5.1	4.4	3.8
Core Goods	26.0	6.8	(0.3)	(1.0)
Pharma & Medical	4.0	0.0	4.6	2.8
Pets Products	0.7	2.7	2.8	1.5
Recreational Vehicles	0.6	6.2	0.2	1.7
Jewelry, Watches	0.6	8.8	(0.2)	2.3
Expenditures Abroad	0.1	2.2	9.2	2.1
Clothing & Footwear	3.1	5.0	0.6	0.2
New Vehicles	2.3	11.9	0.3	(1.3)
Household Appliances	0.5	8.0	(10.9)	(2.5)
Used Vehicles	1.5	48.4	(3.2)	(7.0)
Video, Audio, Computers	2.5	(0.6)	(7.4)	(7.0)
Residual Core Goods	10.1	4.9	0.1	(0.8)

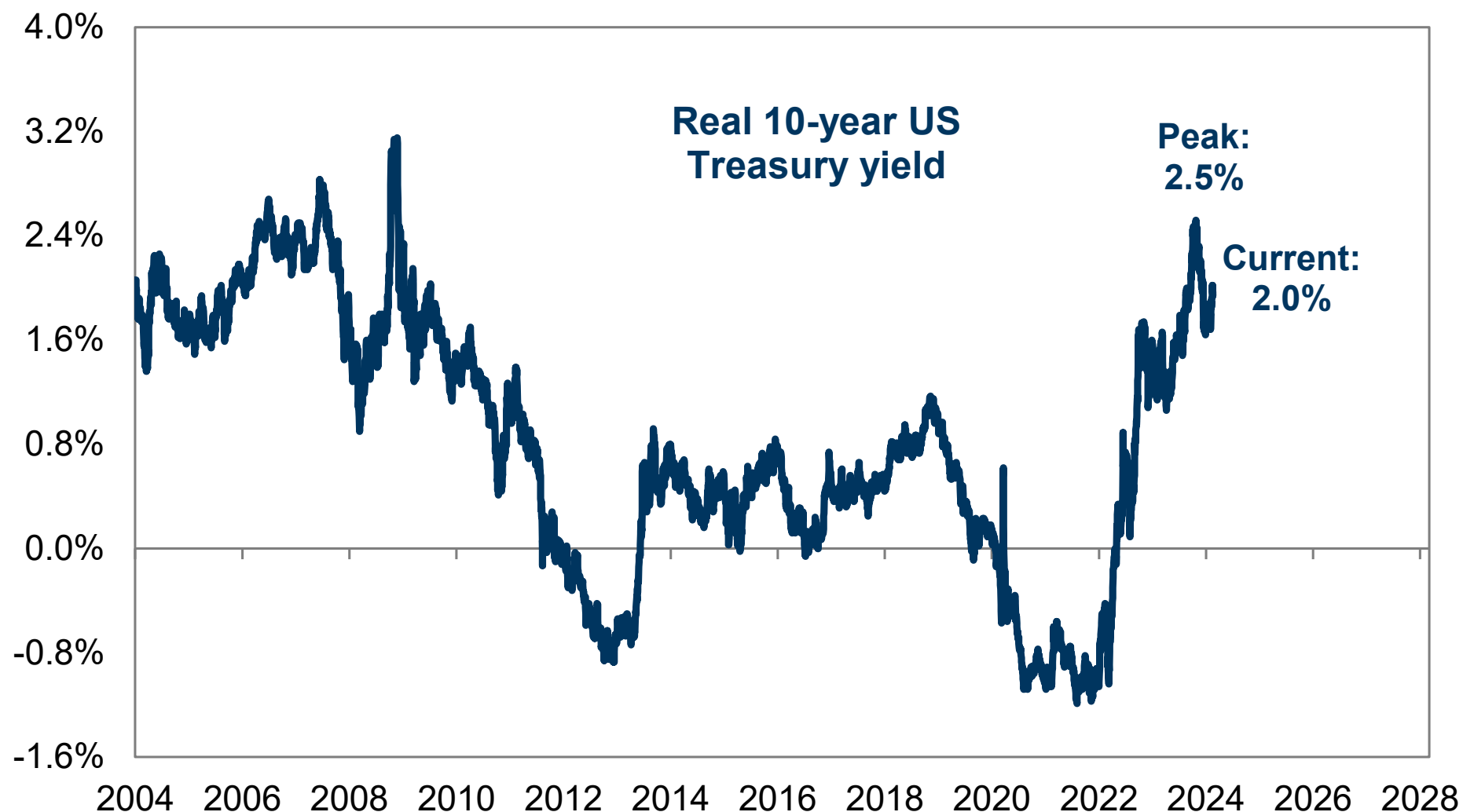
The funding environment

Futures market expects the Fed will cut interest rates 3 times in 2024



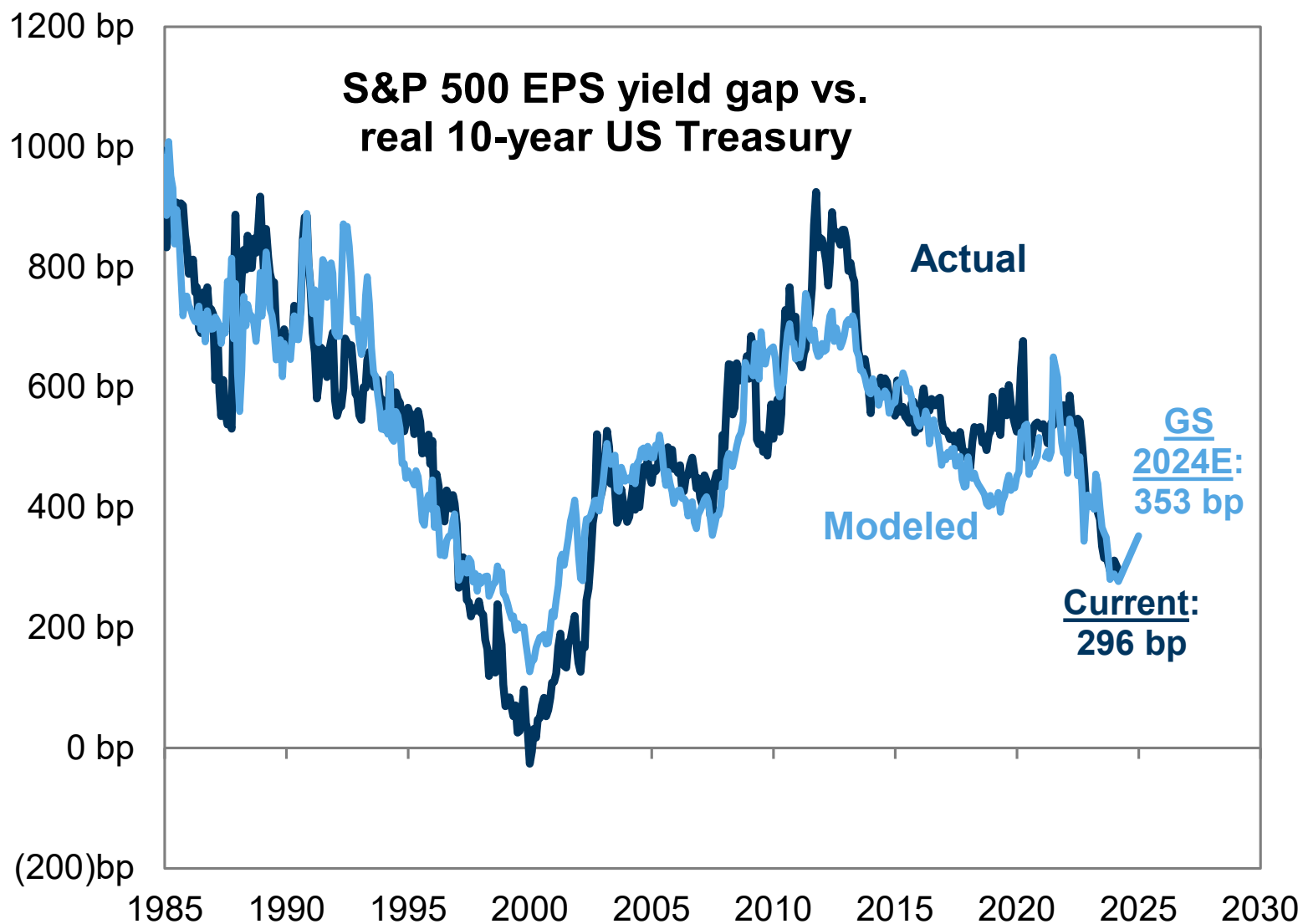
Real 10-year US Treasury yield

Real rates peaked at 2.5% in Oct, fell to 1.6% in Dec, and now equals 2.0%



A practitioner's view of the equity risk premium

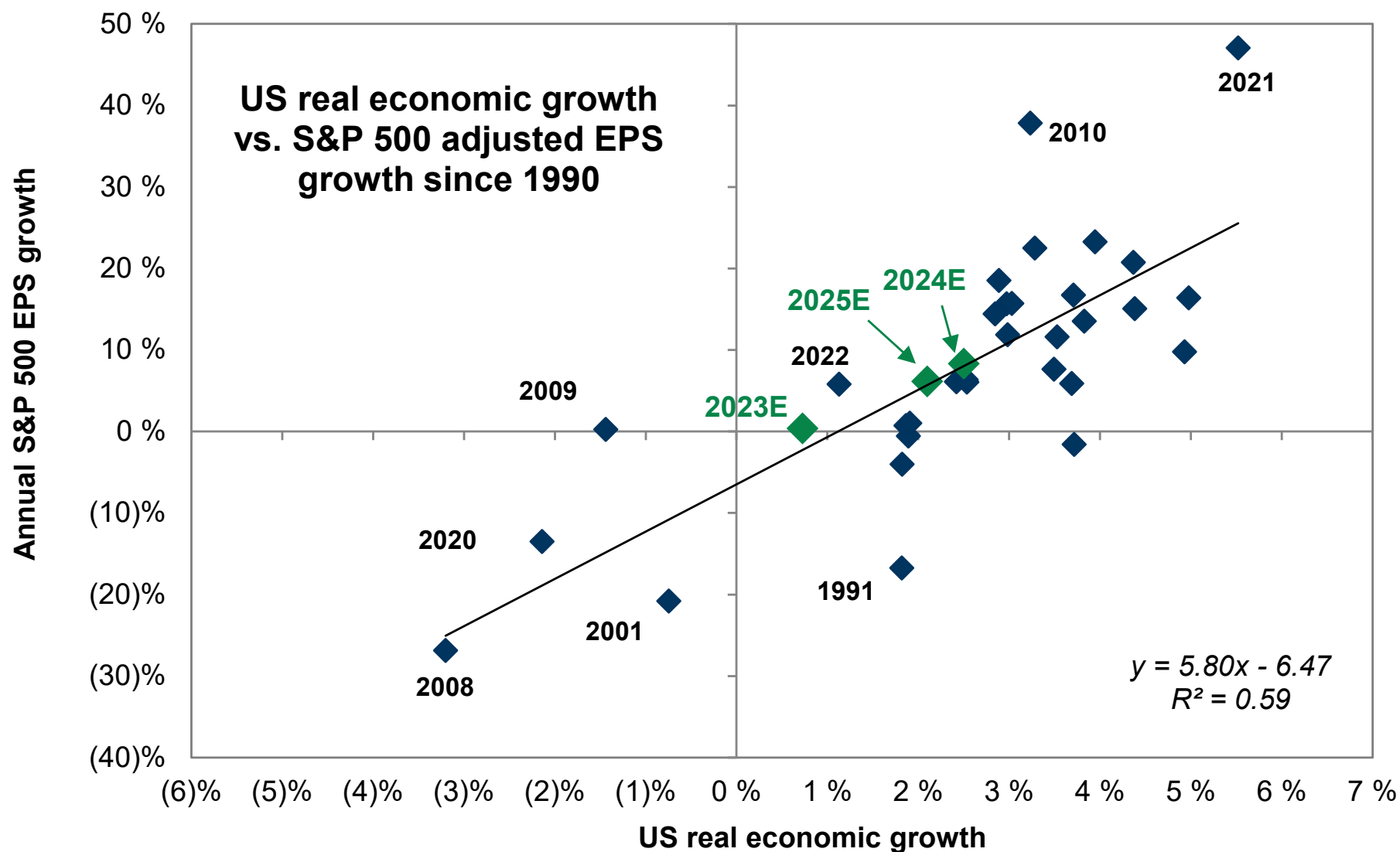
Yield gap between equities and rates has narrowed to tightest level since 2003



2. Earnings: +8% EPS growth in 2024

We forecast 2.9% GDP growth and 8% EPS growth

In our model, GDP growth explains more than 50% of variability in EPS growth



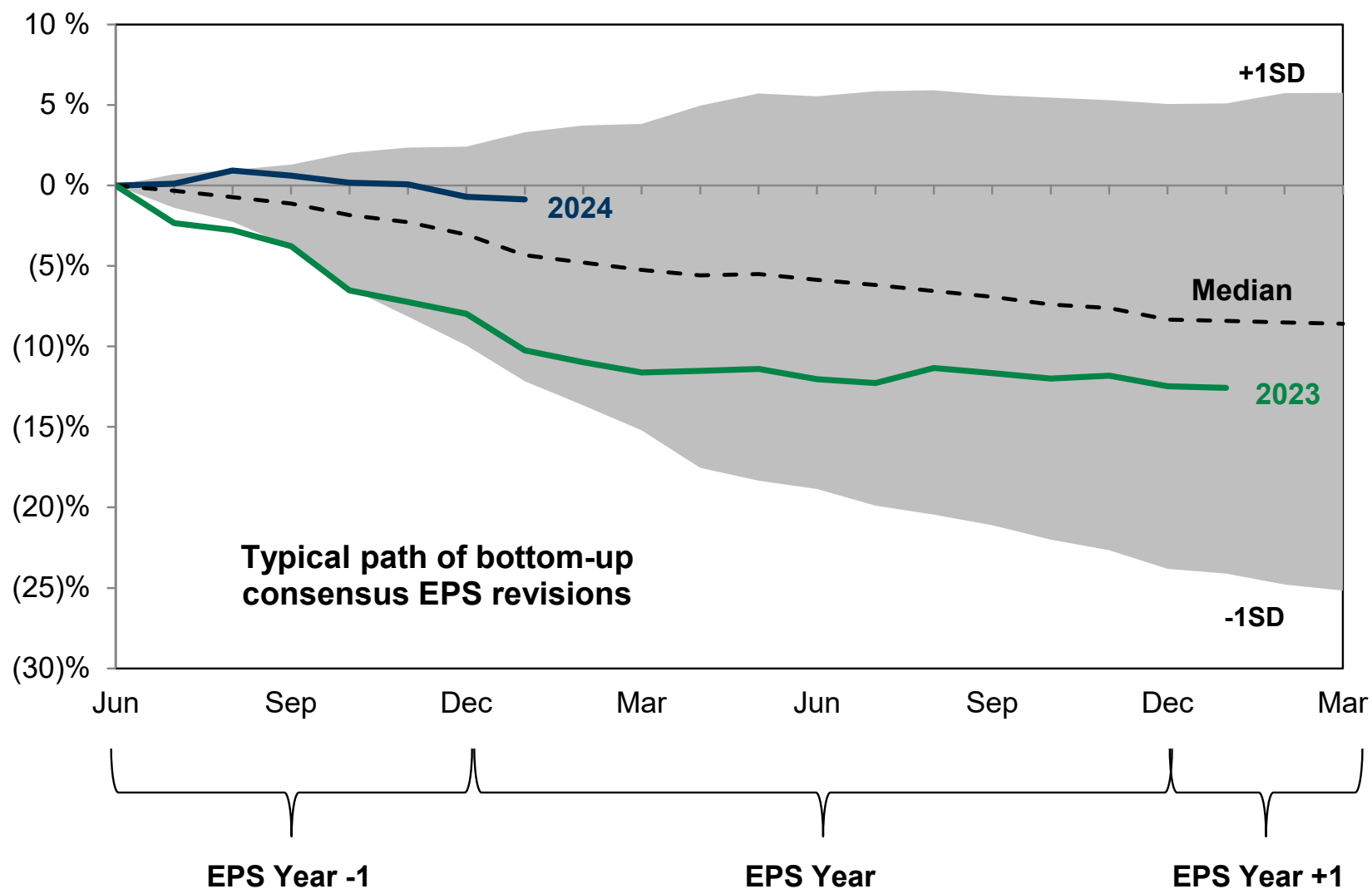
Sensitivity around Goldman Sachs EPS estimates

