

The end of macro?: Some companies are so big they are the macro



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When macro models fail to predict markets, use micro models of giant companies instead. Most equity strategists have a collection of macro models to help assess broad economic conditions and predict stock market performance. These macro models differ from the micro models that analysts typically use to value a company, which range from simple fair PE estimates applied to earnings forecasts to more detailed DCF models. Of course, micro models can be applied to all companies in an equity index and aggregated; but proper macro models don't use corporate financial data or valuation models to predict markets, instead they generally use macroeconomic data and rely on historical relationships for prediction. Some strategists are devout adherents of certain macro models; we find macro models useful when employed as a collection of market signals (e.g. LEI), but are most useful as guides for the inputs into our aggregated micro or intrinsic valuation models for the S&P 500.

Popular macro models: Associating macro conditions with market performance

Popular macro models include: 1) "Macro Compass," this is usually based on the rate of change of real economic growth and inflation to then categorize macro conditions at the highest level into four quadrants; as with all macro models recent trends or forecasts are used to predict market performance being similar to outcomes during past same macroeconomic conditions; 2) "ISM Clock," this is based on the manufacturing ISM; when above 50 and rising it's early cycle and bullish, if above 50 and falling it's late cycle and cautionary, if well below 50 it's a recession, if newly above 50 it's a recovery; 3) the "Credit Impulse," this monitors changes in the growth rate of loans, which is important for credit driven activities, especially construction activity; 4) the "Fed cycle," hikes above neutral or an inverted curve suggest late-cycle with elevated recession risk; 5) "cycle age," years since the last recession are used to indicate risk of the next one. These are probably the most classic macro models for the stock market, but other popular ones focus on employment, fiscal conditions, election cycles, commodity prices, FX rates, asset allocations, monetary aggregates and especially since 2009 the Fed's balance sheet.

We don't rely on any single macro model and we are leery of recession signals

We don't rely on any single macro model to predict the market, particularly those that aim to predict imminent recessions, but we use many macro models to help forecast S&P EPS. Because there is a loose relationship between GDP and S&P EPS growth outside of recessions, we use many sub GDP macro models. Our profit indicator models include the mfg. ISM, industrial production, investment spending on structures and equipment & software from the GDP accounts, gross exports, credit standards, bank loan growth, commodity prices, etc. We don't treat cycles like reliable clocks, but we respect long-cycle forces that exist for many commodities and real estate and extended periods of sticky norms typical for macro variables like inflation, interest rates, FX rates and even vol and risk premiums. We've long argued that an inverted yield curve is an imperfect recession indicator (like steep corrections), so is the age of an expansion, election years, a climb in oil prices or a drop in housing starts. Recessions are usually caused by monetary policy tightening against inflation or shocks, the latter difficult to predict and the former typically eases at the brink. We prefer to evaluate strength and weakness within a cycle than to predict longevity. Areas of strength and weakness often persist through the cycle. Ultimately, macro is uncertain and it's difficult to diversify away macro risk.

Many macro models didn't help the past year, some did but became less relevant

In 2023, US GDP surprised to the upside with robust 3% growth on services strength and inflation slowed but stayed at least 3%. Goods weighed on growth and inflation, whereas services boosted both. This was a crucial distinction within the broad data. Because S&P EPS was flat in 2023 owing to a mild but drawn-out goods manufacturing recession (mfg. ISM under 50 for 2 years), sluggish loan growth (mostly commercial, not household loans), down oil prices, sluggish foreign economies and a stable but strong dollar. All of these sub-cycle GDP and inflation factors affect S&P EPS more than GDP outside the broad crush of recessions. While S&P EPS was flat, neither a recession nor bear market occurred (rather 25% gain) despite the most vaunted of recession signals flashing red: an inverted yield curve. The curve remains inverted and a recession might still occur in late 2024 or 2025, but like the mid 1960s, mid 1980s and the most noted 1995 occurrence, soft landing do happen with an upward curve returning without a recession. Or the curve might stay flattish for a few years like 2004-2007 or for decades without a recession like in the UK. We respected the risk signal of the inverted curve and Fed tightening and still do, but we noted other factors mitigating recession risks such as the strength in services, sustained fiscal support, cheaper oil, but perhaps most importantly and continuing the surging equity market. Wealth effects from stock market gains boost spending and confidence and make financial conditions less restrictive than the Fed Funds rate alone would suggest. This brings us to Tech stocks and the phenomenon of the Great Eight the years since the pandemic.

S&P performance is now digital stock dominated; digital is the macro for the S&P

The Great Eight digital stocks are now 1/3rd of S&P 500 market cap. While S&P EPS remains global with positive sensitivities to manufacturing, commodity prices, credit conditions and loan growth, the digital trends now dominate. The earnings and market cap share of digital and big price moves seen at such pushed the S&P 500 toward growth style and digital trend sensitivities. Outside of recessions, we expect digital and healthcare earnings and returns to be the main drivers of S&P performance the rest of this decade. So we contemplate what kind of macro models help with that? Strategists must respect the now giant micro of Tech and Health Care and the intangible asset nature of these sectors.

Keep 2024E S&P EPS at \$242, 20+ PE depends on yields and digital "duration"

We raise our 2024E S&P EPS at Great Eight and trim elsewhere after 4Q23 results and guidance. Despite strong 2024 EPS growth outlooks, the Great Eight PE is threatened by rising real Treasury yields and the sustainability of competitive advantages to provide them many more years of continued rapid economic profit growth at what is now macroeconomic scale. We think the long-term potential of Health Care is being overlooked and expect some Health stocks to join the future Great 10, 12, etc.

Contributor: Ju Wang, Portfolio Manager Equity

Global Equity Index Forecasts: 12-months			
Index	Dec 2024F	NTM EPS Growth	Target PE
S&P 500	4,700	8.5%	19.5
EuroStoxx 50	4,350	4.0%	11.9
Stoxx 600	465	4.0%	12.6
MSCI Japan	1,520	6.0%	15.2
MSCI Asia xJ	640	13.0%	13.9
MSCI EM	1,010	11.0%	13.0

S&P 500 Outlook at Yearend			
	2022	2023F	2024F
S&P 500	3840	4700	4700
Dividend Yield	1.75%	1.50%	1.60%
S&P EPS	\$222	\$223	\$242
Trailing PE	17.3	21.0	19.5
DPS	\$67	\$70	\$76

Next 5%+ Price Move
(Up / Balanced Risk / **Down**)
Risk of 10%+ correction within 12-months
(Low / Moderate / **High**)

Taxable U.S. Investor Asset Allocations		
Asset Class	Long-term	Current
Fixed Income/Cash	30-35%	33.5%
Equities	55-60%	55%
US Equities	40%	36%
S&P 500	35%	34.5%
Small Caps	0-10%	1.5%
Foreign DM	10-15%	11%
Foreign EM	0-10%	8%
Alternatives	10%	11.5%

Key CIO Views		
Macro signal:	Dec 2023	Dec 2024F
U.S. Fed Funds rate	5.25%-5.50%	4.5%-4.75%
10yr Treasury yield	4.20%	4.20%
US IG Corp Spreads	140bp	130bp
US High Yield Spreads	420bp	450bp
Crude Oil (WTI) \$/bbl	69	88
EUR / USD FX rate	1.06	1.10

GDP Forecasts			
Region	2022	2023F	2024F
US	2.1%	2.0%	0.8%
World	3.4%	3.0%	2.8%
Euro area	3.4%	0.7%	0.7%
China	3.0%	5.2%	4.7%
Japan	1.0%	2.1%	1.0%

* Q4/Q4 GDP growth.
EPS = Earnings Per Share
GDP = Gross Domestic Product
FX = Foreign Exchange
TIPS = Treasury Inflation Protected Securities
Source: DWS Investment Management GmbH. All opinions and claims are based upon data on 2/23/2024 and may not come to pass. This information is subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. All foreign asset exposures are not FX hedged unless otherwise noted. For illustrative purposes only.

S&P 500 Sector and Industry views

	Market	Allocated	Sector	2022	2023	2024	Overweight	2022	2023	2024	Equal weight	2022	2023	2024	Underweight	2022	2023	2024	Sector OW		
Over-weight	12.7%	17.0%	Health Care	17.9	22.3	19.2	Biotechnology Health Care Equipment & Supplies Pharmaceuticals	13.7 27.5 15.5	18.9 27.6 26.2	17.7 25.7 18.2	Health Care Providers & Services	17.5	16.3	15.3	Life Sciences Tools & Services	24.9	29.0	27.7	Sector OW	9.82%	
	3.7%	5.6%	Energy	8.3	11.2	10.9	Energy Equipment & Services Oil Gas & Consumable Fuels	22.0 7.9	14.8 11.0	13.0 10.8									Sector UW	-9.82%	
	9.0%	10.5%	Communication Services	27.5	22.1	19.2	Diversified Telecommunication Servi Entertainment Interactive Media & Services	7.2 68.9 38.5	7.8 38.2 27.5	8.4 26.6 22.6	Wireless Telecommunication Servi	79.4	23.4	18.5	Media	11.4	11.1	10.8	Industry OW	21.42%	
	6.0%	7.0%	Consumer Staples	21.6	20.9	20.2	Beverages Household Products Personal Care Products	24.8 27.9 19.0	22.2 25.7 24.2	20.9 24.5 24.2	Consumer Staples Distribution & R	26.6	26.1	24.7	Food Products Tobacco	14.5 12.0	15.2 11.7	15.2 11.5	Industry UW	-21.42%	
	2.1%	2.9%	Utilities	17.6	16.5	15.4	Electric Utilities	18.3	16.4	15.2	Gas Utilities Independent Power & Renewable E Multi-Utilities Water Utilities	20.0 9.6 16.2 27.0	18.1 9.2 16.9 24.2	17.1 8.5 15.8 22.9							
Equal-weight	8.7%	8.7%	Industrials	25.0	22.1	20.5	Aerospace & Defense Passenger Airlines Electrical Equipment	35.5 17.3 28.4	27.7 7.2 26.7	21.9 7.2 23.5	Construction & Engineering Industrial Conglomerates Machinery	36.7 24.4 22.1	33.6 24.4 17.4	28.0 20.9 17.9	Air Freight & Logistics Building Products Commercial Services & Supplies Ground Transportation Professional Services Trading Companies & Distributors	12.4 24.9 41.4 21.9 30.8 27.8	17.1 22.4 37.4 23.8 29.0 23.0	16.4 21.2 34.5 22.4 27.7 21.8			
	13.0%	13.0%	Financials	18.4	16.5	16.1	Banks Insurance	12.0 20.0	10.3 16.5	11.1 13.9	Financial Services	29.4	25.6	23.8	Capital Markets Consumer Finance	19.9 11.6	20.5 13.2	19.1 13.2			
Under-weight	2.3%	1.9%	Real Estate	18.0	18.1	17.9	Specialized REITs	18.8	19.3	18.4	Hotel & Resort REITs Industrial REITs Office REITs Retail REITs	11.5 25.9 11.7 13.1	10.9 23.6 11.9 13.2	10.6 24.7 13.0 13.8	Health Care REITs Residential REITs Real Estate Mgmt. & Development	19.4 16.8 26.6	18.9 15.8 36.8	17.9 15.6 36.8			
	2.3%	1.9%	Materials	15.4	19.9	20.4	Metals & Mining	9.2	13.9	16.9	Chemicals	17.2	21.5	21.1	Construction Materials Containers & Packaging	47.7 13.6	32.5 17.9	32.5 17.6			
	29.7%	25.5%	Information Technology	36.1	33.8	29.1	Communications Equipment IT Services	18.3 25.2	16.5 23.8	16.0 22.8	Software	43.9	37.9	33.2	Electronic Equipment Semiconductors Technology Hardware Storage & Per	22.6 42.6 28.5	24.0 40.4 28.8	22.7 30.7 26.4			
	10.5%	6.0%	Consumer Discretionary	40.3	28.1	26.7	Automobile Components	14	13.2	10.8	Distributors Hotels Restaurants & Leisure Leisure Products	16.8 66 11.3	17.3 25.1 17.5	16.7 23.6 13.1	Automobiles Household Durables Broadline Retail Multiline Retail Specialty Retail Textiles Apparel & Luxury Goods	21.9 10.7 -1982 22.4 24.6	23.6 11.5 55.7	25.9 12.4 45.4 21.8 23.2			
			Automobiles	21.9	23.6	25.9															
Broadline Retail			-1982	55.7	45.4																
CD ex Auto & Broadline Retail			27.3	21.8	20.9																
Aggregate PE: DWS View							Overweight	17.5	18.3	16.7	Equalweight	29.1	25.5	23.7	Underweight	27.9	27.1	24.6			
S&P 500								5087			2022, 2023 & 2024 EPS	219.41	223.00	242.00	2022, 2023 & 2024 PE	23.2	22.8	21.0			
											Bottom-up Consensus EPS	219.41	224.32	246.10	Bottom-up Cons. PE	23.2	22.7	20.7			
															2022, 2023 & 2024 Ex Energy PE	23.7	23.7	21.6			
															Bottom-up Cons. Ex Energy PE	25.0	23.7	21.3			