Upside potential from faster GDP growth, lower inflation, and weaker USD

Variable	2024E	Chg from baseline	Sensitivity	
			S&P 500 EPS impact	
			\$	%
US GDP growth	2.4 %	+100 bp	+\$8	3.4%
World GDP growth	2.8 %	+100 bp	+2.2	1.0
Core CPI inflation	2.9 %	+100 bp	+0	0.1
10-year UST yield	4.0 %	+100 bp	+0.6	0.3
Brent crude oil	\$81	+10 %	+1.8	0.8
Trade-weighted US dollar	(2)%	+10 pp	-5	-2.0
<hr/>				
GS EPS estimate	\$241			

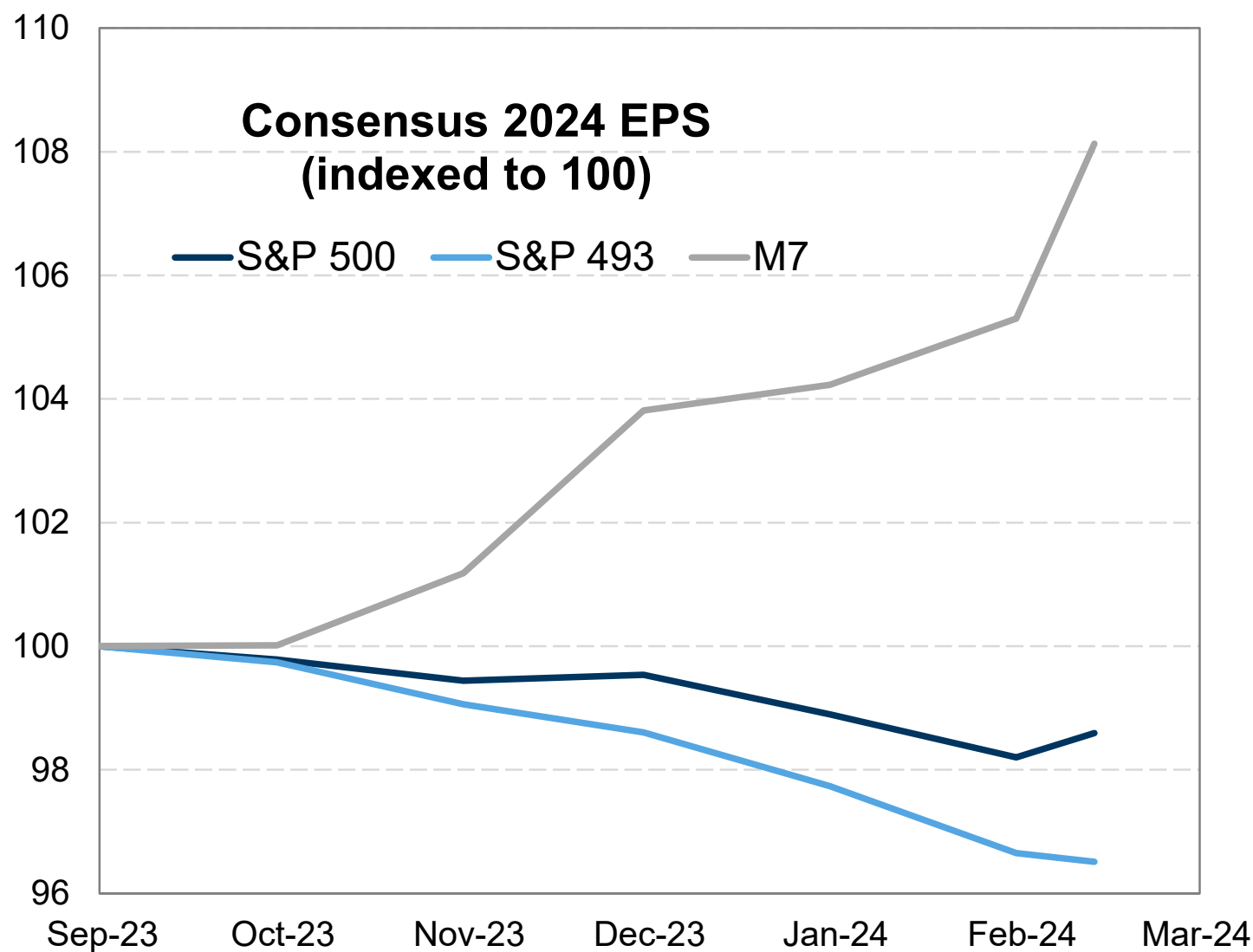
Typical path of S&P 500 consensus EPS revisions

2024 negative EPS revisions tracking better than 2023 and historical median



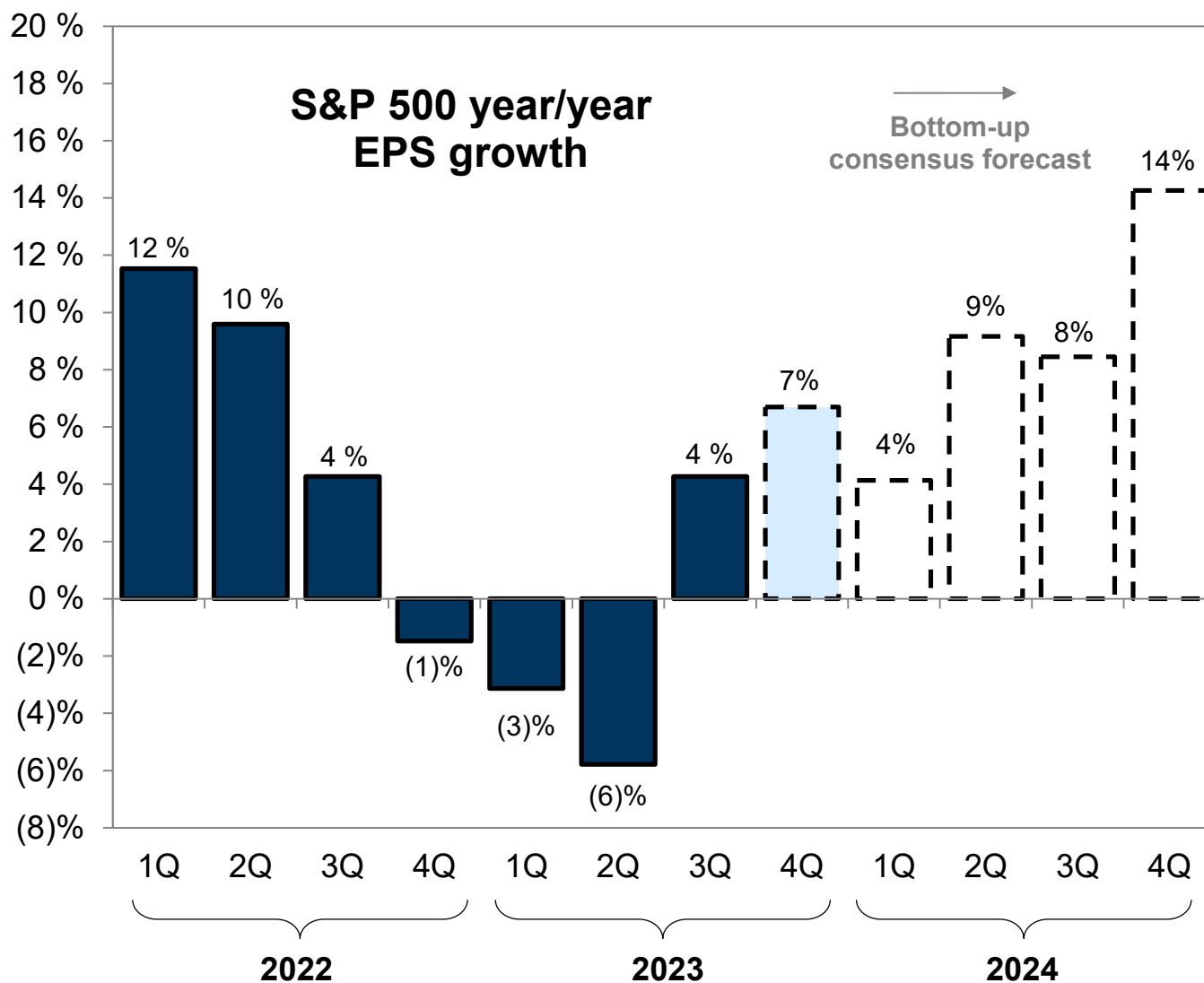
Positive EPS revisions for the Magnificent 7 stocks

Negative revisions for the S&P 493 and for the aggregate S&P 500 index



Quarterly path of S&P 500 EPS year/year growth

Quarterly positive EPS surprises averaged 4 pp in 2023



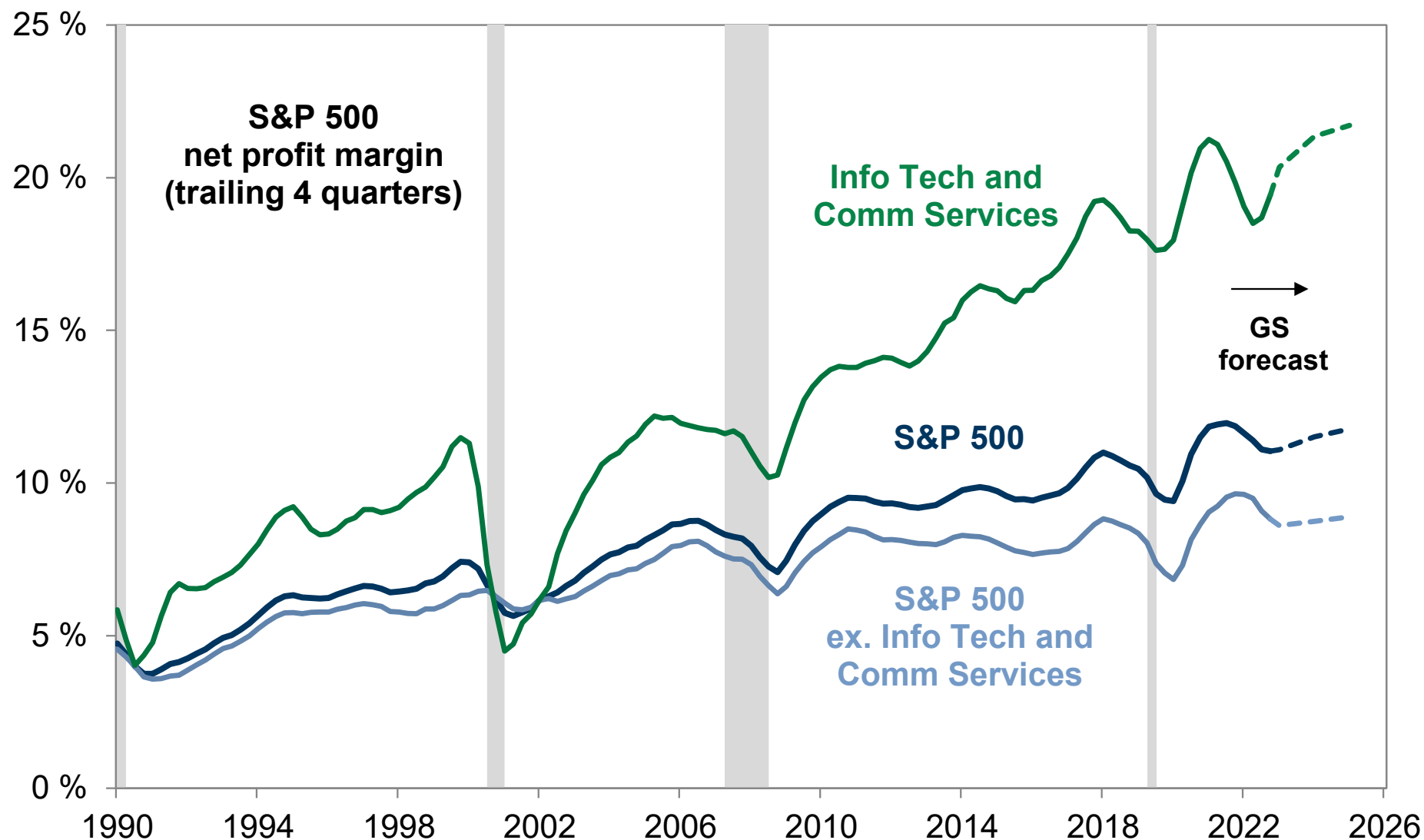
4Q 2023 results: aggregate EPS growth of 7%

S&P 500 sales rose 4% year/year and margins expanded by 27 bp to 11.1%

Sector	4Q 2023 realized and bottom-up consensus (y/y)				
	EPS	Sales	Margin		Median stock EPS growth
	Growth	Growth	Level	Change	
Utilities	49 %	NM	NM	NM	20 %
Comm Services	41	3	15.2	409	5
Consumer Discretionary	33	5	7.4	155	5
Info Tech	21	8	26.3	292	8
Industrials	10	5	10.1	40	9
Consumer Staples	9	8	6.4	6	7
Financials	5	NM	NM	NM	10
Real Estate	2	NM	NM	NM	3
Health Care	(17)	8	7.3	(214)	1
Materials	(21)	(7)	9.0	(156)	(5)
Energy	(25)	(10)	10.7	(216)	(10)
S&P 500	7 %				6 %
<i>ex. Financials and Utilities</i>	7	4 %	11.1 %	27 bp	5
<i>ex. Energy</i>	11				6
<i>ex. Energy, Fins, and Utils</i>	12	6	11.1	57	6

Path of S&P 500 margins: up and to the right

We forecast limited margin expansion in 2024 and 2025



S&P 500 sector EPS estimates

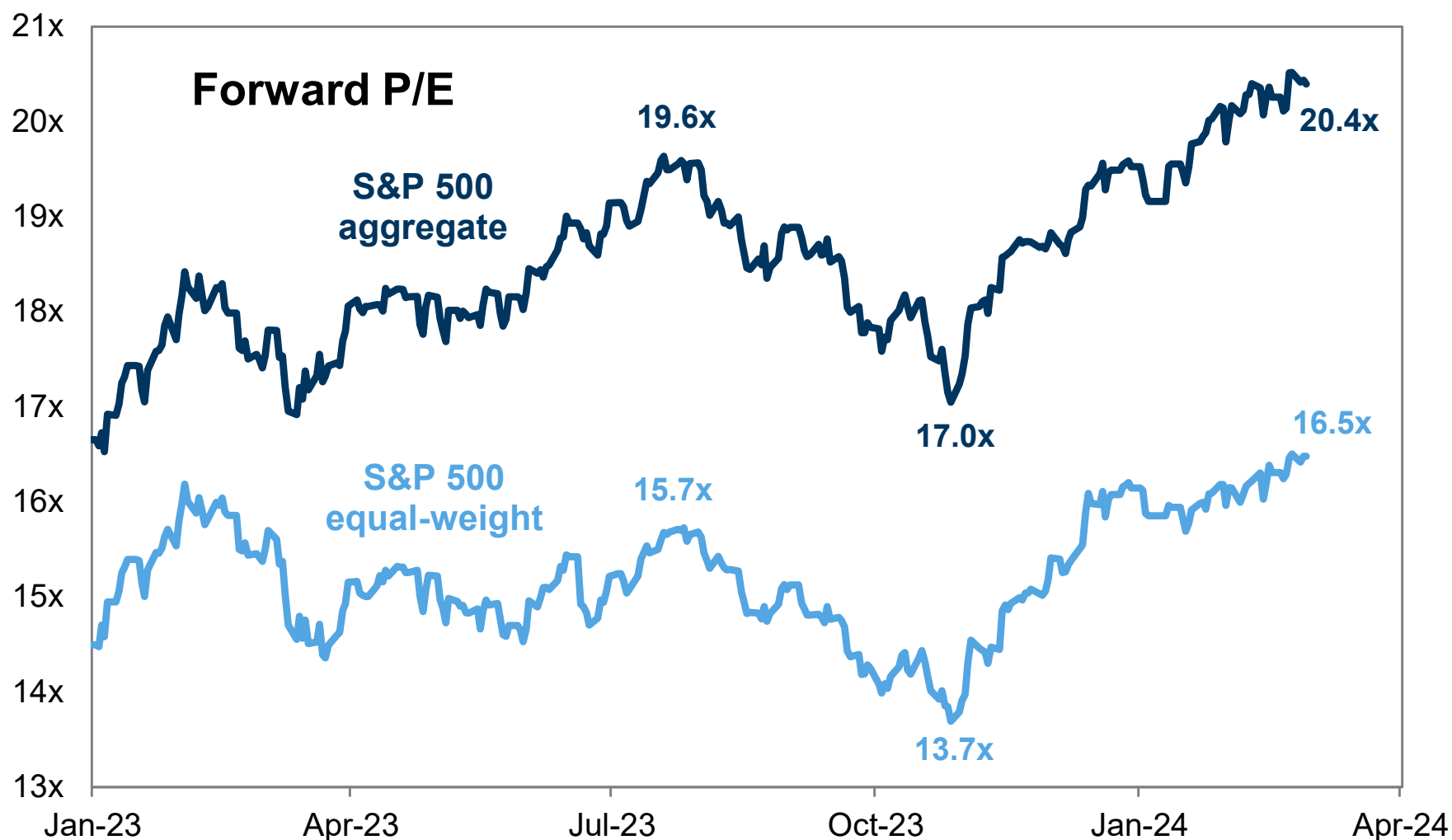
Goldman Sachs top-down vs. consensus bottom-up for 2023, 2024, and 2025

	2022A	GS Top-Down						Cons. Bottom-Up		
		Contribution			EPS growth			EPS growth		
		2023E	2024E	2025E	2023E	2024E	2025E	2023E	2024E	2025E
Information Technology	\$42	\$45	\$52	\$56	7 %	15 %	10 %	7 %	15 %	18 %
Comm Services	18	21	24	26	14	14	9	14	15	14
Consumer Discretionary	14	19	21	23	32	13	8	32	12	16
Health Care	37	29	32	35	(20)	10	7	(20)	13	12
Industrials	17	19	20	21	11	7	4	11	10	14
Utilities	6	6	7	7	8	6	4	8	10	7
Financials	37	40	42	44	9	5	5	9	5	11
Materials	7	6	6	6	(21)	5	2	(21)	(2)	14
Consumer Staples	13	14	15	16	7	4	4	7	6	9
Real Estate	6	6	6	7	3	4	4	3	5	7
Energy	24	17	16	16	(29)	(7)	(1)	(29)	(9)	13
S&P 500 EPS	\$222	\$223	\$241	\$256	0 %	8 %	6 %	0 %	9 %	13 %

3. Valuation: S&P 500 trades at P/E of ~20x

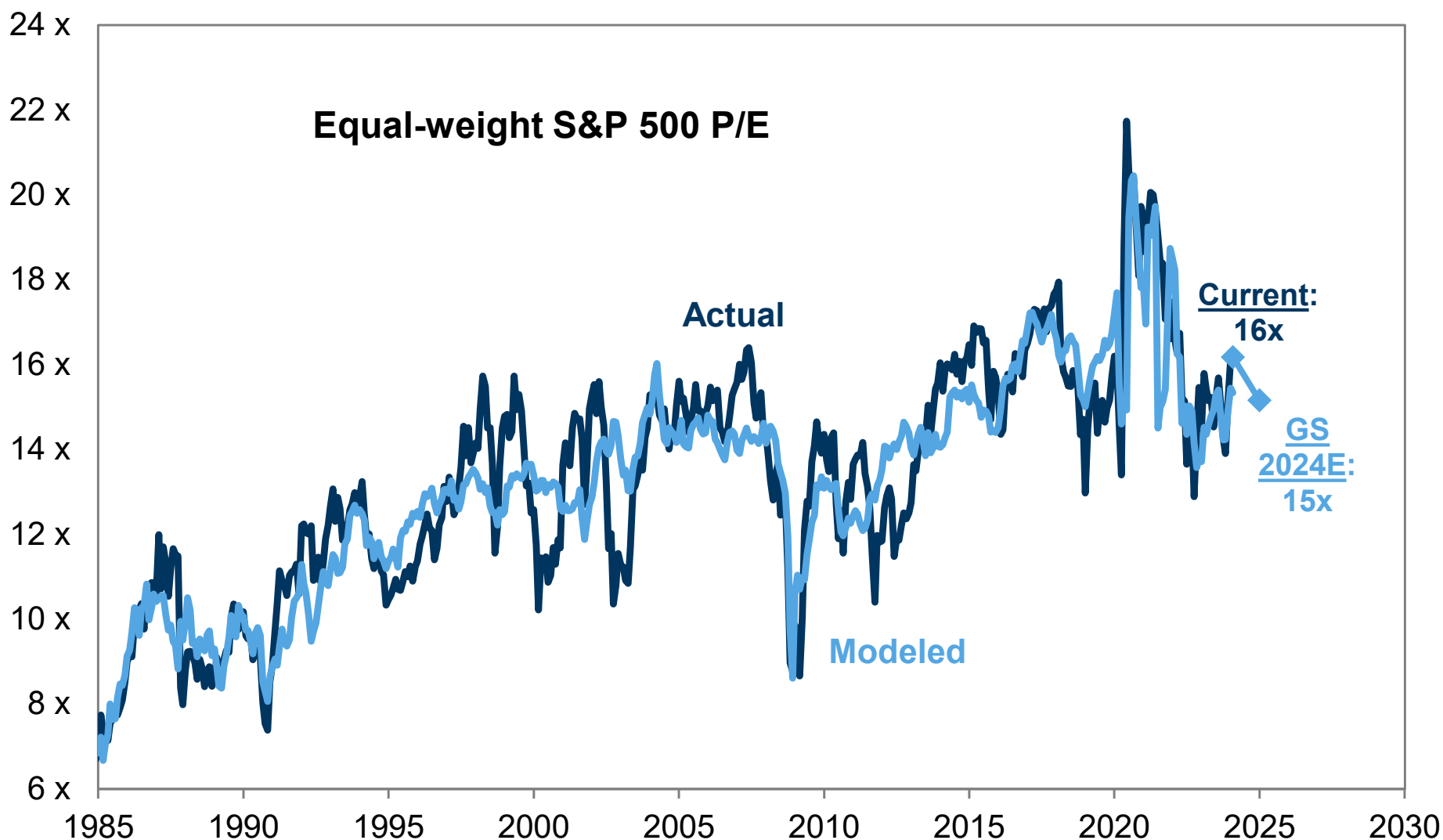
P/E expansion explains recent S&P 500 rally

Equity valuations have expanded alongside the decline in bond yields



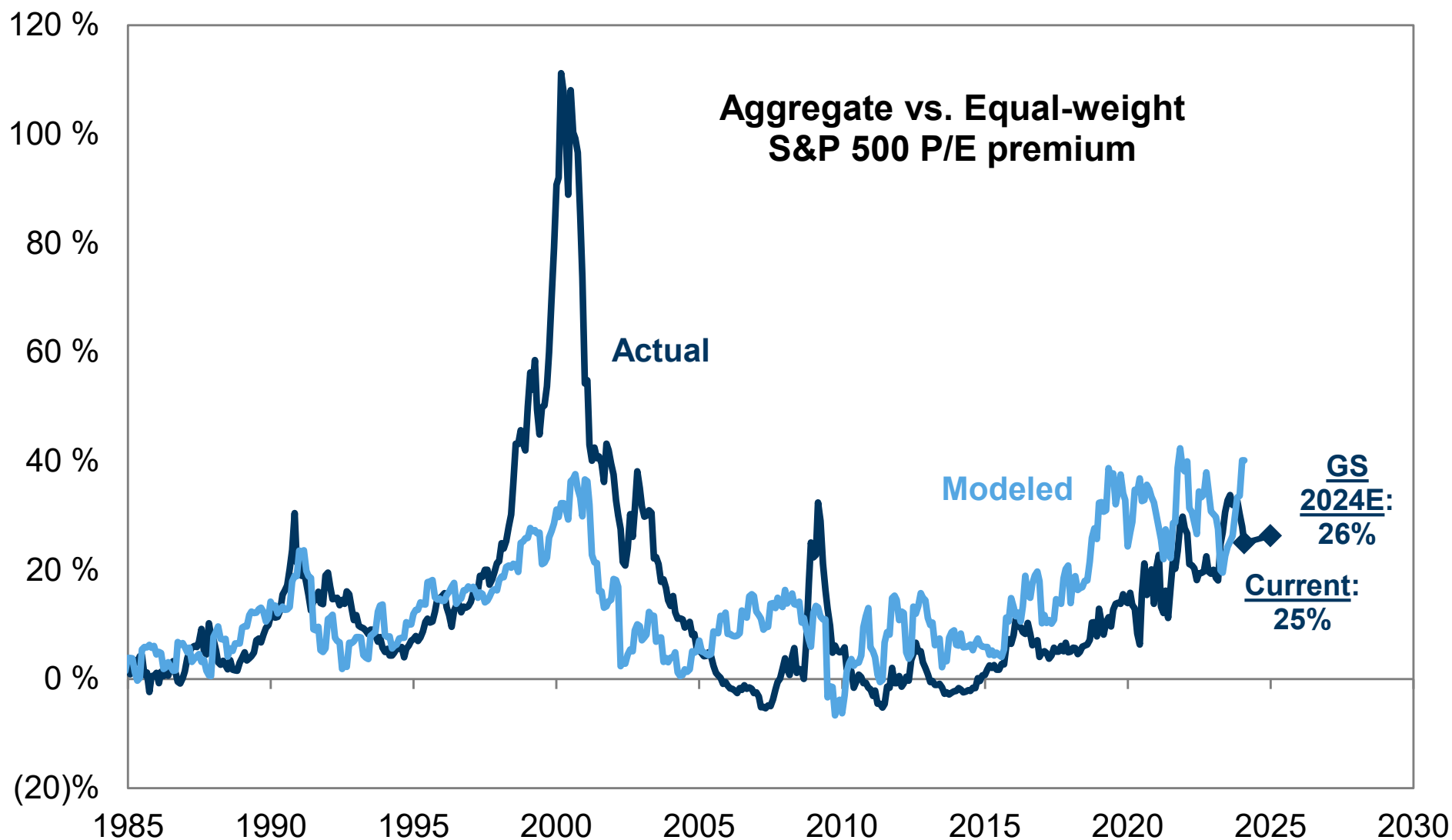
S&P 500 equal-weight P/E trades at roughly fair value

GS macro model of equal-weight S&P 500 P/E implies slight contraction



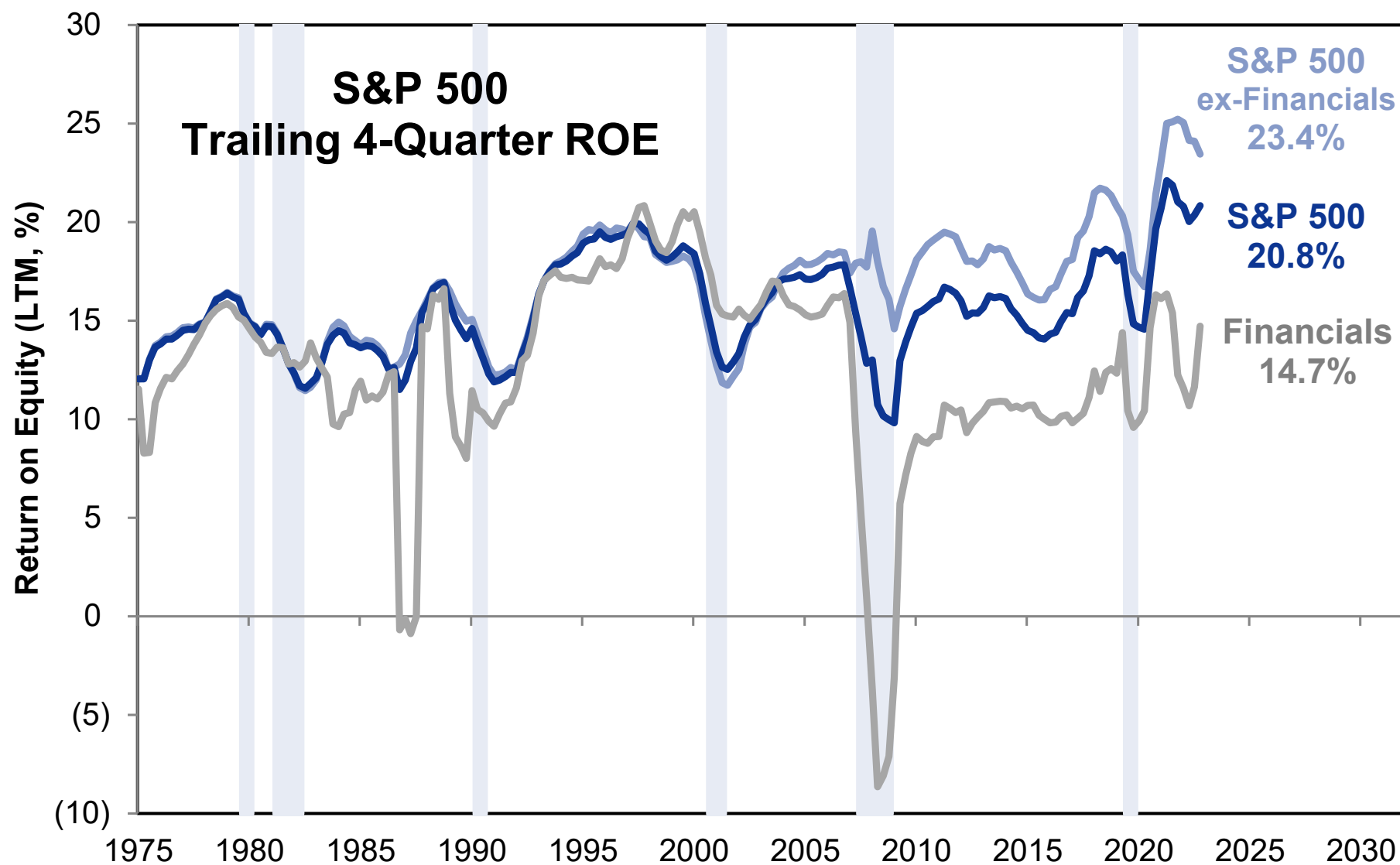
S&P 500 aggregate vs. equal-weight P/E premium

GS macro model suggests P/E premium can be supported through 2024



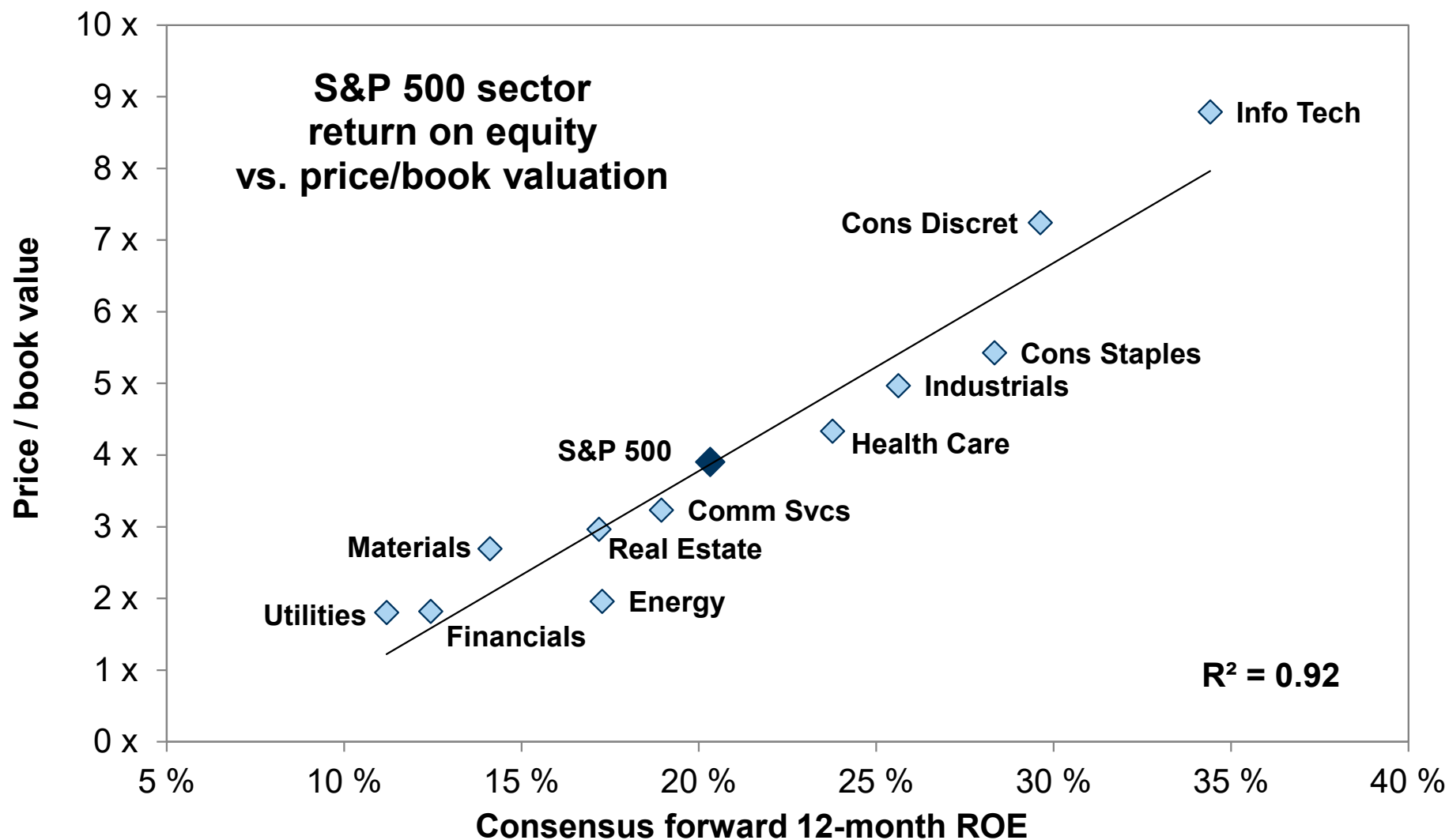
S&P 500 ex-Financials ROE ranks at 97th %-ile