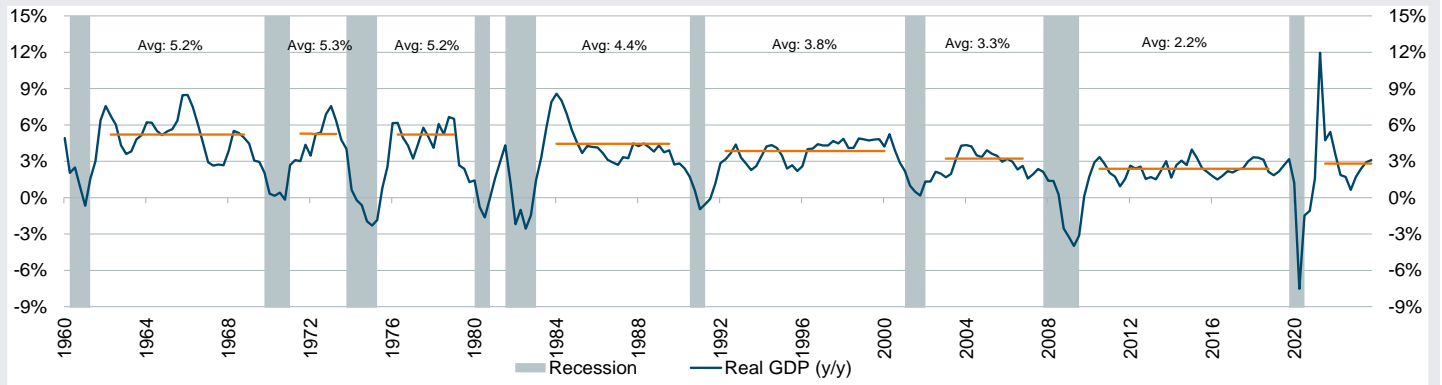
Macro tilts:		
Cyclicals		-5.91%
Defensive		5.91%
Value (Financial+Energy)		1.42%
Growth		1.13%
Growth ex Health Care		-3.29%
Consumer		-3.88%
Services/experience		-0.16%
Disc. Goods		-4.66%
Retailing		-2.33%
Durables		-2.33%
Staples Goods/Retail		0.94%
Commodity		1.51%
Energy		1.68%
Metals/Chemicals		-0.17%
Capex		6.77%
Capacity additions		3.10%
Productivity		3.67%
Health Care		4.42%
Innovation		3.45%
Marketers		2.23%
Insurers		-0.23%
Financials		-0.26%
Up rates/low spreads		1.04%
Capital Markets		-2.97%
Insurance		1.67%
Bond Substitutes		0.84%
Weak FX \$ plays		1.01%
High R&D plays		2.76%
Transports		-0.55%
Geopolitical risk		2.74%
Weak oil prices		0.67%
Inflation shock		0.98%
Stagflation Protection		4.68%
Domestic GDP		-3.48%
Global GDP		-4.53%
Consumer TMT		0.30%
Trade sensitive		-1.27%

More details on sector earnings forecast and sector intrinsic valuation can be found towards the back of this note.

Price as of 2/23/2024

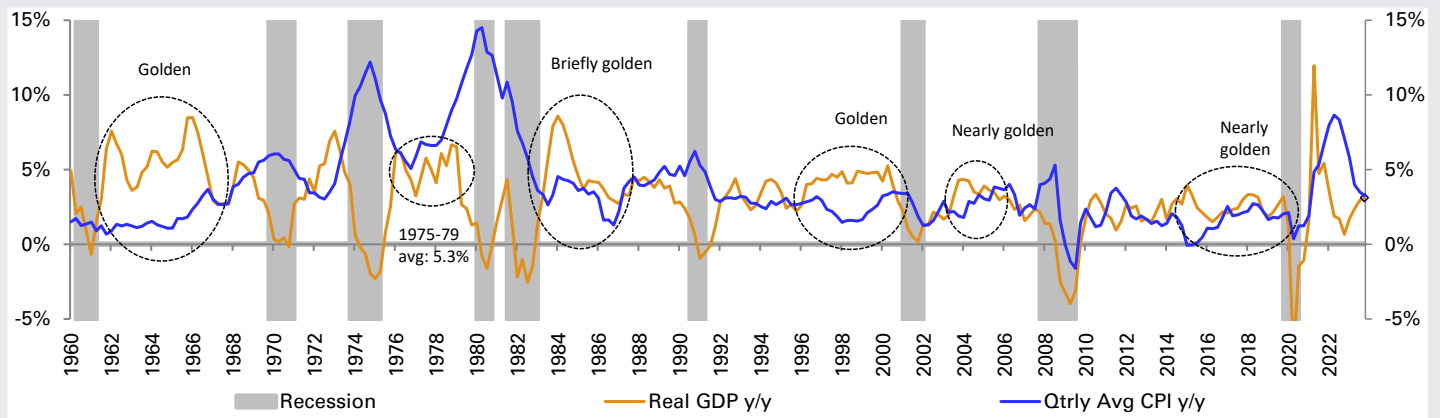
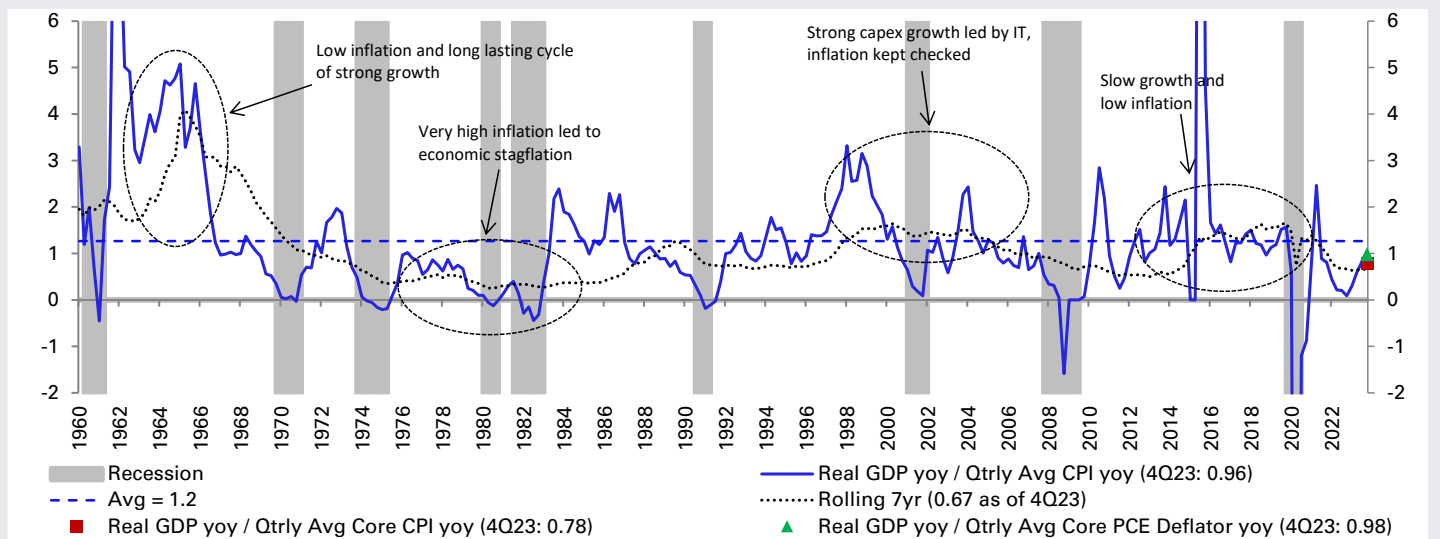
Source: DWS Investment Management GmbH

U.S. economic cycles



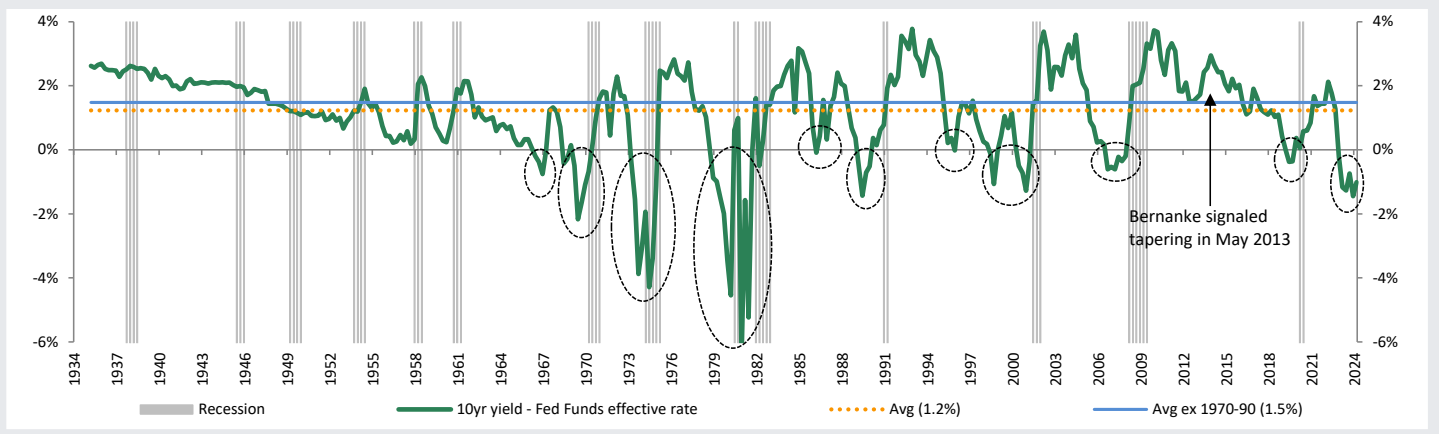
Source: Haver, DWS Investment GmbH as of February 2024. Past performance may not be indicative of future results.

The golden ratio: real GDP growth / CPI



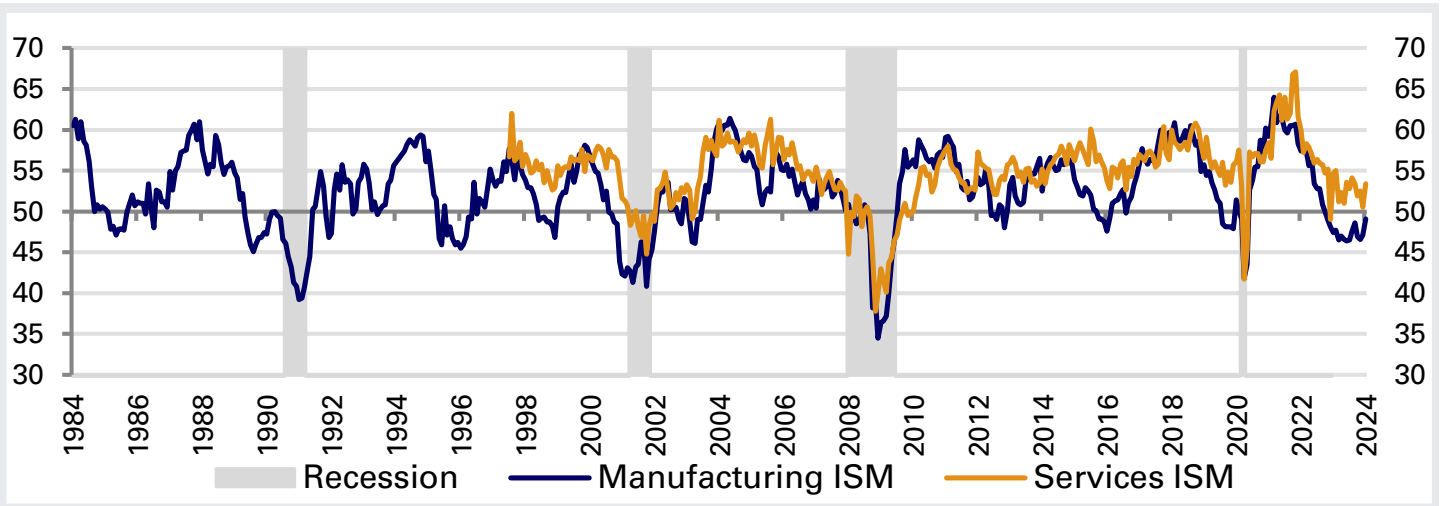
Source: Haver, DWS Investment GmbH as of 4Q 2023. Past performance may not be indicative of future results.