S&P 500 ex-Financials ROE has fallen by 176 since peaking in 2Q 2022



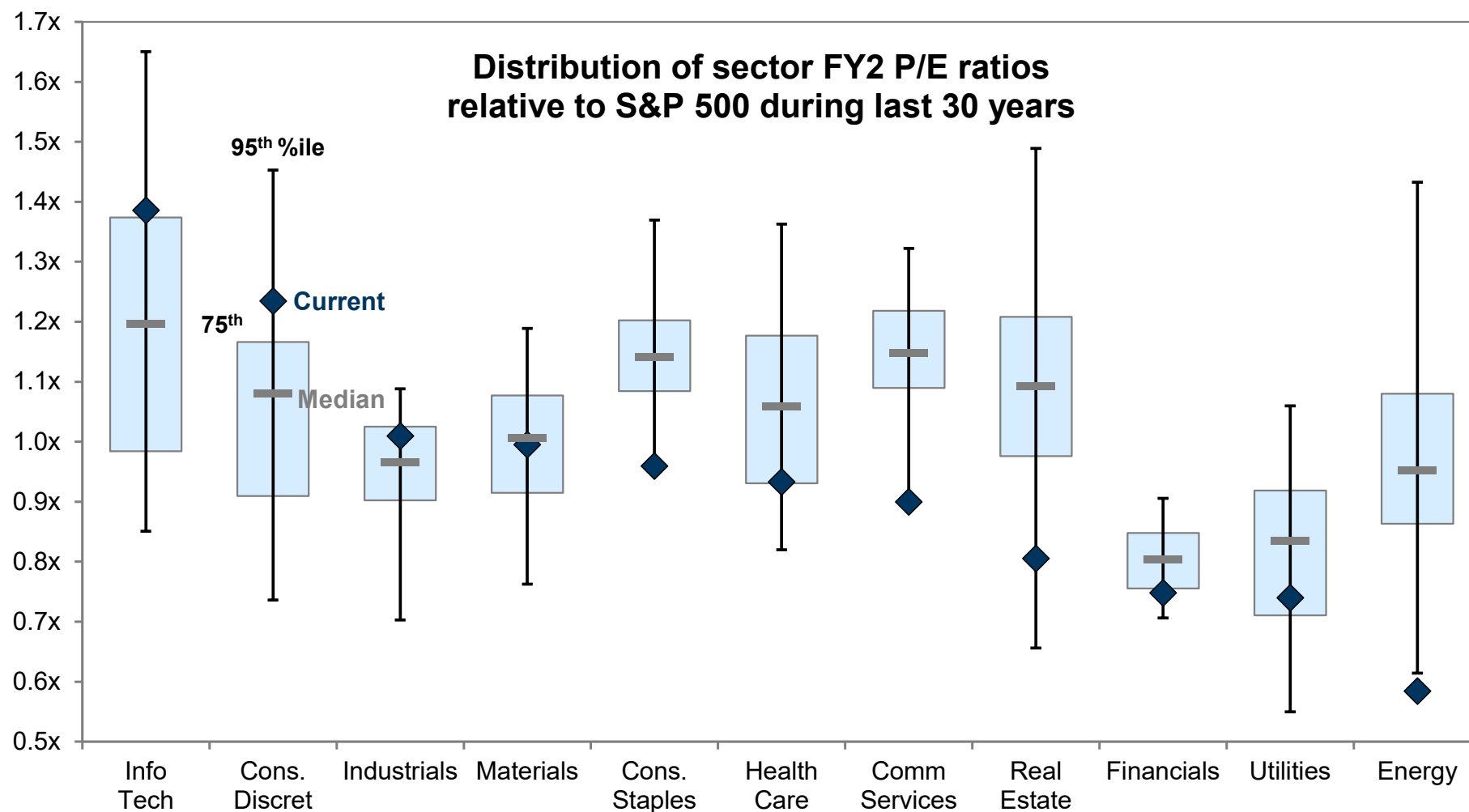
Sector P/B valuation is consistent with expected ROE

Energy, Health Care, Staples, and Industrials inexpensive on Price/Book basis



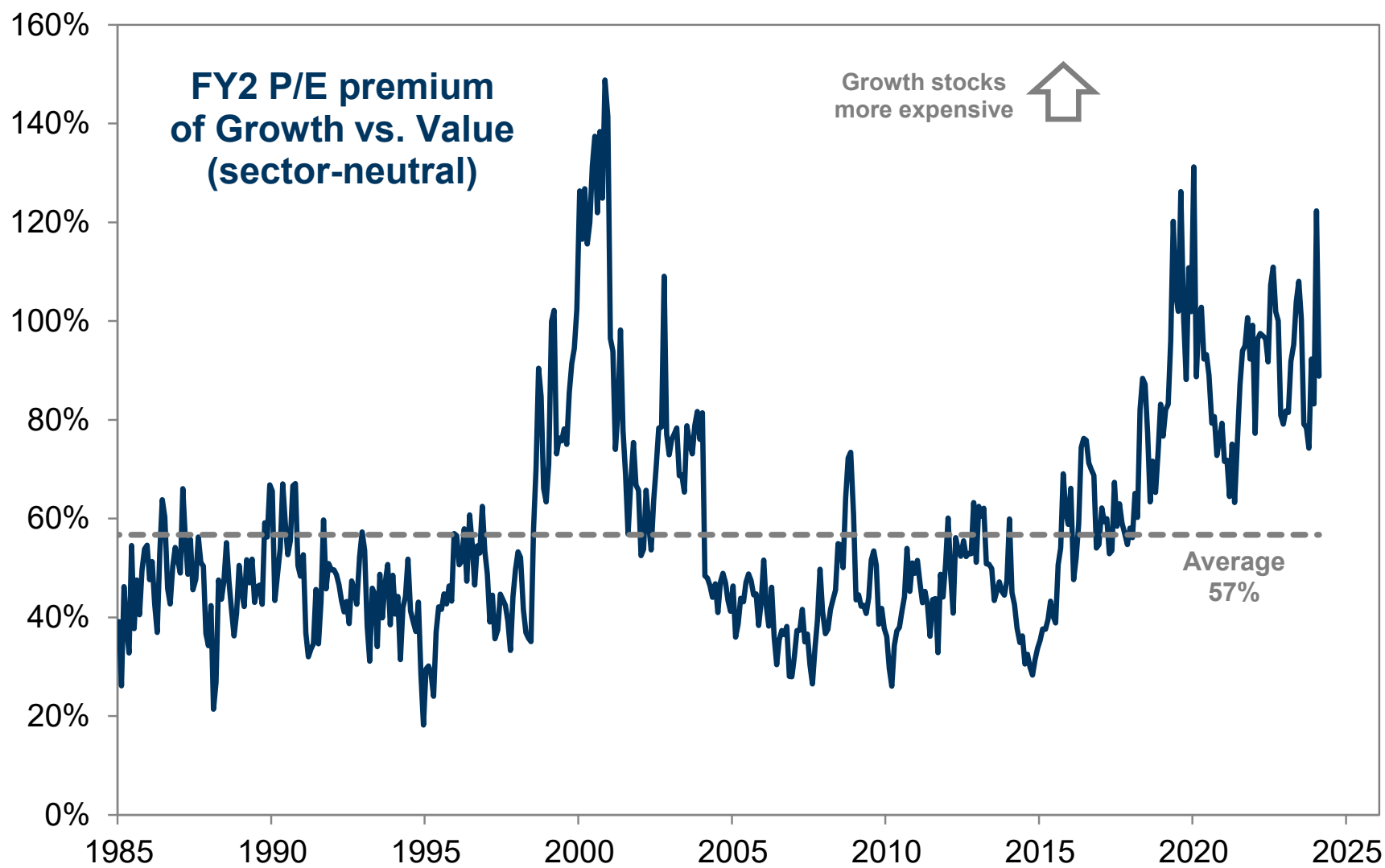
Distribution of sector historical relative P/E multiples

Wide variation in current index-relative valuations vs. history



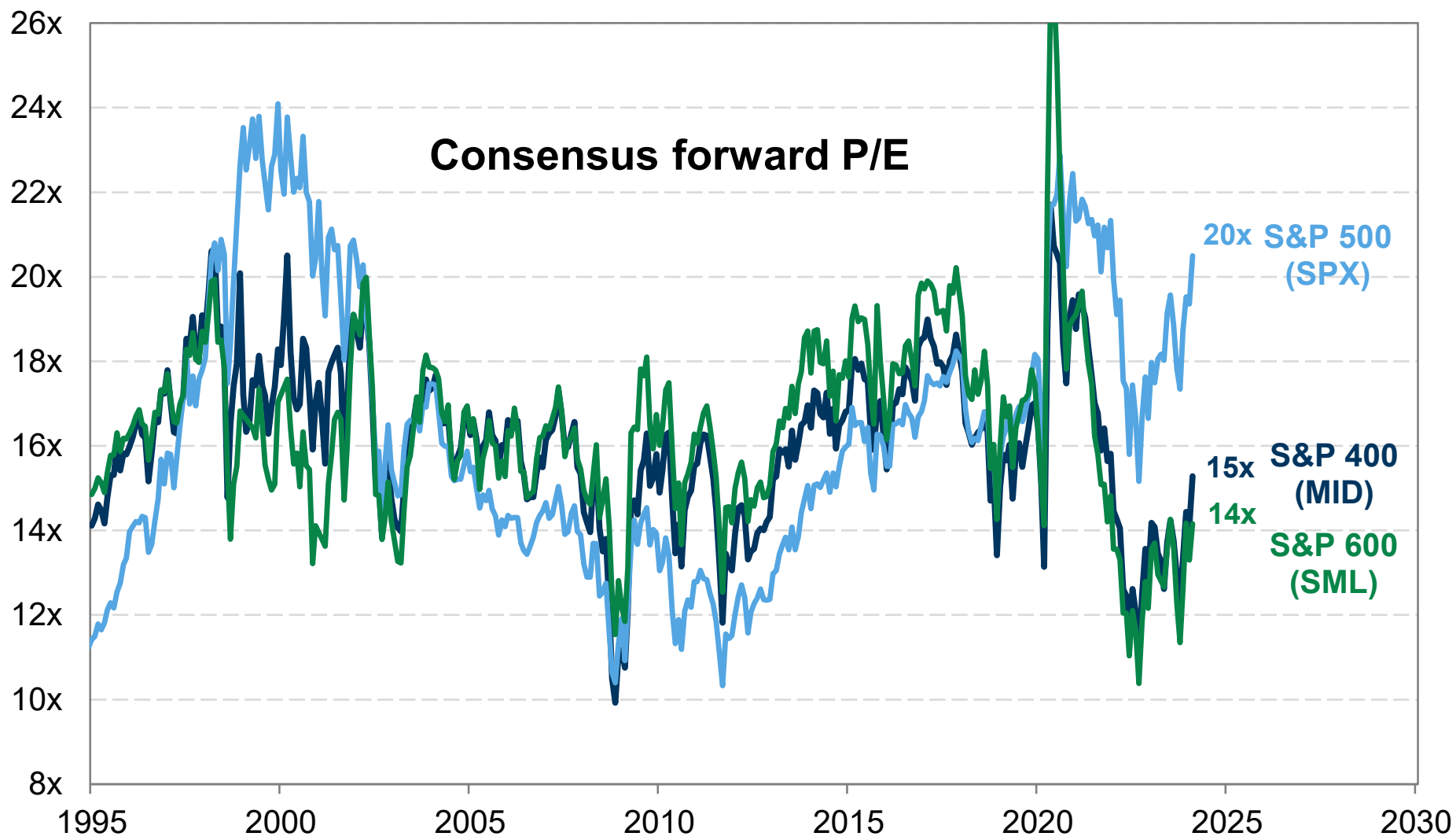
Growth vs. Value

Valuation of high-growth stocks is elevated compared with history



Large-cap vs. Mid-cap vs. Small-cap

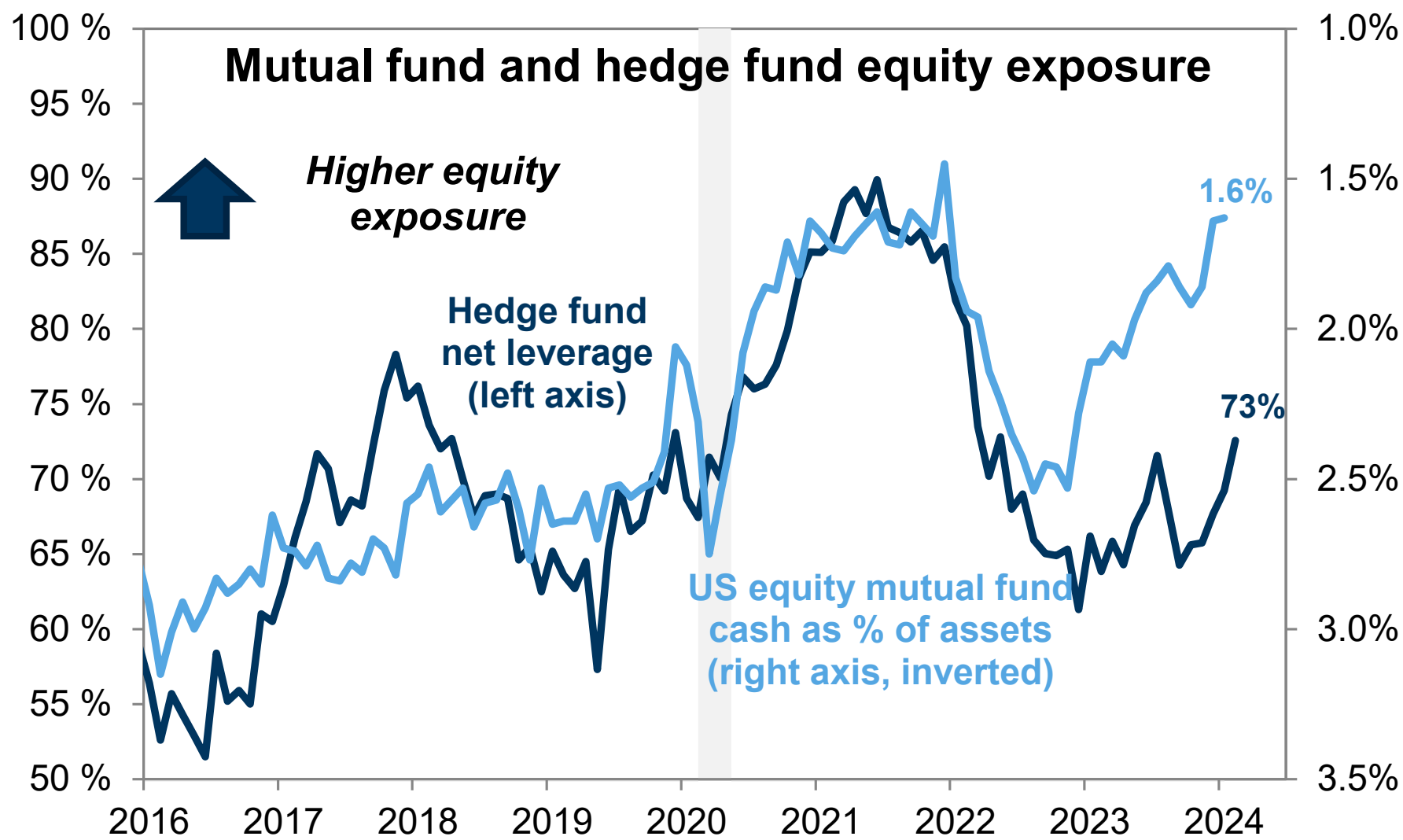
Valuation of small-caps and mid-caps remain below historical averages