Yield curve



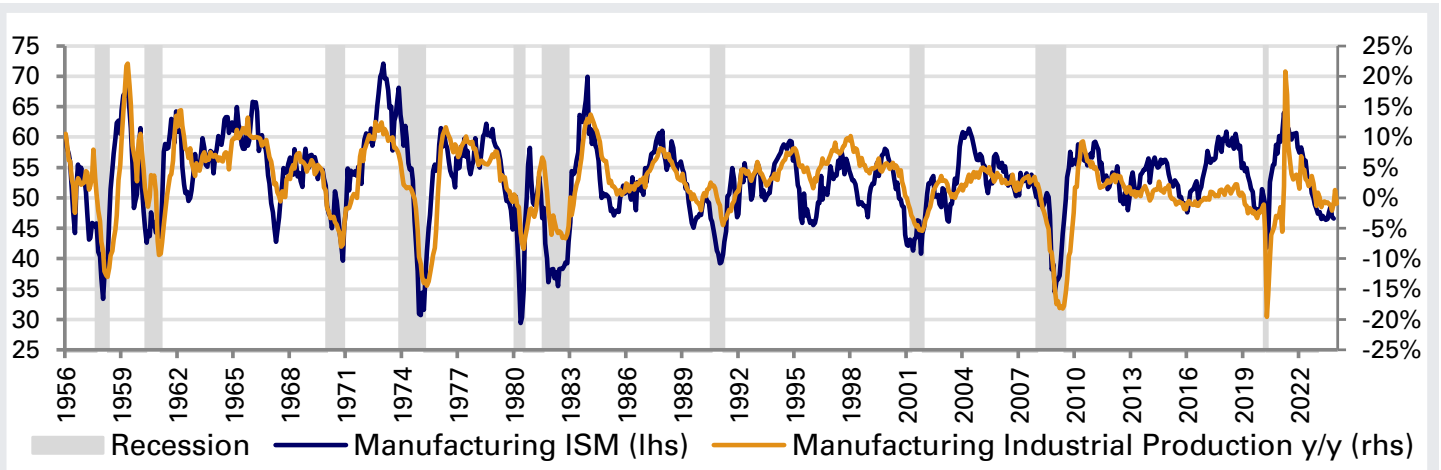
Source: Haver, DWS Investment GmbH as of 2/21/2024. Past performance may not be indicative of future results.

U.S. manufacturing and services ISM



Source: Haver, DWS Investment GmbH as of February 2024. Past performance may not be indicative of future results.

U.S. manufacturing ISM vs. manufacturing industrial production



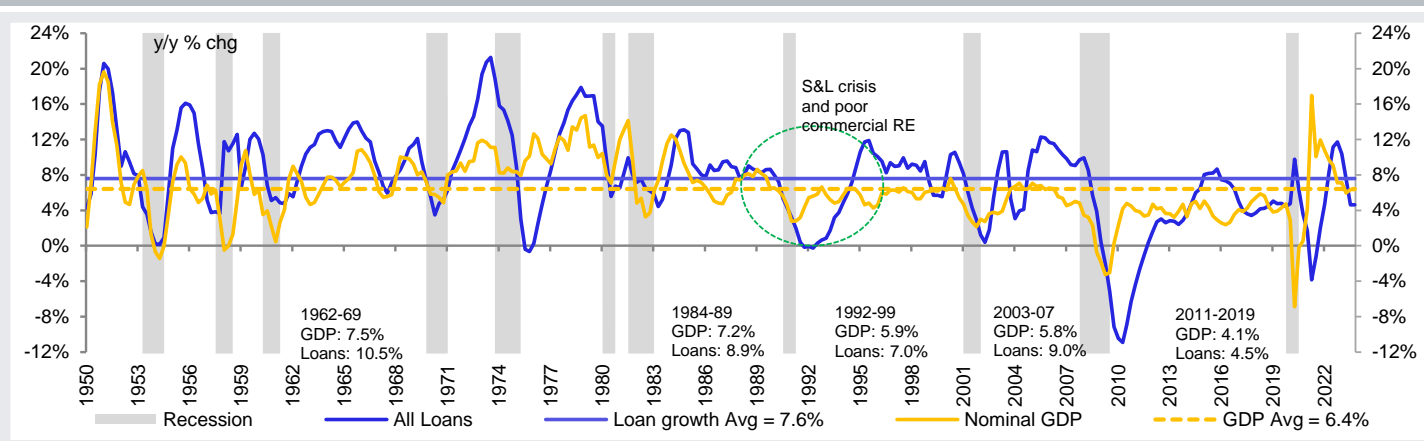
Source: Haver, DWS Investment GmbH as of February 2024. Past performance may not be indicative of future results.

Global purchasing managers indices (PMI): Indices for the manufacturing industry

	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
U.S.	48.4	47.4	47.7	46.3	47.1	46.9	46.0	46.4	47.6	49.0	46.7	46.7	47.4
Germany	47.1	47.3	46.3	44.7	44.5	43.2	40.6	38.8	39.1	39.6	40.8	42.6	45.4
France	49.2	50.5	47.4	47.3	45.6	45.7	46.0	45.1	46.0	44.2	42.8	42.9	43.2
Italy	48.5	50.4	52.0	51.1	46.8	45.9	43.8	44.5	45.4	46.8	44.9	44.4	45.3
UK	45.3	47.0	49.3	47.9	47.8	47.1	46.5	45.3	43.0	44.3	44.8	47.2	47.3
Sweden	45.6	46.7	47.2	45.5	45.8	40.9	45.0	48.0	46.1	43.5	46.2	48.8	47.1
Japan	48.9	48.9	47.7	49.2	49.5	50.6	49.8	49.6	49.6	48.5	48.7	48.3	48.0
Singapore	49.7	49.8	50.0	49.9	49.7	49.5	49.7	49.8	49.9	50.1	50.2	50.3	50.5
Taiwan	44.6	44.3	49.0	48.6	47.1	44.3	44.8	44.1	44.3	46.4	47.6	48.3	48.8
South Korea	48.2	48.5	48.5	47.6	48.1	48.4	47.8	49.4	48.9	49.9	49.8	50.0	51.2
China (HSBC)	49.0	49.2	51.6	50.0	49.5	50.9	50.5	49.2	51.0	50.6	49.5	50.7	50.8
India	57.8	55.4	55.3	56.4	57.2	58.7	57.8	57.7	58.6	57.5	55.5	56.0	56.5
Brazil	44.2	47.5	49.2	47.0	44.3	47.1	46.6	47.8	50.1	49.0	48.6	49.4	48.4
Global													
Manufacturing Ind.	48.7	49.1	49.9	49.6	49.6	49.5	48.7	48.6	49.0	49.2	48.8	49.3	49.0
Non-manufacturing	48.0	50.0	52.5	54.3	55.3	55.3	53.8	52.6	51.0	50.7	50.4	50.6	51.6
Global Composite	48.2	49.7	52.1	53.3	54.1	54.3	52.6	51.6	50.6	50.5	50.0	50.5	51.0

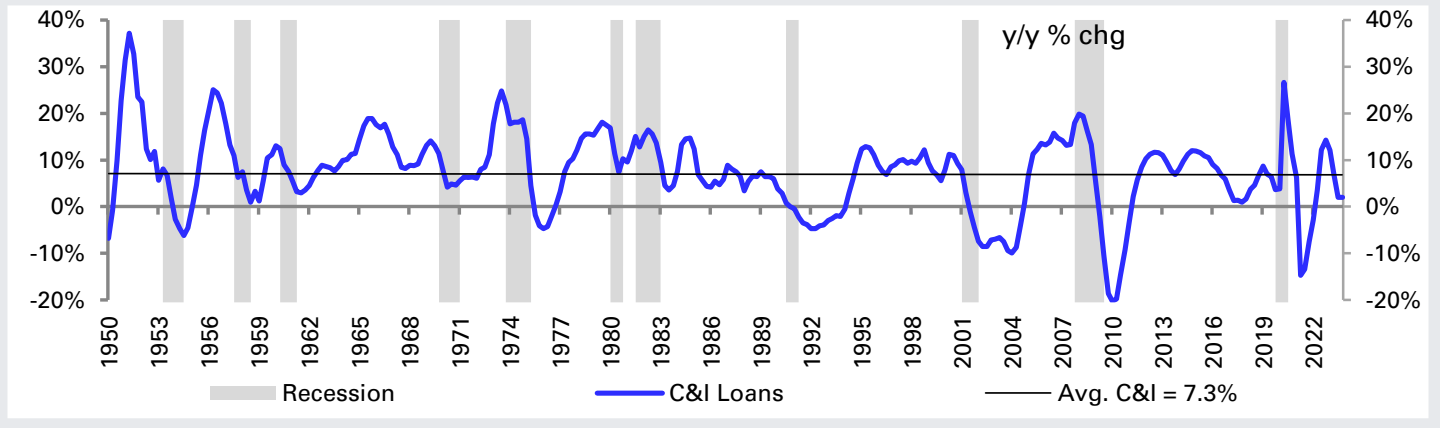
Source: Haver, DWS Investment GmbH as of February 2024. Past performance may not be indicative of future results.

U.S. loan growth vs. GDP growth



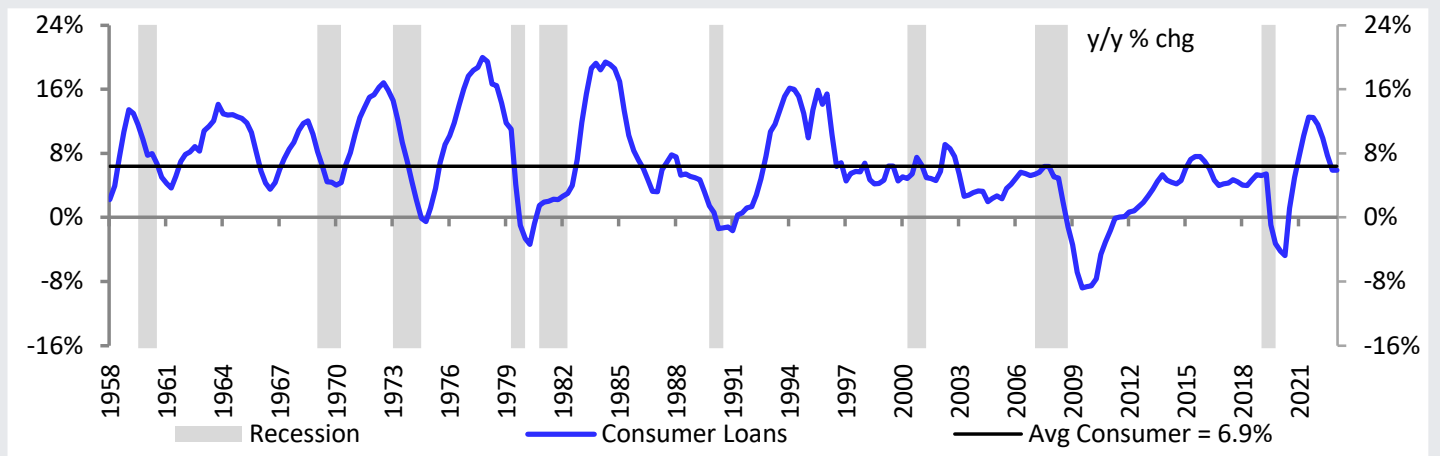
Source: Haver, DWS Investment GmbH as of 4Q 2023. Past performance may not be indicative of future results.