4. Money Flow

Hedge fund net exposure has risen to 73%

Mutual funds reduced their cash holdings to 1.6% of assets, lowest since 2021



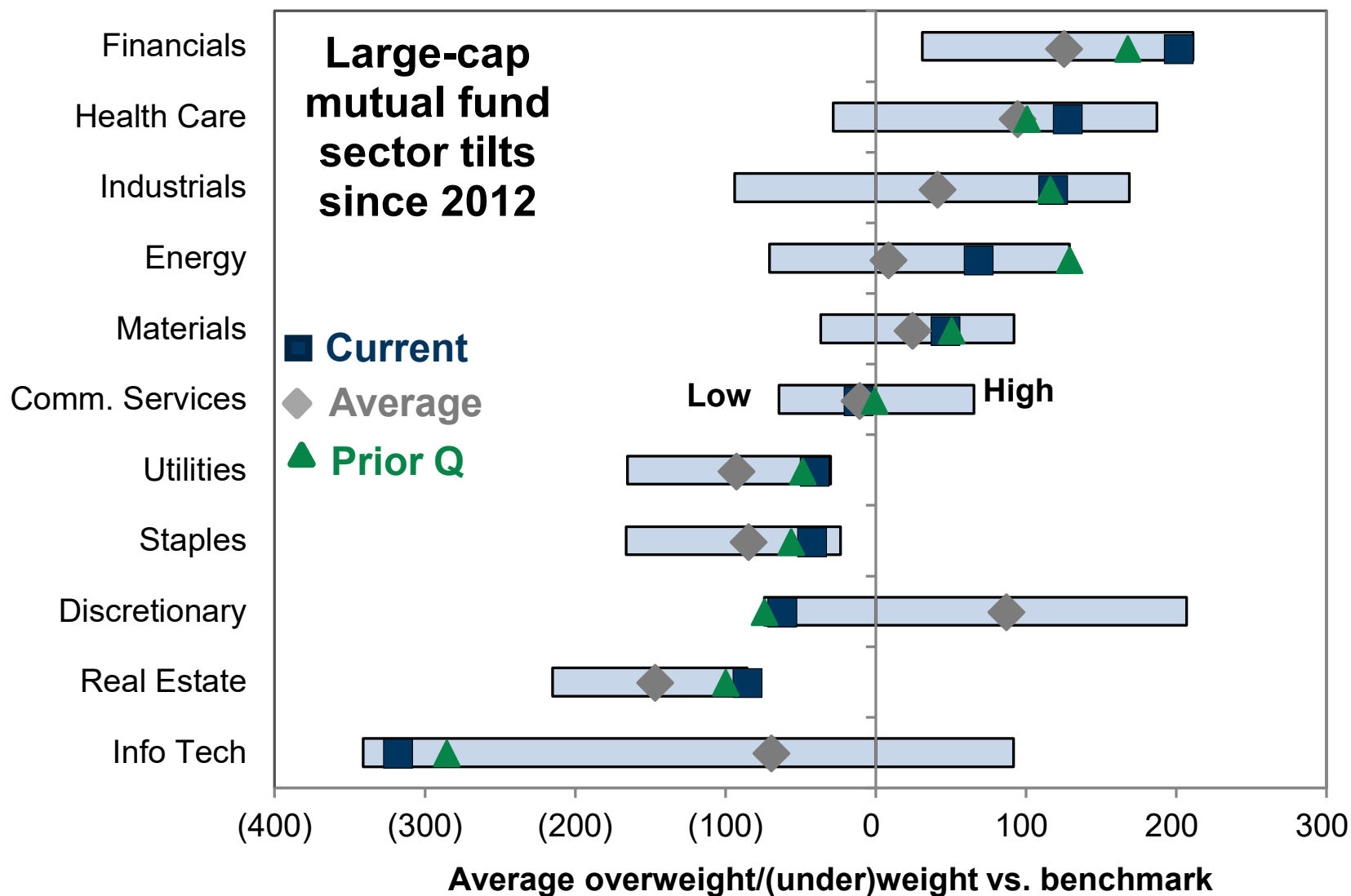
Overlap in our hedge fund and mutual fund baskets

Hedge fund long and short vs. mutual fund overweight and underweight baskets

		Overlap with our MUTUAL FUND baskets							
		<i>Overweight</i>				<i>Underweight</i>			
		Mutual Fund Overweight Positions <GSTMFOV>				Mutual Fund Underweight Positions <GSTMFUW>			
Overlap with our HEDGE FUND baskets	Long	Hedge Fund VIP List <GSTHHVIP>				Hedge Fund Very Important Short Positions <GSTHVISP>			
	Short	DHR NOW VRT				ADBE CVS			
		FI	PGR	WDAY		BAC	INTU		
		KKR	UBER			CMCSA	UNH		
		MA	V			COR			
		AAPL BRK.B MSFT				ABBV COST IBM JPM PEP WMT			
		AMD	GOOGL	LLY		BA	CVX	INTC	MCD
		AMZN	NVDA			BX	F	ITW	MRNA
		AVGO	META			CAT	HD	JNJ	MU
						VZ			

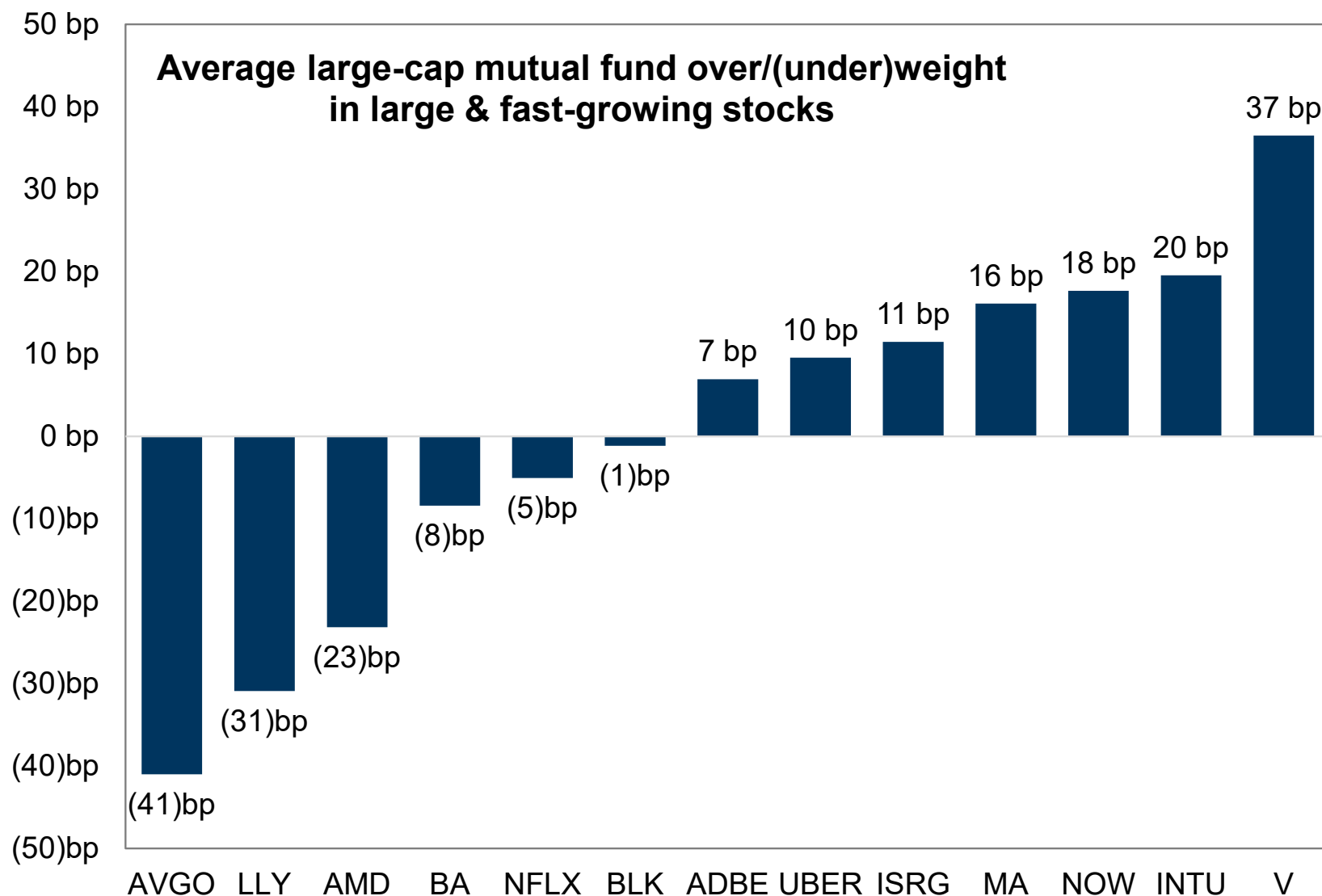
Mutual fund sector positioning relative to history

Overweight Financials vs. benchmark and underweight Information Technology



Mutual fund positioning in large-cap growth stocks

Russell 1000 stocks with weight > 25 bp, >10% sales growth, excluding “Mag 7”



HF sector weights: \$1.7 trillion long, \$890 billion short

52% of net portfolio in Tech (21%), Health Care (19%), and Industrials (11%)

Sector	Aggregate hedge fund asset allocation				vs. Russell 3000	
	Long portfolio (\$1.7 tn)	Short portfolio (\$890 bn)	Allocation difference	Net weight	Russell 3000 weight	Hedge fund net tilt
Health Care	16.0 %	13.1 %	291 bp	19.1 %	12.1 %	693 bp
Comm Services	9.3	6.8	253	12.0	8.5	346
Industrials	11.4	11.3	9	11.4	9.8	166
Materials	3.6	2.9	67	4.3	2.7	155
Energy	4.8	5.8	(107)	3.6	3.9	(23)
Consumer Discretionary	13.3	15.5	(224)	10.9	11.3	(40)
Utilities	1.8	2.4	(55)	1.2	2.2	(93)
Real Estate	2.4	3.7	(125)	1.1	2.9	(175)
Consumer Staples	4.5	5.0	(49)	4.0	6.1	(216)
Financials	11.8	11.9	(3)	11.8	14.1	(227)
Information Technology	21.2	21.7	(57)	20.6	26.4	(587)
Total	100.0	100.0	0	100.0	100.0	0

Hedge Fund very important position list (GSTHHVIP)

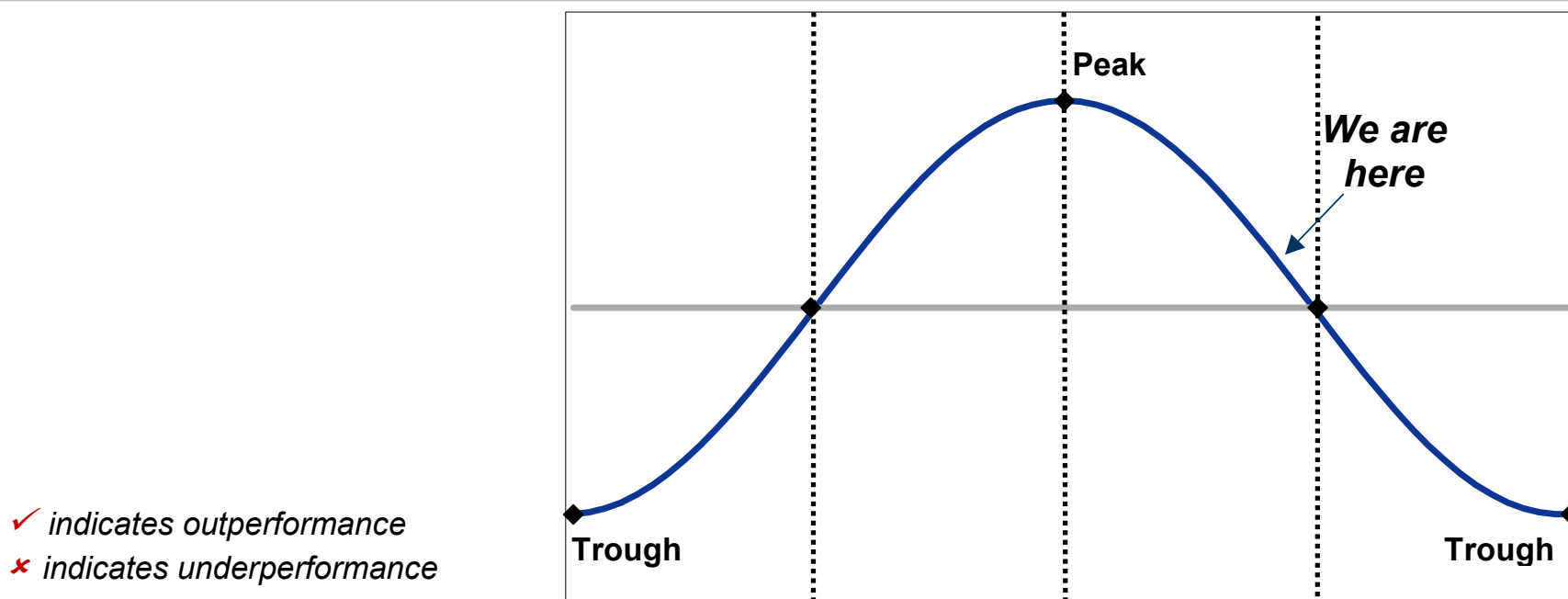
50 stocks that “matter most” to the performance of long/short hedge funds

Hedge Fund Very Important Position (VIP) Basket <GSTHHVIP>											
Company	Ticker	Sub-sector	Total Return YTD	No. of funds with stock as top 10 holding 31-Dec-23	Percent of equity cap owned by hedge funds 31-Dec-23	Company	Ticker	Sub-sector	Total Return YTD	No. of funds with stock as top 10 holding 31-Dec-23	Percent of equity cap owned by hedge funds 31-Dec-23
Amazon.com Inc.	AMZN	Broadline Retail	15 %	98	2 %	WillScot Mobile Mini Hldgs	WSC	Construction & Engineering	8%	13	8%
Microsoft Corp.	MSFT	Systems Software	10	96	1	Workday Inc.	WDAY	Application Software	11	13	9
Meta Platforms Inc.	META	Interactive Media & Services	37	87	4	Alteryx Inc.	AYX	Application Software	2	12	29
Alphabet Inc.	GOOGL	Interactive Media & Services	3	53	2	APi Group Corp.	APG	Construction & Engineering	1	12	21
NVIDIA Corp.	NVDA	Semiconductors	59	51	2	General Electric	GE	Industrial Conglomerates	19	12	3
Uber Technologies	UBER	Passenger Ground Transportation	27	32	5	KKR & Co Inc.	KKR	Asset Management & Custody Banks	16	12	5
Apple Inc.	AAPL	Technology Hardware Storage & Peripherals	(4)	29	1	Taiwan Semiconductor Manufacturing, (ADR)	TSM	Semiconductors	24	12	1
Pioneer Natural Resources	PXD	Oil & Gas Exploration & Production	4	27	10	Tempur Sealy International, Inc.	TPX	Home Furnishings	(0)	12	14
Salesforce Inc.	CRM	Application Software	12	25	4	Albertsons Companies	ACI	Food Retail	(7)	11	8
Visa Inc.	V	Transaction & Payment Processing Services	9	23	2	Alibaba Group Hldg (ADR)	BABA	Broadline Retail	(2)	11	1
Mastercard Inc.	MA	Transaction & Payment Processing Services	11	22	2	Broadcom Inc.	AVGO	Semiconductors	17	11	1
Netflix Inc.	NFLX	Movies & Entertainment	21	21	3	Caesars Entertainment	CZR	Casinos & Gaming	(12)	11	12
Splunk Inc.	SPLK	Application Software	2	20	14	Cheniere Energy	LNG	Oil & Gas Storage & Transportation	(7)	11	5
Advanced Micro Devices	AMD	Semiconductors	23	19	3	Karuna Therapeutics	KRTX	Biotechnology	1	11	13
Berkshire Hathaway	BRK.B	Multi-Sector Holdings	16	19	1	Progressive Corp.	PGR	Property & Casualty Insurance	21	11	4
Eli Lilly & Co.	LLY	Pharmaceuticals	32	19	1	S&P Global Inc.	SPGI	Financial Exchanges & Data	(1)	11	2
Apollo Global Mgmt	APO	Diversified Financial Services	20	17	6	Boston Scientific	BSX	Health Care Equipment	15	10	5
Vertiv Holdings	VRT	Electrical Components & Equipment	31	16	17	Citigroup Inc.	C	Diversified Banks	10	10	4
CRH public limited company	CRH	Construction Materials	13	15	6	Danaher Corp.	DHR	Life Sciences Tools & Services	9	10	2
Fiserv Inc.	FI	Transaction & Payment Processing Services	13	15	4	Energy Transfer LP	ET	Oil & Gas Storage & Transportation	10	10	2
AerCap Holdings	AER	Trading Companies & Distributors	6	14	18	ServiceNow Inc.	NOW	Systems Software	9	10	2
First Citizens BancShares	FCNCA	Diversified Banks	7	14	9	Union Pacific Corp.	UNP	Rail Transportation	4	10	3
Hess Corp.	HES	Oil & Gas Exploration & Production	4	14	9	Builders FirstSource	BLDR	Building Products	13	9	6
MercadoLibre Inc.	MELI	Broadline Retail	16	14	4						
Tenet Healthcare	THC	Health Care Facilities	22	14	25						
Capri Holdings Limited	CPRI	Apparel Accessories & Luxury Goods	(7)	13	19						
TransDigm Group	TDG	Aerospace & Defense	18	13	9						
GSTHHVIP Average									12%	21	7%
Median									10	14	4