U.S. C&I loan growth



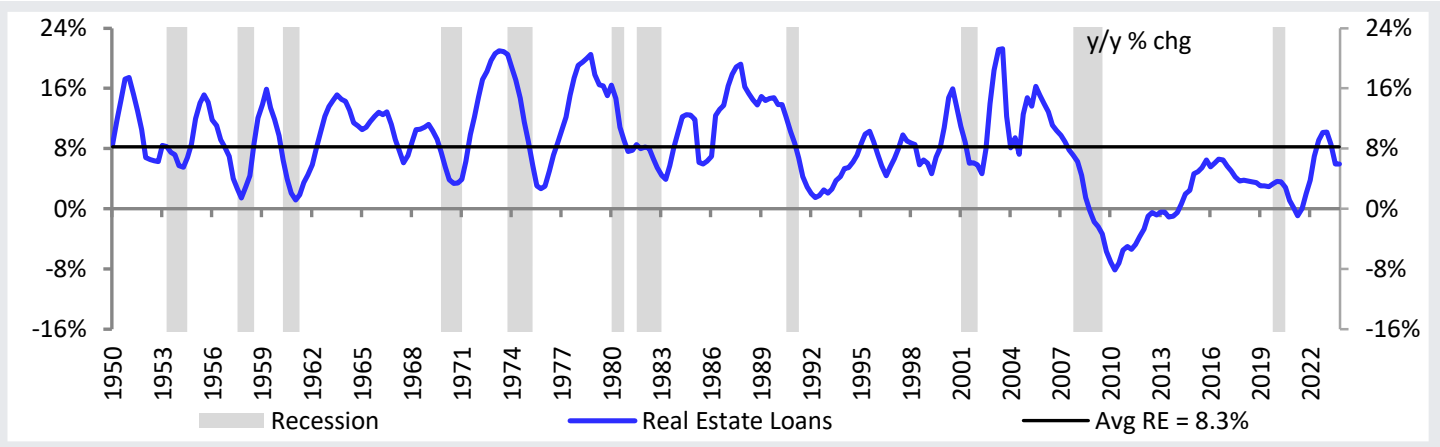
Source: Haver, DWS Investment GmbH as of 4Q 2023. Past performance may not be indicative of future results.

U.S. consumer loan growth



Source: Haver, DWS Investment GmbH as of 4Q 2023. Past performance may not be indicative of future results.

U.S. real estate loan growth

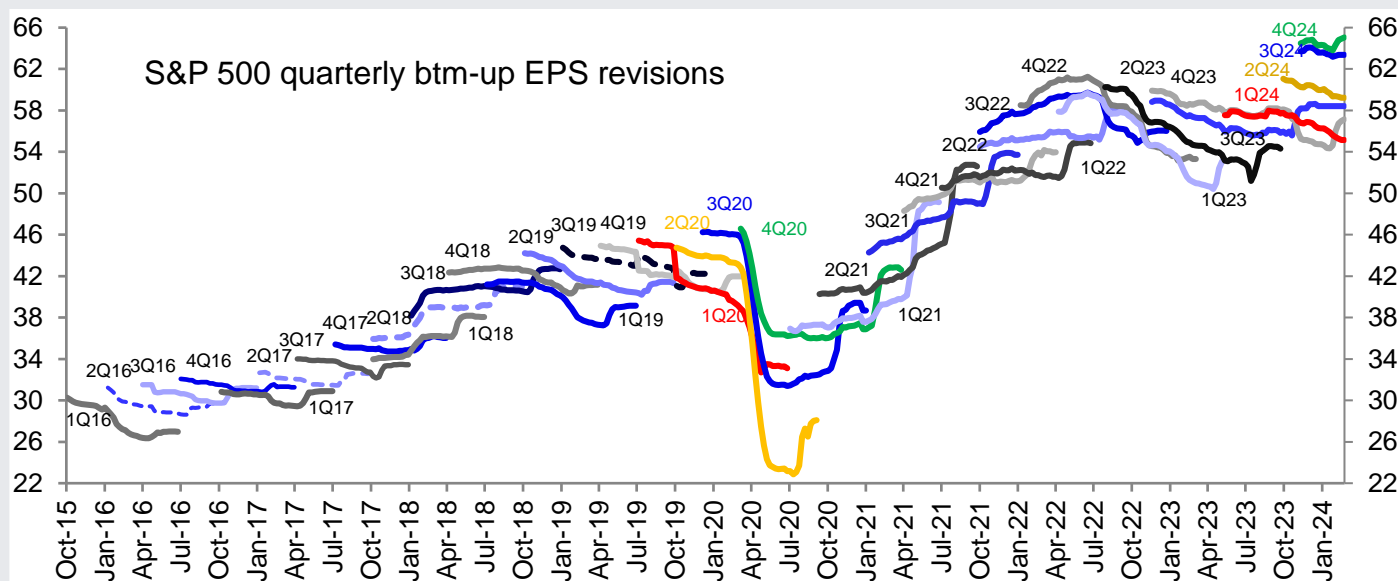


Source: Haver, DWS Investment GmbH as of 4Q 2023. Past performance may not be indicative of future results.

S&P 500 4Q EPS tracker:

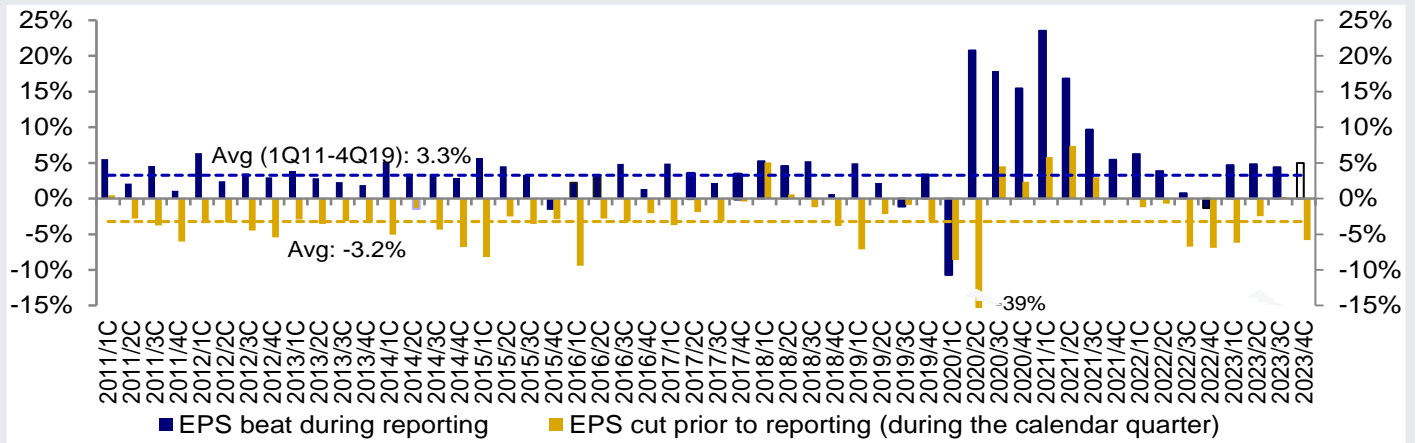
- This data reflects the 444 S&P 500 companies or 93% of index earnings that have reported as of Wednesday February 22nd.
- Bottom-up blended 4Q EPS is \$57.14 (actual results for companies reported and consensus estimates for the rest), +8.5% year-over-year (y/y). Blended sales growth is +2.5% y/y. Blended pro-forma net margin is 12.3%, vs. 12.6% in 3Q23 and 11.6% a year ago.
- S&P 500 has been in a profit recession in the last two years outside of the Great 8. S&P EPS growth was +2.5% in the last two years (4Q23 vs. 4Q21). S&P EPS ex the Great 8 was down by -0.3% 4Q23 vs. 4Q21. The great 8 had a +11.9% EPS growth in the same period.
- S&P 500 ex the Great 8's 2023 and 2024 consensus EPS have been cut by 8.0% and 7.8% since 2023 start. The Great 8's 2023 and 2024 consensus EPS have been raised by 13% and 15% since 2023 start.
- 75% of reporting companies beat on earnings per share (EPS) and 22% missed (the rest in-line), with an aggregate surprise of +5.0%, +6.0% ex Financials. Historic average EPS beat is +3.3% (2011-2019 average). 45% beat on sales and 27% missed, with an aggregate surprise of +0.9%, +1.1% ex Financials. Our measures of beat / miss ratios and magnitudes are based on analysts' consensus estimates at the end of the fiscal quarter for each company.
- Our standing 4Q EPS estimate is \$58, which proves to be \$1 too high.
- Bottom-up consensus estimate for 2023 S&P EPS is now \$224.32. Our estimate is \$223. Bottom-up 2024 consensus EPS is now \$246.10. Our estimate is \$242 = \$57 + \$59 + \$62 + \$64, up about 8.5% y/y. This assumes a very "soft recession" with very strong EPS growth from Tech and Communications.
- By sector, 4Q blended EPS y/y growth is strongest at Communication Services (+54% y/y), Consumer Discretionary (32%), Utilities (31%), Tech (23%) and Financials (7.9%). EPS y/y growth is weakest at Energy (-22% y/y), Materials (-20%), Health Care (-15%) and Real Estate (-0.7%).
- 4Q blended sales y/y growth is strongest at Tech (+8.0% y/y), Health Care (7.1%), Real Estate (7.1%), Communication Services (6.6%), Consumer discretionary (4.9%) and Sales y/y growth is weakest at Energy (-9.6% y/y), Utilities (-5.4%), Materials (-5.3%) and Financials (-2.3%).
- Valuations at the S&P are reasonable if excluding the Great 8 (AAPL, AMZN, GOOG/GOOGL, META, MSFT, NFLX, NVDA, TSLA). S&P 500 excluding the Great 8 PE on 2023 consensus EPS is 19.7x, PE of the Great 8 is 37.2x. Overall S&P PE is 22.9x.
- We see the Great 8 at risk to overly demanding PEs, we see the rest of the S&P 500 at risk to a cyclical downturn. Both are at risk to higher Treasury yields.

S&P 500 quarterly EPS revision



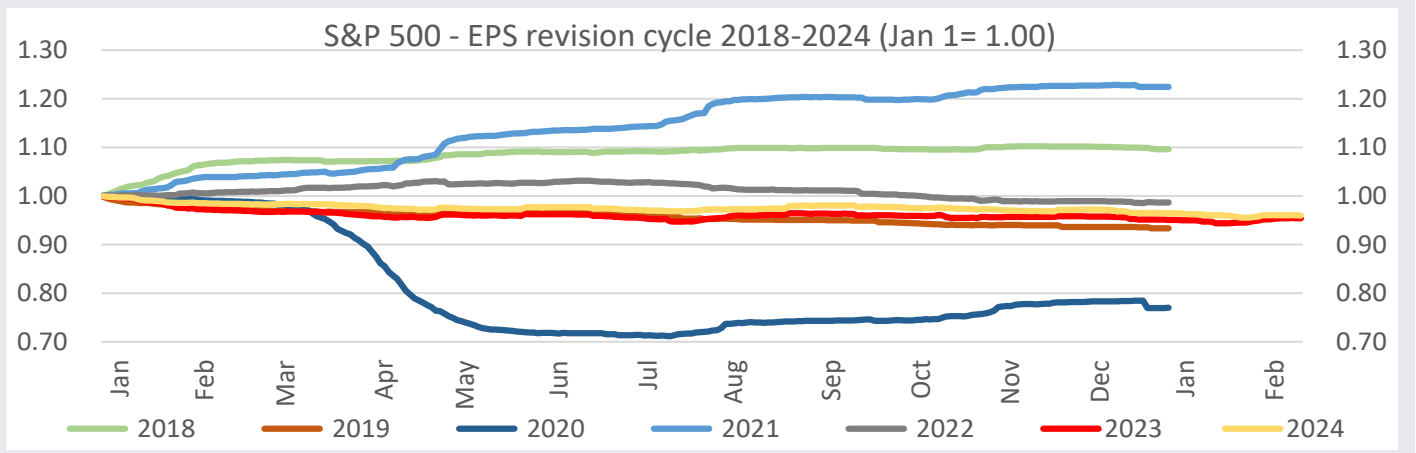
Source: Factset, IBES, DWS Investment GmbH as of 2/23/2024. Past performance may not be indicative of future results. Forecasts are not a reliable indicator of future returns.