Note: Boldface indicates new basket constituent

Economic cycle and how cash spending is rewarded

Investors reward balance sheet strength, returning cash late in the economic cycle

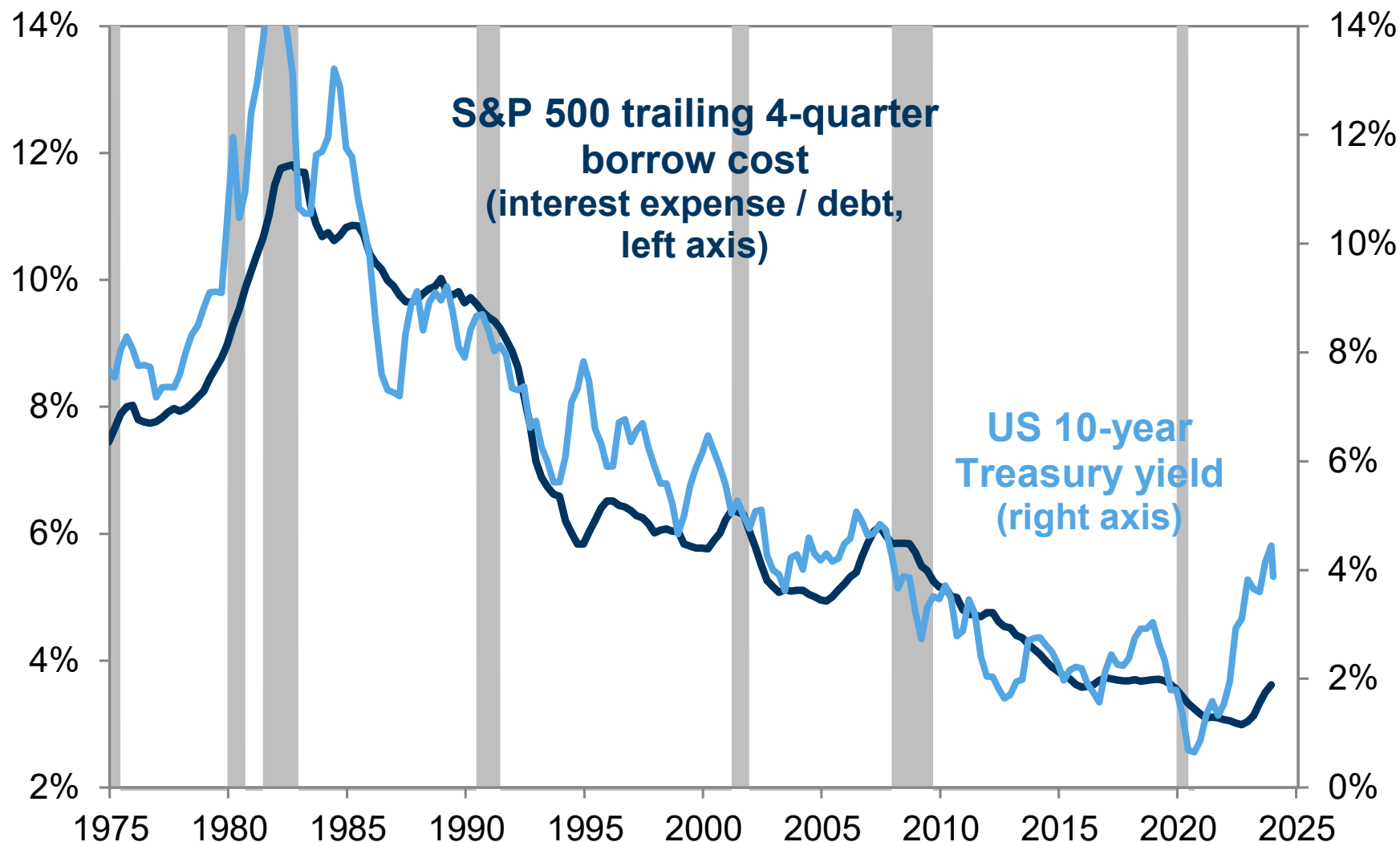


Median relative performance of stocks during the economic cycle

	Rebound	Expansion	Slowdown	Recession
Balance Sheet Strength	✗	✗	✓	✓
Returning Cash to Shareholders	=	✓	✓	=
Investing for Growth	✓	✓	✗	✗

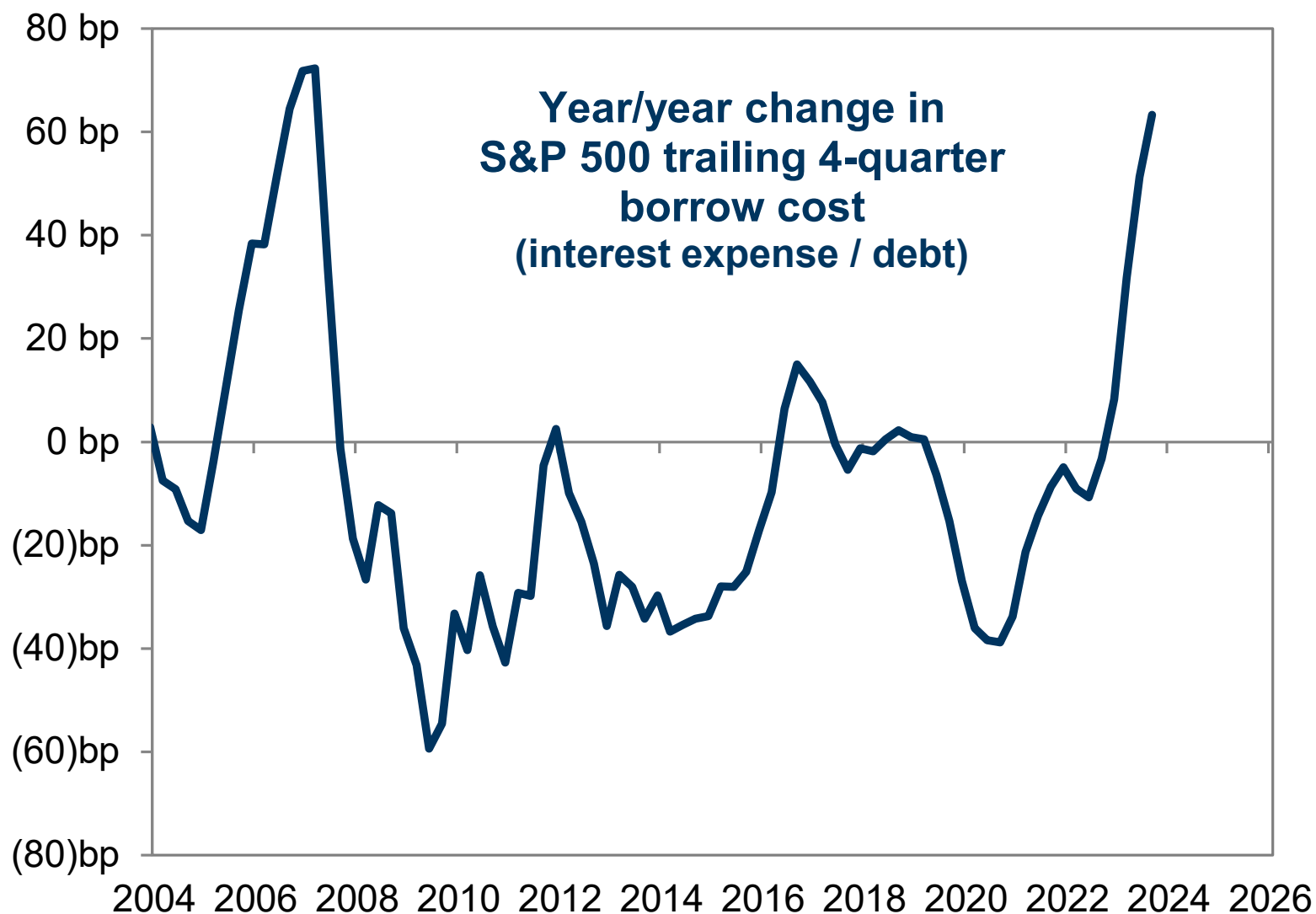
Corporate borrow costs are extremely low vs. history

S&P 500 borrow costs remain close to the lowest level in 48 years



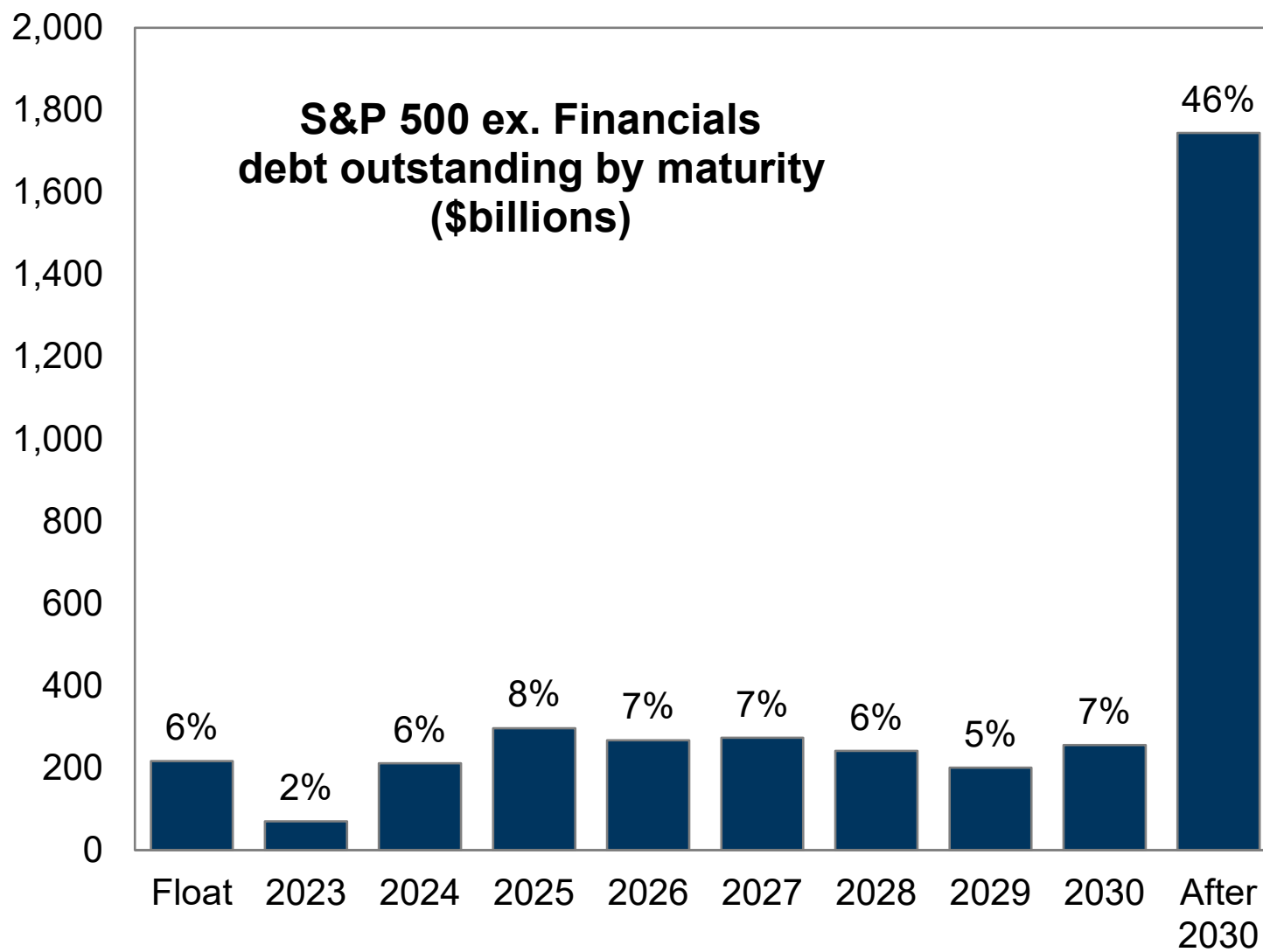
S&P 500 borrow costs have risen sharply this year