S&P 500: EPS cut during the calendar quarter vs. EPS beat during earnings season



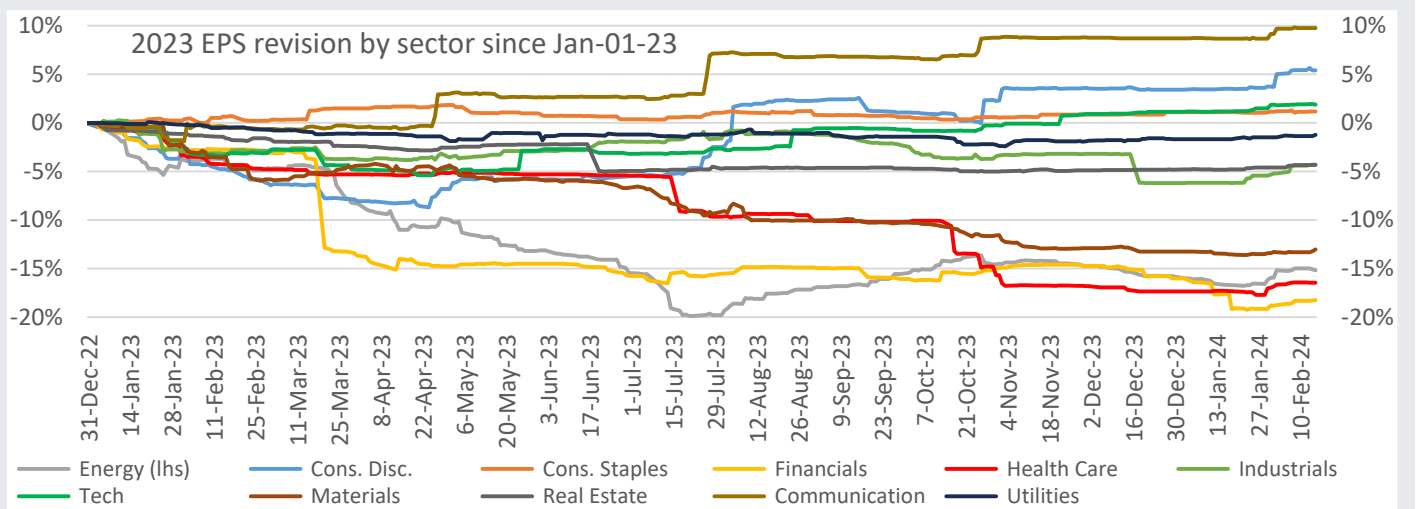
Source: Factset, DWS Investment GmbH as of 2/23/2024. Past performance may not be indicative of future results.

S&P 500 annual EPS revision



Source: Factset, IBES, DWS Investment GmbH as of 2/23/2024. Past performance may not be indicative of future results.

S&P 500 2023 EPS revision by sector



Source: Factset, IBES, DWS Investment GmbH as of 2/23/2024. Past performance may not be indicative of future results.

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S&P 500: 4Q23 earnings season summary statistics

	4Q23 Summary (Based on reported companies)										
	% of EPS reported	# Cos reported	EPS (% of co's)		EPS surprise (%)	EPS y/y (%)	Sales (% of co's)		Sales surprise (%)	Sales y/y (%)	
			% beat	% miss			% beat	% miss			
S&P 500	92.7%	444	73%	23%	5.1%	8.0%	44%	27%	1.0%	2.7%	
S&P 500 ex. Financials & Real Est	93.6%	348	76%	22%	6.2%	8.4%	46%	27%	1.2%	3.4%	
S&P 500 ex. Energy	92.5%	423	75%	21%	5.3%	11.7%	45%	25%	1.4%	4.2%	
S&P ex. Tech	92.9%	387	71%	25%	4.6%	3.9%	45%	29%	0.9%	2.1%	
S&P ex. Energy, Financials & Real Est	93.4%	327	79%	19%	6.5%	13.2%	47%	25%	1.7%	5.1%	
Communication Services	100.3%	20	65%	30%	3.7%	45.8%	60%	5%	1.5%	7.3%	
Consumer Discretionary	87.3%	41	80%	22%	13.5%	36.9%	41%	39%	2.8%	5.7%	
Consumer Staples	85.5%	28	89%	7%	5.6%	8.5%	36%	46%	0.9%	3.8%	
Energy	95.4%	21	33%	67%	2.7%	-23.1%	33%	57%	-3.1%	-10.1%	
Financials	90.3%	69	70%	29%	0.9%	7.3%	46%	29%	-0.8%	-2.3%	
Health Care	97.4%	59	78%	19%	6.5%	-14.5%	71%	7%	3.2%	7.3%	
Industrials	99.3%	73	79%	18%	7.0%	4.9%	45%	22%	1.7%	2.4%	
Information Technology	92.2%	57	89%	9%	6.9%	24.5%	39%	14%	1.6%	8.0%	
Materials	99.1%	28	61%	36%	1.7%	-19.8%	43%	36%	0.7%	-5.3%	
Real Estate	82.2%	27	48%	22%	0.6%	0.6%	15%	19%	1.3%	6.6%	
Utilities	74.4%	21	67%	33%	2.1%	21.8%	24%	67%	-11.9%	-4.4%	
Great 8 *	100.0%	9	78%	22%	7.5%	63.7%	78%	11%	1.8%	15.0%	
S&P ex Great 8	90.6%	438	73%	23%	4.4%	-2.6%	43%	27%	0.8%	1.0%	

* # Beat, # miss and weighted surprise % is based on EPS and sales estimate as of 3/31/2023 (as of 3/1/2023 for pre-season reporters)

EPS is considered beat or miss when the difference between actual and estimate as of 3/31/2023 is more than \$0.01 (3/1/2023 for pre-season reporters)

Sales is considered beat or miss when the difference between actual and estimate as of 3/31/2023 is more than \$20 million (3/1/2023 for pre-season reporters)

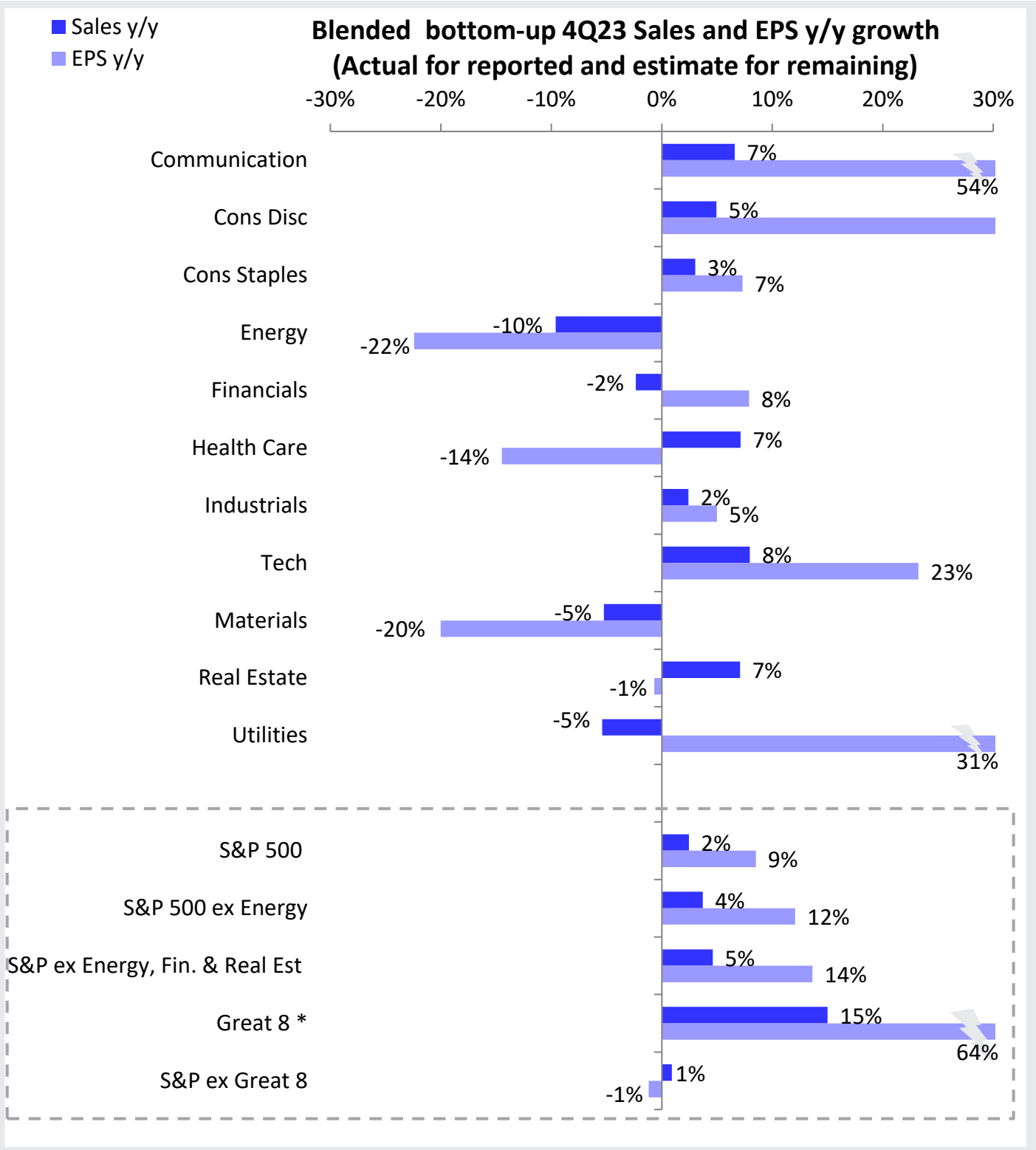
Beats statistics elsewhere often based on estimates the day before.

Source: Factset, DWS Investment GmbH as of 2/23/2024. Past performance may not be indicative of future results.

S&P 500 EPS & Sales growth and Net Margins by sector (4Q23 is blended with actual for reported and consensus for the rest)

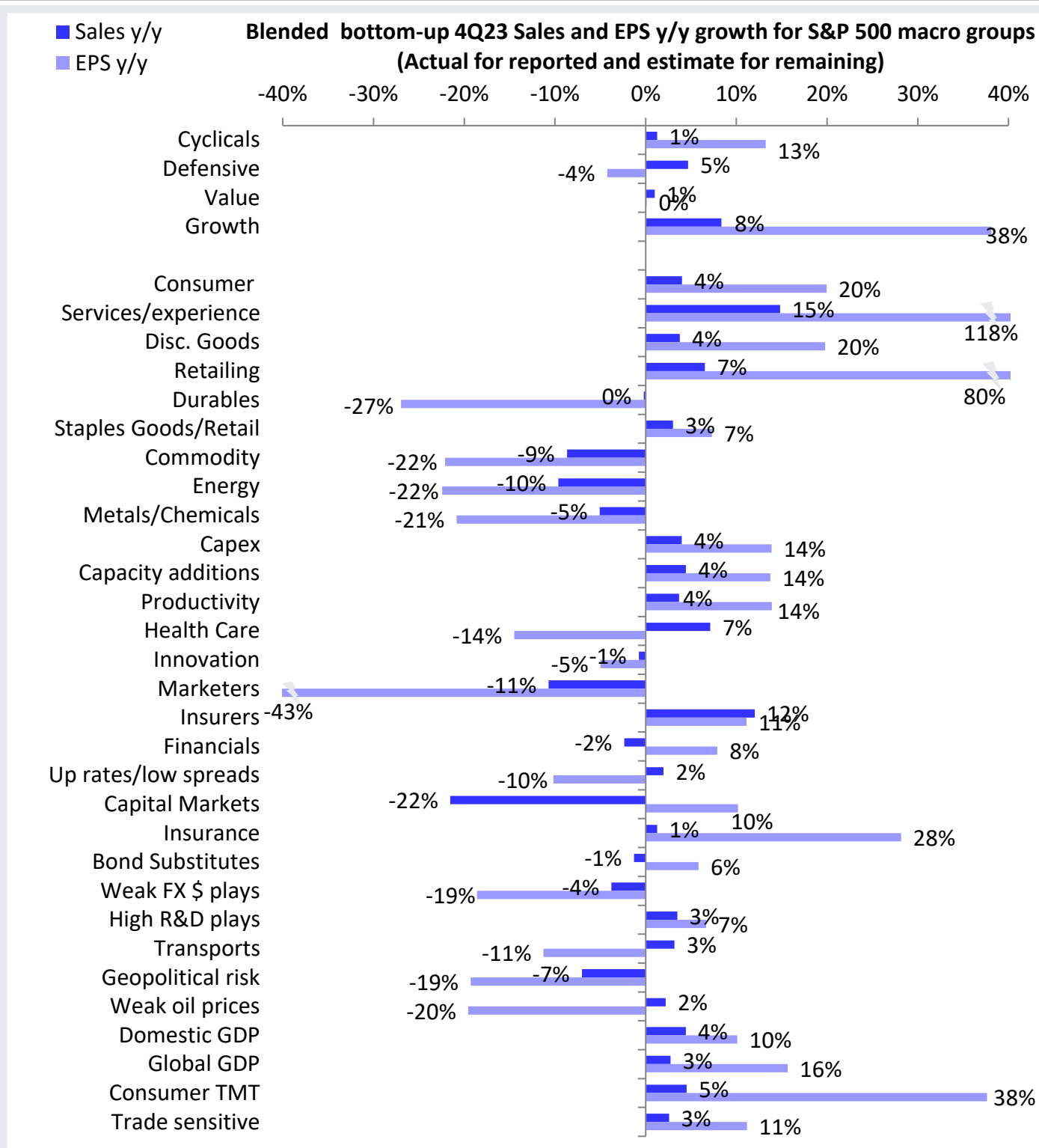
	2019					2020					2021					2022					2023				
	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	
EPS growth (y/y)																									
S&P 500	2.6%	1.5%	1.2%	3.6%	0.0%	-12.3%	-31.8%	-7.3%	3.1%	0.0%	48.1%	91.5%	41.1%	32.2%	0.0%	10.6%	9.1%	4.6%	-2.8%	0.0%	-0.2%	-3.3%	6.6%	8.5%	
S&P 500 ex. Financials & Real Est	1.2%	-0.9%	0.4%	2.1%	2.2%	-6.0%	-27.5%	-8.4%	-0.5%	-9.4%	36.0%	80.4%	43.7%	38.8%	48.3%	17.9%	15.9%	8.4%	-1.6%	6.6%	-1.7%	-5.9%	3.8%	9.0%	
S&P 500 ex. Energy	3.8%	2.2%	3.6%	6.5%	0.3%	-11.9%	-25.8%	-3.5%	6.6%	-7.4%	49.3%	77.8%	33.7%	24.5%	46.1%	4.9%	-1.4%	-3.1%	-7.1%	11.5%	-2.0%	3.4%	12.1%	12.1%	
S&P 500 ex. Tech	4.9%	3.2%	2.4%	1.7%	4.0%	-16.9%	-38.4%	-9.8%	-0.4%	-5.4%	49.9%	103.8%	41.3%	34.5%	41.4%	9.9%	11.3%	6.2%	-0.7%	-0.4%	1.9%	-5.0%	4.7%	4.7%	
S&P ex. Energy, Fin & Real Est	2.8%	-0.1%	3.4%	5.6%	1.3%	-5.2%	-19.4%	-3.4%	3.8%	-29.0%	37.0%	64.1%	34.0%	28.5%	88.9%	10.4%	2.3%	-1.3%	-7.1%	17.1%	-4.3%	2.1%	10.3%	13.6%	
S&P ex. Energy, Fin, Real Est, Healthcare	1.0%	-3.0%	2.1%	4.5%	2.5%	-8.0%	-25.8%	-6.4%	3.0%	-2.0%	39.8%	79.4%	35.8%	28.9%	37.2%	8.5%	0.6%	-1.6%	-7.9%	2.6%	-0.7%	11.0%	18.8%	21.7%	
Communication Services	8.9%	6.8%	0.8%	8.8%	1.6%	-8.5%	-16.4%	0.0%	9.6%	-3.8%	53.9%	66.6%	40.9%	17.4%	15.6%	-4.6%	-14.1%	-21.7%	-25.8%	11.5%	-10.1%	15.5%	46.0%	53.9%	
Consumer Discretionary	11.8%	4.7%	2.4%	1.6%	0.0%	-48.0%	-70.7%	-0.5%	-15.2%	0.0%	169.7%	358.1%	18.4%	85.3%	0.0%	-25.7%	-8.3%	14.9%	-14.9%	0.0%	52.7%	51.9%	40.0%	32.4%	
Cons. Disc. ex. Auto	15.0%	6.9%	3.4%	14.4%	8.9%	-37.8%	-57.2%	-13.2%	-31.3%	5.0%	107.5%	215.3%	35.8%	102.7%	45.4%	-36.1%	-18.8%	7.7%	-27.6%	7.7%	78.1%	58.9%	53.1%	62.1%	
Cons. Disc. ex. Broadline Retail	3.2%	4.3%	5.1%	0.7%	4.7%	-53.1%	-91.6%	-15.7%	-34.7%	-29.4%	168.8%	1594.8%	38.4%	83.0%	92.8%	14.2%	24.1%	21.3%	31.4%	-14.6%	20.7%	24.4%	21.1%	2.6%	
Cons. Disc. ex. Auto & Broadline Retail	4.5%	6.7%	6.8%	15.8%	-0.8%	-41.6%	-79.7%	-32.7%	-54.5%	-43.8%	84.1%	505.9%	74.7%	113.7%	115.5%	17.3%	15.6%	14.4%	22.9%	26.5%	26.6%	23.4%	29.8%	21.2%	
Consumer Staples	-0.2%	0.0%	3.2%	3.7%	1.1%	4.4%	1.8%	9.5%	9.3%	-28.4%	19.6%	16.4%	6.7%	7.1%	94.0%	4.3%	-3.7%	-0.9%	-2.5%	-6.5%	2.6%	10.4%	8.5%	7.3%	
Energy	-24.3%	-12.9%	-37.2%	-42.5%	1.7%	-22.2%	-168.6%	-108.9%	-101.2%	7.9%	9.9%	249%	2084%	23957%	13%	251.9%	300.0%	143.4%	61.3%	9.2%	2.7%	-47.9%	-32.7%	-22.4%	
Financials	7.4%	10.6%	4.3%	11.3%	-30.2%	-35.6%	-49.8%	-3.3%	18.2%	-112.2%	118.0%	164.0%	34.4%	12.3%	-1313%	-13.6%	-15.8%	-12.0%	-9.3%	156.5%	7.0%	9.5%	22.5%	7.9%	
Health Care	10.1%	12.1%	8.7%	10.2%	9.6%	4.6%	3.1%	8.1%	7.2%	-17.5%	28.4%	26.4%	28.1%	26.9%	62.9%	16.9%	8.3%	-0.1%	-3.9%	-12.6%	-14.9%	-26.3%	-17.9%	-14.5%	
Industrials	8.4%	-8.9%	2.4%	-9.3%	9.9%	-25.8%	-7.8%	-46.7%	-29.3%	8.0%	-3.3%	351.2%	75.4%	38.2%	28.4%	35.4%	29.8%	19.9%	39.0%	6.3%	24.7%	14.8%	10.7%	5.0%	
Industrials ex. Aerospace & Defense	6.9%	2.9%	3.8%	-0.3%	-4.6%	-25.3%	-33.8%	-50.6%	-32.1%	-51.7%	-7.8%	342.8%	88.1%	50.7%	83.6%	42.1%	42.6%	30.8%	27.3%	32.8%	24.7%	12.8%	6.1%	2.3%	
Industrials ex. Transportation	8.1%	-16.9%	1.7%	-12.0%	4.2%	-14.2%	-36.0%	-11.7%	5.1%	-47.2%	24.9%	107.6%	23.1%	4.7%	79.7%	12.0%	6.1%	4.7%	37.1%	34.5%	16.9%	17.8%	22.7%	11.9%	
Industrials ex. Aerospace & Defense and T	5.6%	0.6%	2.4%	2.3%	-7.0%	-7.8%	-37.6%	-3.6%	11.5%	-21.0%	28.4%	72.4%	20.3%	11.3%	29.2%	12.6%	14.7%	16.6%	20.4%	12.4%	15.5%	15.3%	17.4%	9.8%	
Information Technology	-7.1%	-6.1%	-3.8%	11.4%	-3.2%	10.8%	2.2%	4.1%	16.0%	-46.2%	41.2%	52.6%	40.3%	24.8%	68.0%	13.2%	-0.6%	-2.2%	-10.0%	29.1%	-8.2%	-4.9%	15.2%	23.2%	
Materials	-12.6%	-20.1%	68.6%	-13.0%	2.2%	-7.5%	-34.9%	-13.8%	13.4%	16.2%	49.7%	139.7%	97.2%	72.5%	32.0%	52.2%	21.9%	-7.6%	-20.5%	3.8%	-22.7%	-26.8%	-18.7%	-20.0%	
Real Estate	3.6%	1.5%	3.5%	-0.9%	-10.5%	-1.8%	-12.7%	-6.0%	1.9%	-6.2%	8.9%	30.1%	19.1%	10.5%	90.7%	17.0%	10.9%	10.5%	9.1%	8.9%	-2.3%	-0.2%	-1.0%	-0.7%	
Utilities	0.0%	1.0%	7.0%	16.2%	2.5%	3.5%	6.2%	-2.4%	-5.2%	4.5%	-4.5%	8.3%	10.2%	-0.2%	39.0%	24.5%	-3.8%	-7.7%	-3.8%	-17.2%	-26.7%	-4.6%	6.1%	30.8%	
Sales growth (y/y)																									
S&P 500	5.8%	5.2%	4.0%	7.8%	5.7%	-1.8%	-10.3%	-2.3%	-0.5%	-3.7%	9.5%	21.8%	13.9%	15.2%	15.0%	13.6%	12.2%	13.0%	9.0%	11.9%	9.1%	7.1%	5.0%	2.5%	
S&P 500 ex. Financials & Real Est	3.2%	2.9%	1.9%	6.2%	3.6%	-2.8%	-12.0%	-2.6%	1.4%	-4.0%	11.9%	26.6%	17.4%	16.5%	19.0%	15.4%	13.3%	12.5%	8.0%	11.6%	6.8%	4.5%	4.0%	3.1%	
S&P 500 ex. Energy	3.7%	3.4%	3.5%	7.7%	4.5%	-1.6%	-6.7%	0.2%	4.0%	-1.1%	12.3%	20.6%	13.5%	11.5%	14.2%	10.3%	6.7%	8.7%	7.2%	8.1%	9.2%	10.7%	7.2%	3.7%	
S&P 500 ex. Tech	3.9%	3.4%	2.6%	6.6%	4.2%	-2.9%	-12.3%	-2.7%	0.2%	-5.0%	10.6%	24.9%	15.8%	15.7%	17.0%	13.5%	12.3%	12.5%	9.1%	11.6%	9.2%	6.8%	4.9%	1.8%	
S&P ex. Energy, Fin & Real Est	3.5%	3.4%	3.2%	7.6%	4.4%	-2.0%	-7.4%	0.7%	4.7%	-1.1%	12.6%	22.1%	13.7%	11.7%	15.7%	11.8%	7.4%	8.8%	7.3%	8.1%	8.1%	9.6%	6.8%	4.6%	
S&P ex. Energy, Fin, Real Est, Healthcare	0.6%	0.4%	0.0%	6.1%	1.5%	-5.3%	-10.4%	-2.0%	2.5%	-4.5%	13.4%	22.9%	12.9%	10.9%	15.9%	10.6%	6.3%	9.9%	8.3%	7.8%	9.4%	11.1%	7.0%	3.8%	
Communication Services	13.1%	15.7%	11.6%	4.2%	9.7%	4.1%	-7.4%	0.4%	-6.9%	-0.9%	8.6%	22.4%	13.2%	22.2%	19.7%	7.7%	7.2%	5.4%	4.5%	2.4%	5.2%	3.5%	6.0%	6.6%	
Consumer Discretionary	4.4%	5.4%	5.7%	3.0%	4.3%	-3.3%	-15.9%	4.9%	11.2%	6.2%	23.0%	39.0%	12.1%	12.3%	14.1%	10.3%	12.3%	15.2%	10.7%	11.0%	8.7%	9.6%	6.8%	4.9%	
Cons. Disc. ex. Auto	7.0%	6.7%	8.2%	7.9%	7.0%	-1.4%	-4.1%	5.4%	12.2%	11.9%	28.1%	33.3%	18.2%	14.5%	15.7%	10.1%	9.1%	10.8%	7.2%	7.7%	6.4%	6.2%	6.4%	6.4%	
Cons. Disc. ex. Broadline Retail	2.1%	2.8%	2.3%	-1.2%	1.0%	-9.5%	-26.7%	-2.5%	1.5%	-3.5%	17.0%	44.4%	11.1%	13.5%	11.8%	11.6%	14.3%	15.8%	11.6%	11.8%	8.5%	9.2%	4.9%	1.5%	
Cons. Disc. ex. Auto & Broadline Retail	4.3%	3.4%	4.1%	3.5%	3.2%	-9.8%	-17.5%	-4.8%	-0.4%	3.2%	21.5%	37.2%	19.6%	17.5%	12.9%	11.8%	10.2%	9.3%	6.8%	7.1%	5.0%	4.1%	3.5%	2.3%	
Consumer Staples	2.7%	2.1%	3.3%	3.0%	2.7%	6.1%	1.6%	3.5%	6.4%	7.9%	5.7%	13.1%	11.9%	10.8%	11.2%	10.3%	9.3%	9.2%	6.0%	6.6%	5.0%	2.7%	3.3%	3.0%	
Energy	0.5%	-0.7%	-3.0%	-6.2%	-3.9%	-10.9%	-53.7%	-34.2%	-31.4%	-32.8%	4.3%	11.0%	7.3%	9.0%	6.6%	57.3%	77.1%	48.8%	14.0%	47.3%	-3.9%	-28.8%	-15.8%	-9.6%	
Financials	4.9%	3.4%	5.1%	8.2%	5.3%	0.1%	-2.6%	-2.1%	0.0%	-0.6%	11.4%	12.3%	11.9%	9.7%	5.0%	1.1%	1.7%	7.7%	6.3%	7.5%	16.1%	18.4%	9.6%	-2.3%	
Health Care	14.6%	14.8%	15.6%	13.2%	15.7%	9.2%	2.7%	9.8%	12.1%	10.3%	10.4%	19.9%	16.1%	14.6%	15.2%	15.4%	10.5%	5.8%	4.4%	9.1%	4.1%	5.4%	6.2%	7.1%	
Industrials	5.1%	-0.2%	0.8%	2.1%	1.9%	-7.1%	-23.3%	-15.7%	-9.5%	-10.7%	-0.7%	28.1%	17.2%	13.8%	14.4%	12.6%	13.2%	13.1%	10.9%	11.4%	7.8%	4.5%	1.2%	2.4%	
Industrials ex. Aerospace & Defense	3.1%	-1.6%	-0.2%	3.9%	0.9%	-8.6%	-25.2%	-16.2%	-10.6%	-13.3%	1.2%	33.2%	21.8%	19.4%	17.7%	17.4%	17.7%	15.5%	10.3%	13.7%	7.2%	2.5%	0.9%	0.9%	
Industrials ex. Transportation	6.0%	-1.4%	0.6%	2.8%	1.8%	-7.3%	-16.6%	-10.4%	-5.7%	-5.8%	1.7%	19.7%	8.2%	4.9%	9.4%	5.1%	5.4%	9.7%	11.5%	7.6%	8.8%	8.8%	4.2%	4.3%	
Industrials ex. Aerospace & Defense and T	3.4%	-0.0%	-1.0%	6.0%	0.3%	-9.6%	-16.2%	-8.5%	-5.5%	-7.7%	5.9%	22.8%	10.6%	8.7%	11.9%	8.7%	8.8%	12.0%	10.8%	9.3%	8.2%	7.4%	4.9%	2.6%	
Information Technology	-0.4%	-0.7%	0.4%	5.4%	-0.2%	3.4%	5.4%	-0.2%	10.4%	10.9%	22.4%	21.3%	24.7%	15.8%	17.6%	13.4%	7.9%	6.5%	-2.6%	7.7%	-2.9%	-0.1%	2.9%	8.0%	
Materials	0.1%	-16.2%	-13.8%	-15.1%	-9.1%	-16.3%	-15.0%	-6.9%	-5.3%	-6.8%	10.7%	36.6%	33.6%	39.2%	32.2%	27.1%	19.2%	7.6%	-3.8%	10.2%	-7.5%	-12.5%	-10.3%	-5.3%	
Real Estate	5.4%	5.4%	6.3%	5.1%	5.4%	6.0%	-5.4%	-3.5%	-1.3%	-0.7%	2.1%	18.2%	16.6%	18.4%	12.5%	20.8%	17.2%	14.3%	8.0%	14.7%	6.1%	6.4%	6.9%	7.1%	
Utilities	1.0%	0.7%	0.5%	0.1%	6.9%	-5.7%	-5.2%	-2.4%	-23.6%	-9.8%	9.4%	5.6%	4.9%	51.1%	21.3%	15.7%	27.8%	27.0%	16.2%	10.9%	13.0%	-3.9%	-5.7%	-1.4%	
Net margins																									
S&P 500	11.5%	11.7%	12.0%	11.4%	11.3%	10.2%	8.9%	11.3%	11.6%	10.6%	13.6%	13.8%	13.7%	13.1%	13.4%	13.1%	13.2%	12.6%	11.6%	12.6%	11.8%	11.8%	12.6%	12.3%	
S&P 500 ex. Financials & Real Est	10.1%	10.4%	10.9%	10.3%	10.0%	9.7%	8.5%	10.1%	10.1%	9.6%	11.8%	12.2%	12.5%	12.0%	11.9%	11.9%	12.3%	11.8%	11.6%	11.6%	10.7%	10.8%	11.5%	11.3%	
S&P 500 ex. Energy	12.0%	12.3%	12.5%	11.9%	11.8%	10.7%	9.8%	12.0%	12.2%	11.2%	14.3%	14.4%	14.1%	13.5%	13.9%	13.3%	13.0%	12.3%	11.4%	12.5%	11.7%	12.0%	12.7%	12.5%	
S&P 500 ex. Tech	10.5%	10.8%	10.9%	10.0%	10.3%	9.0%	7.6%	10.0%	10.0%	9.2%	12.3%	12.5%	12.3%	11.5%	12.1%	11.7%	12.1%	11.4%	10.2%	11.4%	10.7%	10.6%	11.2%	10.6%	
S&P ex. Energy, Fin & Real Est	10.6%	10.9%	11.4																						