Firms noted during 3Q earnings calls that interest expense has jumped



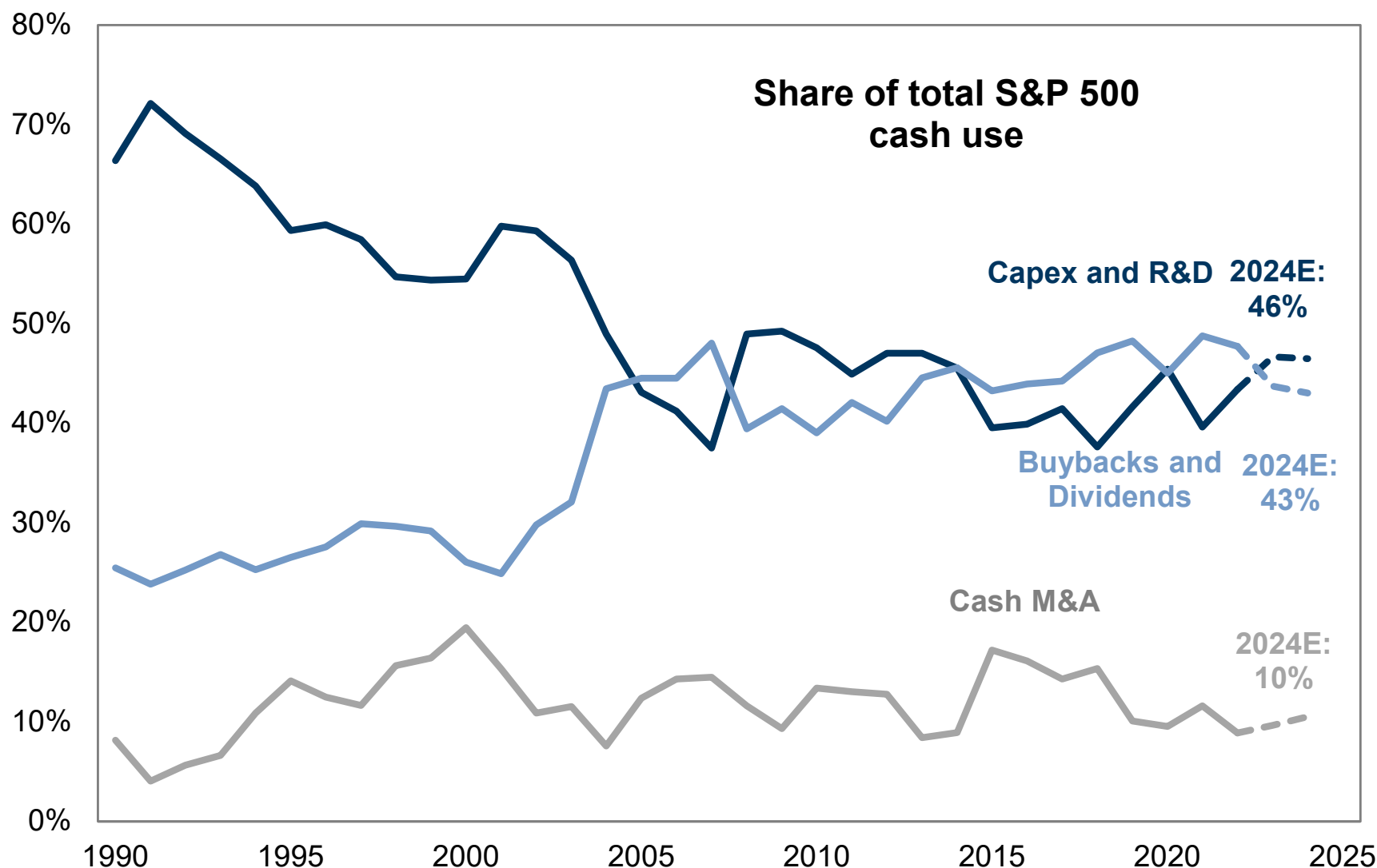
46% of S&P 500 debt matures post 2030

Extended debt maturities have insulated most public companies from rising rates



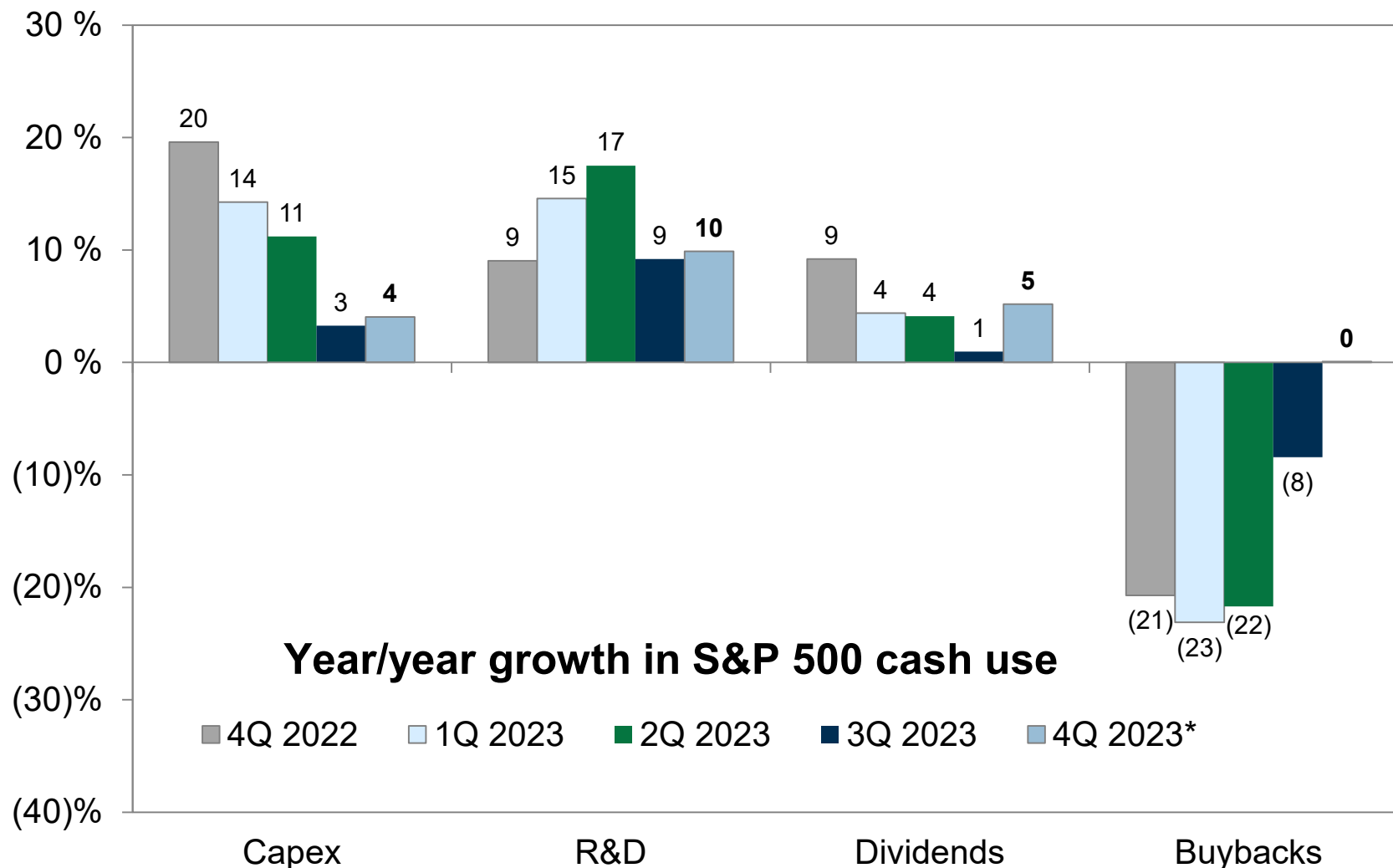
Buybacks & dividends will comprise 43% of cash use

Capex and R&D will account for 46% of total cash spending in 2024



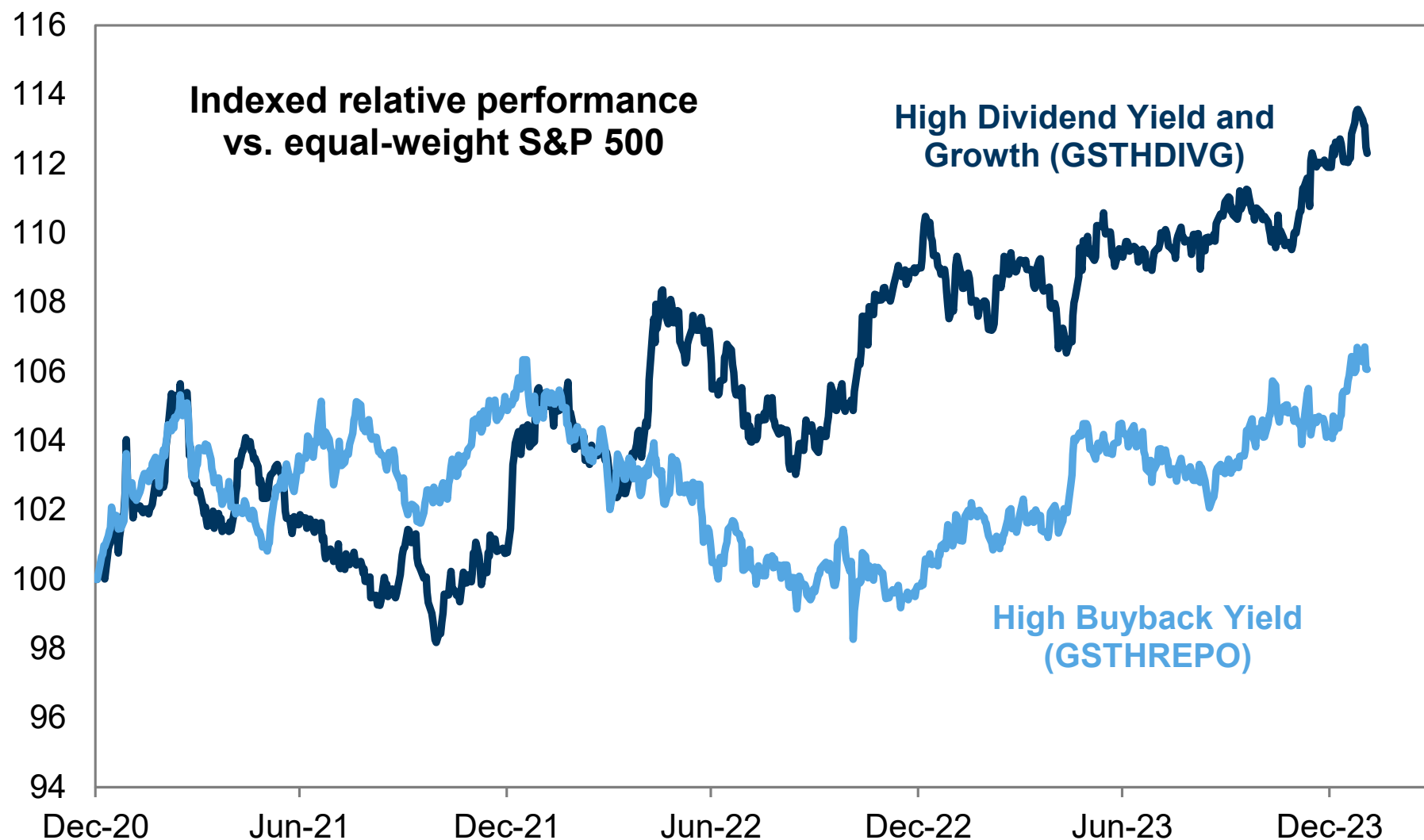
S&P 500 cash spending will increase by 6% in 2024

Companies pulled back further in capex and maintained buybacks in 4Q 2023



High Dividend Yield & Growth basket outperformed

sector-neutral, equal-weighted baskets of 50 stocks



Dividend yield and growth basket (GSTHDIVG)

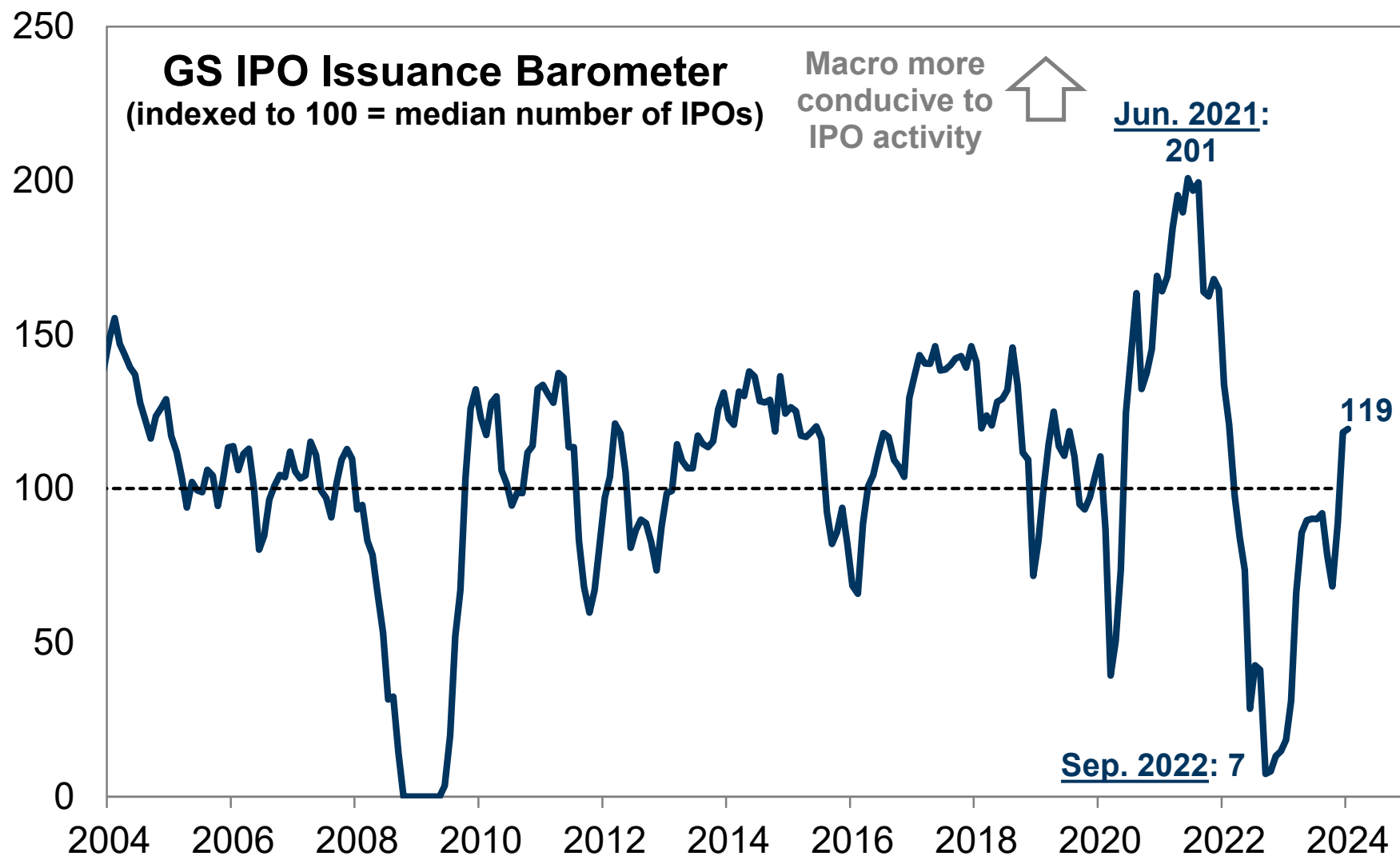
Sector-neutral basket of firms with highest combined dividend yield + growth

Company	Ticker	Mkt. cap (\$, bn)	YTD return	NTM P/E	Payout ratio	2023 dividend yield	2023-2025 dividend CAGR	2024E DPS/ current price
COMMUNICATION SERVICES								
Verizon Communications	VZ	\$169	8 %	9	58 %	6.5 %	2 %	7 %
Interpublic Grp of Cos.	IPG	12	(3)	11	45	3.9	6	4
Omnicom Group Inc.	OMC	17	2	11	36	3.2	4	3
Comcast Corp.	CMCSA	169	(3)	10	29	2.7	7	3
Fox Corp.	FOXA	11	(1)	8	15	1.7	4	2
CONSUMER DISCRETIONARY								
Best Buy Inc.	BBY	\$17	2 %	13	59 %	4.6 %	11 %	5 %
Darden Restaurants	DRI	21	5	18	54	3.0	8	3
Tapestry Inc.	TPR	11	30	11	31	2.7	14	3
eBay Inc.	EBAY	25	10	10	23	2.1	11	2
Bath & Body Works	BBWI	11	12	14	24	1.7	12	2
CONSUMER STAPLES								
Conagra Brands Inc.	CAG	\$13	(1)%	11	52 %	4.8 %	6 %	5 %
General Mills Inc.	GIS	37	(0)	14	51	3.5	8	4
Molson Coors Beverage	TAP	13	3	11	31	2.6	12	3
ENERGY								
Devon Energy Corp.	DVN	\$28	(3)%	8	45 %	6.5 %	8 %	7 %
Chevron Corp.	CVX	288	3	12	50	4.0	5	4
Targa Resources	TRGP	22	13	16	34	1.9	22	2
FINANCIALS								
Truist Financial	TFC	\$46	(4)%	10	59 %	6.0 %	5 %	6 %
Invesco Ltd.	IVZ	7	(13)	9	46	5.2	9	6
Regions Financial	RF	17	(4)	9	48	4.7	7	5
PNC Financial Svc. Grp	PNC	58	(5)	11	49	4.2	7	4
Blackstone Inc.	BX	90	(3)	25	65	2.6	29	4
Wells Fargo & Co.	WFC	199	12	11	29	2.4	14	3
HEALTH CARE								
Pfizer Inc.	PFE	\$153	(5)%	12	72 %	6.1 %	4 %	6 %
Bristol-Myers Squibb	BMJ	104	0	7	35	4.5	7	5
Viatis Inc.	VTRS	15	13	4	17	3.9	9	4
Medtronic Plc	MDT	111	1	15	51	3.3	6	3
AbbVie Inc.	ABBV	314	16	16	55	3.3	5	3
CVS Health Corp.	CVS	97	(4)	9	31	3.2	5	3
Amgen Inc.	AMGN	148	(3)	14	45	3.1	9	3

Company	Ticker	Mkt. cap (\$, bn)	YTD return	NTM P/E	Payout ratio	2023 dividend yield	2023-2025 dividend CAGR	2024E DPS/ current price
INDUSTRIALS								
Paychex Inc.	PAYX	\$44	4 %	25	72 %	2.8 %	9 %	3 %
Snap-on Inc.	SNA	15	(4)	14	39	2.4	10	3
Johnson Controls Intl	JCI	40	3	16	39	2.5	8	3
Norfolk Southern	NSC	57	8	21	44	2.1	9	2
INFORMATION TECHNOLOGY								
HP Inc.	HPQ	\$28	(5)%	8	31 %	3.7 %	5 %	4 %
Corning Inc.	GLW	27	6	17	59	3.5	9	4
International Bus. Machines	IBM	169	14	18	65	3.6	1	4
Cisco Systems Inc.	CSCO	195	(4)	13	42	3.2	3	3
Texas Instruments	TXN	148	(4)	31	99	3.1	5	3
Skyworks Solutions	SWKS	16	(9)	14	36	2.6	8	3
Juniper Networks	JNPR	12	26	16	39	2.4	2	2
Microchip Technology	MCHP	44	(8)	26	56	1.9	12	2
QUALCOMM Inc.	QCOM	173	8	15	31	2.0	7	2
NXP Semiconductors	NXPI	63	6	17	29	1.7	16	2
Analog Devices Inc.	ADI	94	(5)	29	57	1.8	9	2
Broadcom Inc.	AVGO	602	16	26	42	1.5	9	2
Cognizant Tech Solutions	CTSH	39	4	17	26	1.5	8	2
Accenture Plc	ACN	237	8	30	40	1.2	14	1
MATERIALS								
Eastman Chemical	EMN	\$10	(4)%	11	41 %	3.7 %	8 %	4 %
REAL ESTATE								
Extra Space Storage	EXR	\$29	(14)%	27	128 %	4.7 %	17 %	5 %
UTILITIES								
Pinnacle West Capital	PNW	\$8	(6)%	14	73 %	5.2 %	8 %	5 %
GSTHDIVG median								
			1 %	14	45 %	3.1 %	8 %	3.3 %
S&P 500 median								
			3	18	29	1.6	6	1.7

The GS IPO Issuance Barometer is above average

100 = a macro environment consistent with the typical frequency of IPOs



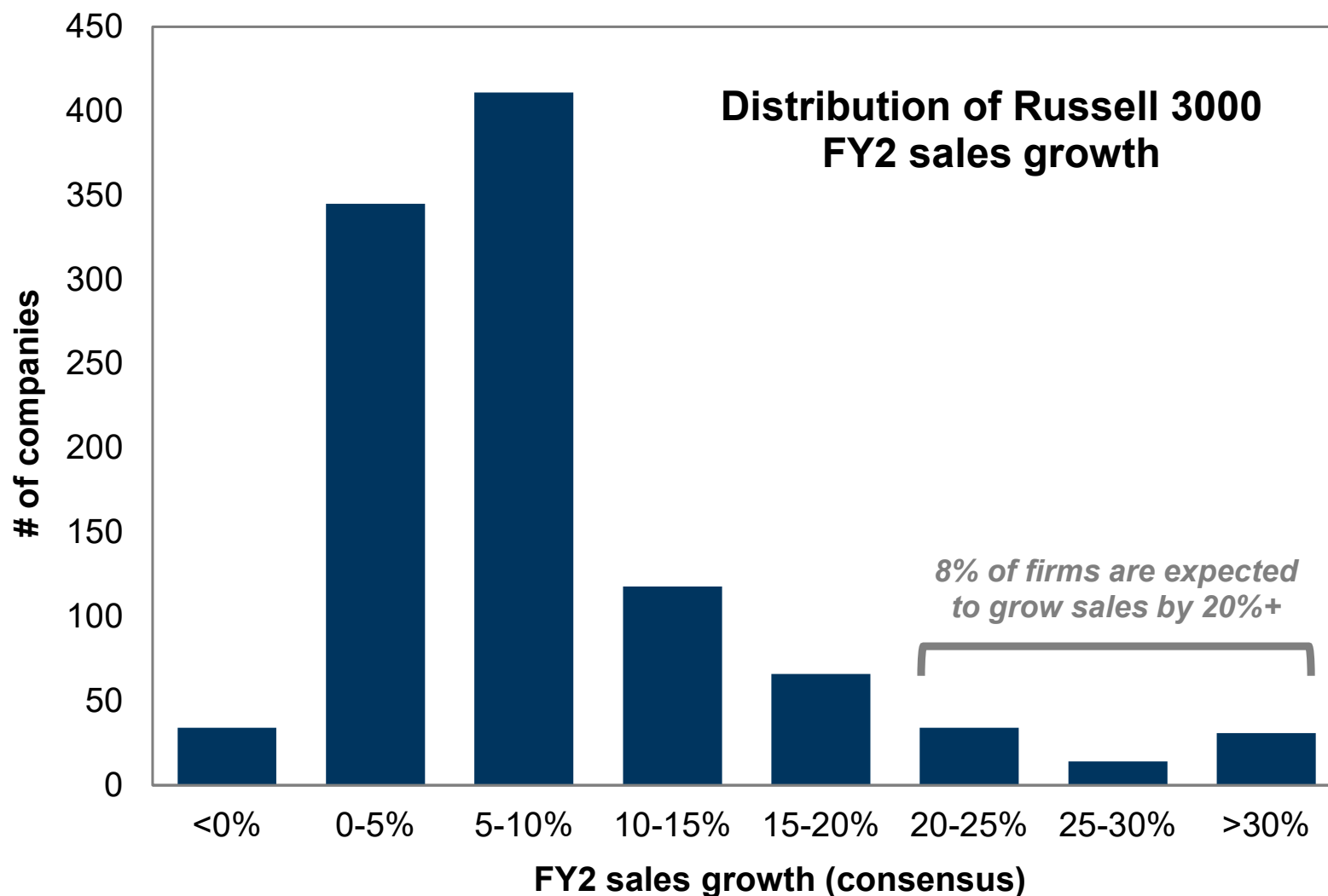
Components of our GS IPO issuance barometer

5 statistically significant metrics which indicate how open market is to IPOs

GS IPO Issuance Barometer				
Indicator	Std. dev. change in IPO activity from 1 std. dev. increase in variable	Current	Percentile rank since 2003	Mid-2024 scenario
S&P 500 drawdown	1.4	(2)%	84 %	0 %
CEO Confidence	0.7	43	18	45
ISM Manufacturing Index	0.7	48	10	47
Change in 2-year UST yield	-0.6	-0.6 pp	86	-0.3 pp
S&P 500 EV/sales	0.5	2.9 x	94	2.7 x
GS IPO Issuance Barometer		119	68 %	118

Russell 3000 distribution of FY2 sales growth

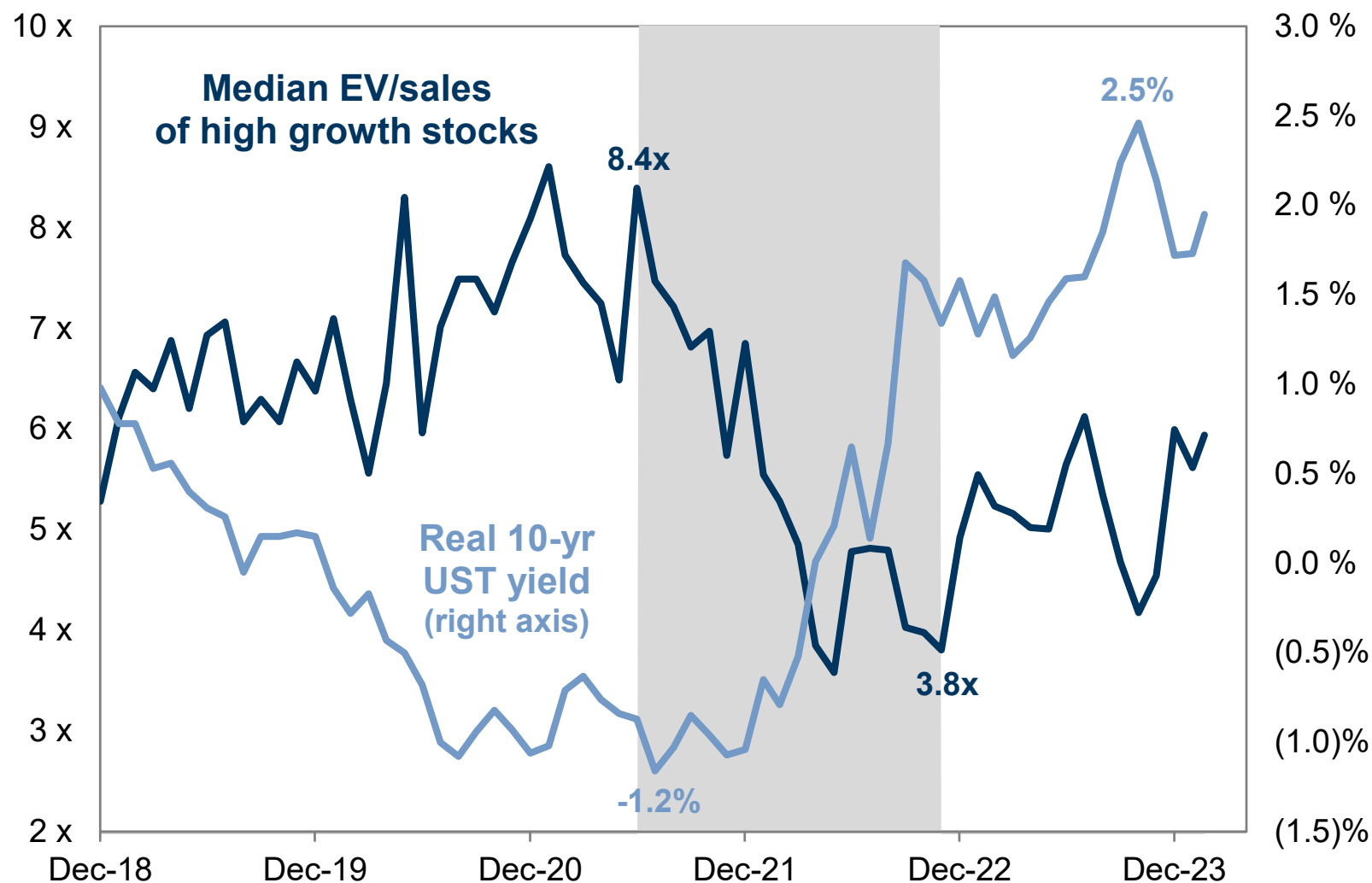
Just 8% of Russell 3000 stocks are forecast to grow FY2 sales by 20%+



Universe includes Russell 3000 stocks with equity capitalization greater than \$2 billion. Excludes Biotechnology stocks.

Valuation of high-growth stocks vs. real yields

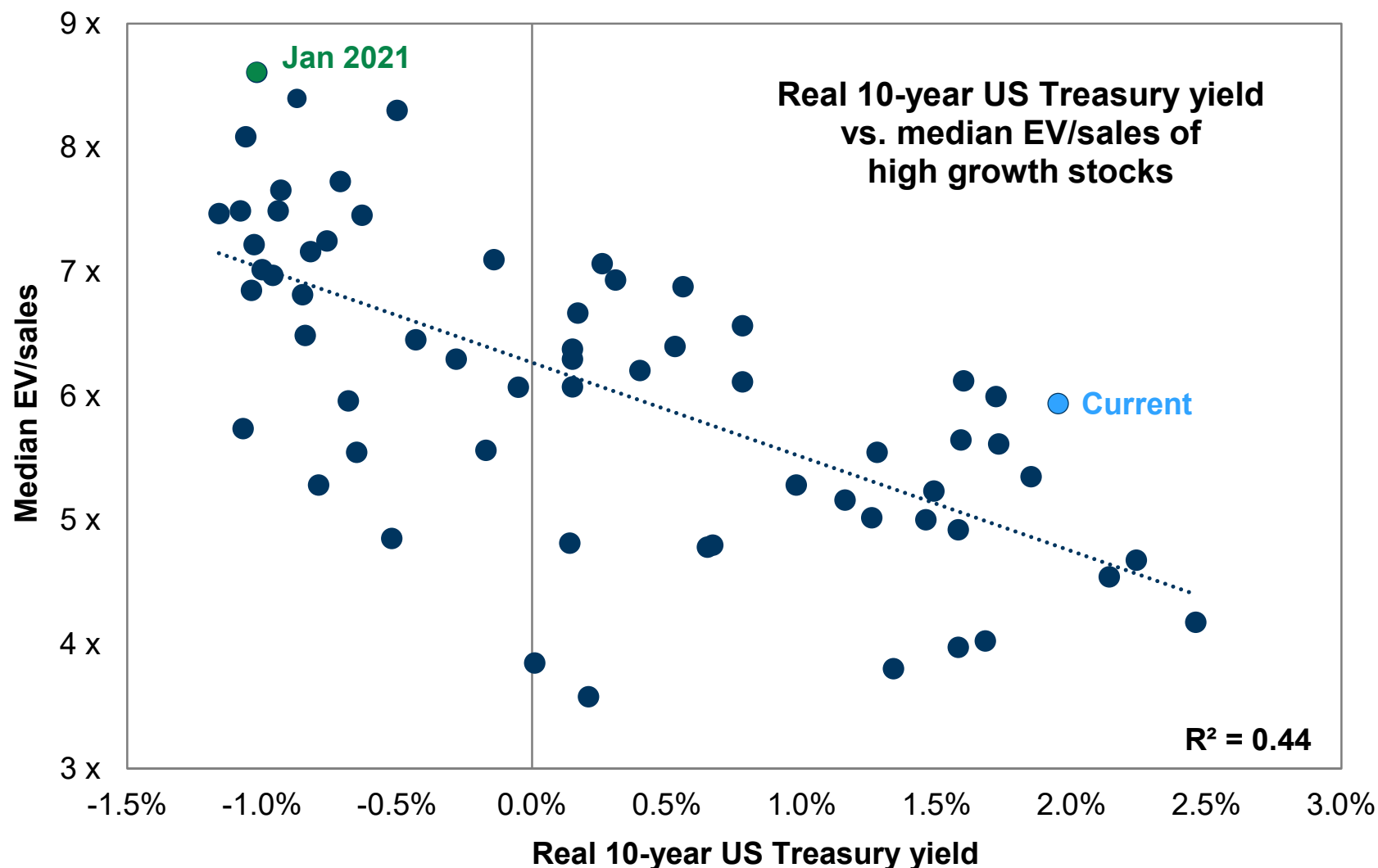
Growth stocks de-rated alongside the surge in real yields



"High growth stocks" defined as Russell 3000 stocks with equity capitalization greater than \$2 billion, excluding Biotechnology, and with expected FY2 sales growth greater than 20%.

Valuations unlikely to return to pandemic highs

Strong relationship between real yield environment and growth stock valuations



"High growth stocks" defined as Russell 3000 stocks with equity capitalization greater than \$2 billion, excluding Biotechnology, and with expected FY2 sales growth greater than 20%.

5. Global equity markets

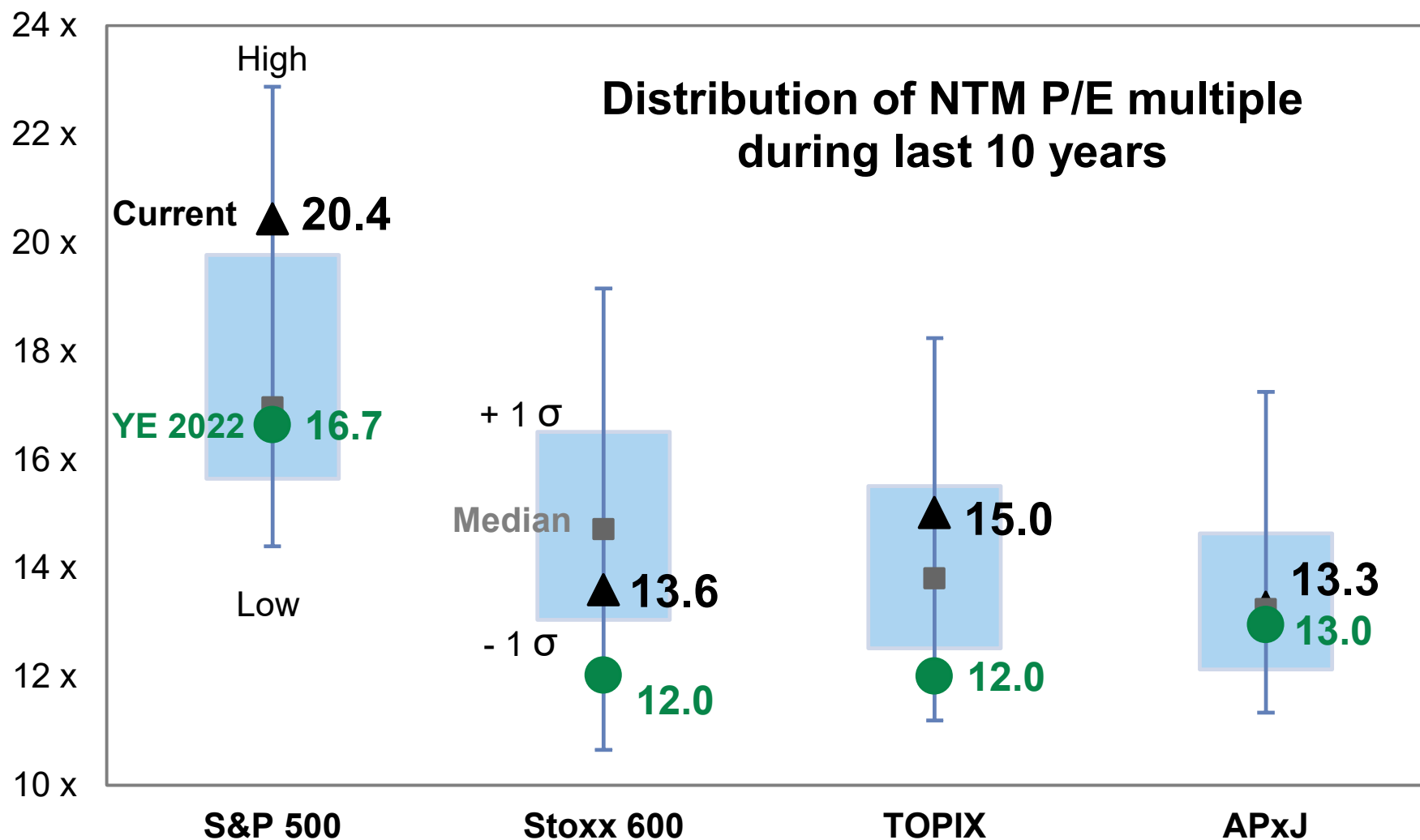
Global equity market returns, valuation, and growth

Local currency return: Japan (+11%), Asia (+9%), Europe (+6%), US (+4%)

INDEX			EARNINGS		VALUATION			RETURN	
	Index level		Adjusted		P/E multiple (GS)		Div Yield	Forecast total return	
	Current	12 month target			Current Price/ 2024 EPS	12 month price target/ 2025 EPS			
			EPS Growth						
			2024	2025				Local	USD
TOPIX	2678	2900	8 %	7 %	15.4 x	15.5 x	2.2 %	11 %	17 %
MXAPJ	528	560	14	11	13.2	12.4	2.9	9	9
STOXX Europe 600	496	510	3	4	13.5	13.3	3.5	6	9
S&P 500	5078	5200	8	6	21.1	20.3	1.5	4	4

Global equity market valuation vs. history

US trades above historical median valuation while Europe trades below



Disclosure Appendix

March 1, 2024

Reg AC

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