S&P 500: Blended bottom-up 4Q23 Sales and EPS y/y growth by sector: 4Q23 vs. 4Q22



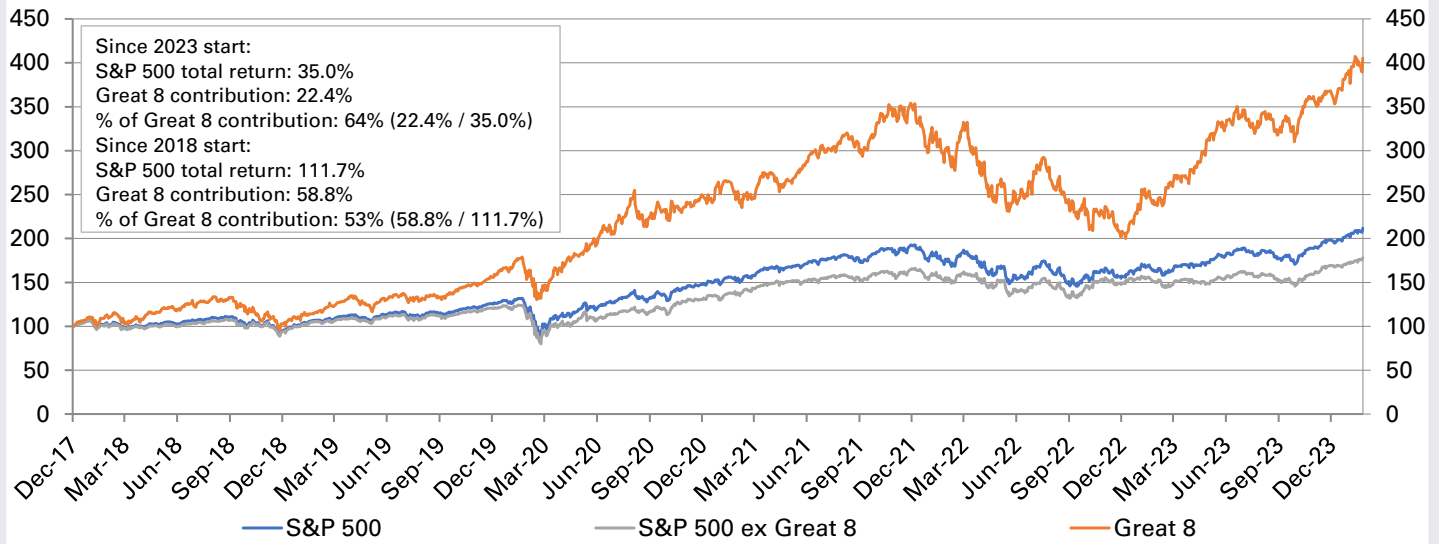
Source: Factset, DWS Investment GmbH as of 2/23/2024. Past performance may not be indicative of future results.

S&P 500: Blended bottom-up 4Q23 Sales and EPS y/y growth for macro tilts: 4Q23 vs. 4Q22



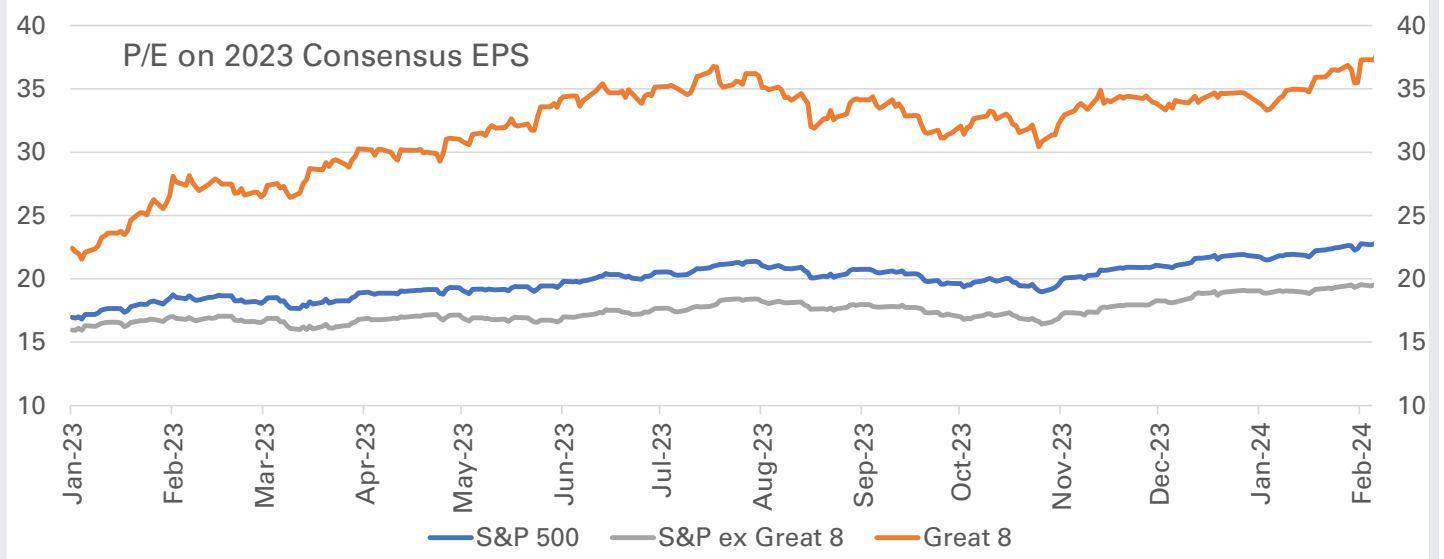
Source: Factset, DWS Investment GmbH as of 2/23/2024. Past performance may not be indicative of future results.

S&P 500 ex. the Great 8 total return



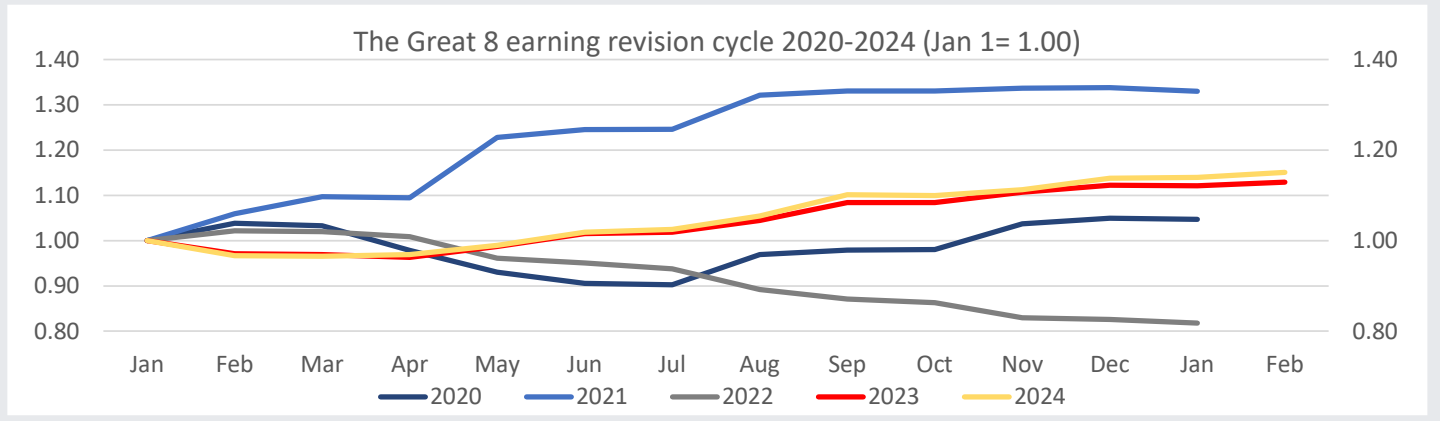
Note: The Great 8: AAPL, AMZN, GOOG/GOOGL, META, MSFT, NFLX, NVDA, TSLA
 Source: Factset, DWS Investment GmbH as of 2/22/2024. Past performance may not be indicative of future results.

S&P 500 ex. the Great 8 P/E



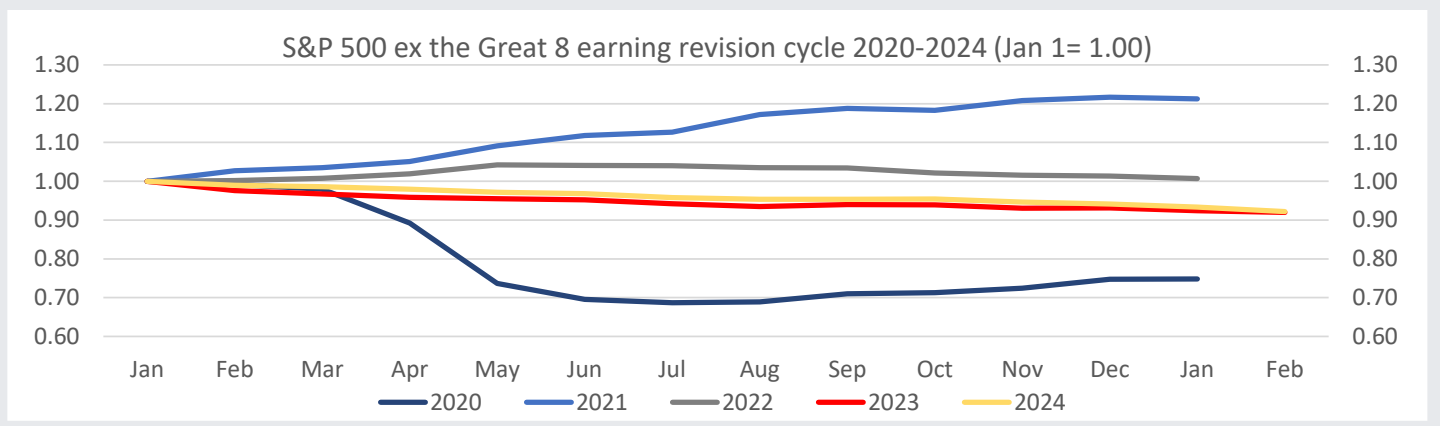
Note: The Great 8: AAPL, AMZN, GOOG/GOOGL, META, MSFT, NFLX, NVDA, TSLA
 Source: Factset, DWS Investment GmbH as of 2/22/2024. Past performance may not be indicative of future results.

The Great 8 EPS revision



Note: The Great 8: AAPL, AMZN, GOOG/GOOGL, META, MSFT, NFLX, NVDA, TSLA
 Source: Factset, DWS Investment GmbH as of 2/21/2024. Past performance may not be indicative of future results.

S&P 500 ex. the Great 8 EPS revision



Note: The Great 8: AAPL, AMZN, GOOG/GOOGL, META, MSFT, NFLX, NVDA, TSLA
 Source: Factset, DWS Investment GmbH as of 2/21/2024. Past performance may not be indicative of future results.



DWS Investment GmbH S&P 500 Annual EPS Outlook

	2014A	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022A	y/y	Bottom-up Consensus (IBES)				DWS View				Normalized 2024	
											2023E	y/y	2024E	y/y	2023E	y/y	2024E	y/y	(\$)	% of 2023
S&P 500 EPS (historical index)	\$118.82	\$117.46	\$118.10	\$132.00	\$161.93	\$162.93	\$139.72	\$208.12	\$218.09	4.8%										
S&P 500 EPS (current constituents)	\$116.70	\$117.17	\$117.41	\$129.32	\$155.41	\$161.17	\$143.29	\$208.02	\$219.41	4.4%	\$224	2.2%	\$246	9.7%	\$223	1.6%	\$242	8.5%	\$240	99%
Sector (\$ bn)																				
Communication Services	67.4	77.8	90.6	98.8	123.4	129.8	135.0	187.4	146.9	-21.6%	183.1	24.7%	213.5	16.6%	182.9	24.5%	210.5	15.1%	208.8	99%
Consumer Discretionary	58.4	68.7	76.6	80.6	95.6	93.6	64.6	124.2	111.5	-10.2%	159.7	43.3%	177.6	11.2%	159.8	43.4%	168.0	5.1%	169.6	101%
Consumer Staples	83.9	82.7	85.4	89.7	96.8	97.9	105.2	117.8	119.5	1.5%	123.3	3.1%	129.1	4.7%	123.2	3.1%	128.0	3.9%	125.7	98%
Energy	94.3	39.4	10.5	37.1	69.8	49.4	-6.1	79.2	200.5	153.3%	149.2	-25.6%	137.7	-7.7%	148.8	-25.8%	152.5	2.5%	137.8	90%
Financials	184.1	199.6	203.7	213.2	262.7	276.6	225.5	363.2	308.5	-15.1%	342.6	11.0%	363.4	6.1%	343.0	11.2%	353.5	3.1%	343.2	97%
Health Care	136.7	151.7	156.5	170.8	187.5	205.5	225.7	293.4	307.9	5.0%	246.9	-19.8%	284.0	15.0%	246.5	-19.9%	287.0	16.4%	283.7	99%
Industrials	100.5	103.9	98.3	107.2	130.5	125.1	66.9	112.0	141.1	26.0%	160.3	13.6%	174.2	8.6%	159.5	13.1%	171.5	7.5%	173.3	101%
Information Technology	162.6	168.2	176.5	208.0	239.7	233.4	264.7	345.8	354.8	2.6%	378.6	6.7%	443.9	17.2%	378.7	6.8%	440.0	16.2%	453.8	103%
Materials	24.8	23.8	22.9	28.9	36.4	34.3	32.5	61.4	64.0	4.2%	49.6	-22.5%	48.7	-1.8%	49.6	-22.6%	48.5	-2.2%	47.2	97%
Real Estate	22.6	25.8	28.5	32.1	35.8	37.3	37.3	44.5	51.8	16.4%	51.6	-0.4%	52.9	2.5%	51.5	-0.6%	52.0	1.1%	50.3	97%
Utilities	32.9	33.0	35.6	37.0	40.8	44.8	46.8	49.3	50.8	2.9%	54.0	6.4%	58.2	7.8%	54.0	6.4%	58.2	7.8%	60.2	103%
S&P 500	968.3	974.8	985.0	1103.4	1319.0	1327.8	1198.1	1778.1	1857.2	4.4%	1898.8	2.2%	2083.2	9.7%	1897.4	2.2%	2069.7	9.1%	2053.4	99%
S&P ex. Energy (\$bn)	874.0	935.4	974.6	1066.3	1249.2	1278.4	1204.2	1698.9	1656.7	-2.5%	1749.6	5.6%	1945.5	11.2%	1748.6	5.6%	1917.2	9.6%	1915.6	100%
S&P ex. Tech (\$bn)	805.7	806.6	808.5	895.4	1079.4	1094.4	933.4	1432.3	1502.5	4.9%	1520.2	1.2%	1639.3	7.8%	1518.7	1.1%	1629.7	7.3%	1599.7	98%
S&P 500 Sales/Share (historical index)	\$1,163	\$1,127	\$1,151	\$1,232	\$1,339	\$1,415	\$1,362	\$1,567	\$1,753	11.9%										
S&P 500 Non-GAAP Net Margin	10.2%	10.4%	10.3%	10.7%	12.1%	11.5%	10.3%	13.3%	12.4%											

S&P 500 EPS	Year	1Q	2Q	3Q	4Q
2019A	163	39	41	41	42
2020A	140	33	28	38	42
2021A	210	49	53	54	54
2022A	222	55	58	56	53
2023E	223	53	54	58	57
2024E	242	57	59	62	64

S&P 500 EPS historical constituents represents the earnings per share (EPS) of S&P 500 index constituents at the time, while S&P 500 EPS current constituents represents the earnings per share of index constituents as of the date the data was compiled 9/30/2023.

Source: Factset, DWS Investment GmbH as of 2/23/2024. Past performance may not be indicative of future results. Forecasts are not a reliable indicator of future returns.

DWS Investment GmbH View: S&P 500 fair value by sector: Assuming a ~5.60% real cost of equity (CoE) for overall S&P 500

	Market Value (\$bn)	Current 2024 PE	2024E Earnings (\$bn)	Normal Ratio	Normal 2024E Earnings	Accounting Quality Adjustment	Fully Adjusted Earnings	Net Debt / Market Cap	FCF / EPS	Real CoE	Steady State Value	Growth Premium	2024 Start Fair Value (\$bn)	2024E Dividend Yield	2024 End Fair Value (\$bn)	PE on Normal 2024E EPS	2024 End Upside %	2024 End Upside vs. S&P 500
Communication Services	4,034	19.2	210.5	99%	208.8	-7%	194.1	14%	0.83	5.75%	3,376	15%	3,883	0.9%	4,169	20.0	3%	11%
Consumer Discretionary	4,494	26.7	168.0	101%	169.6	-6%	159.4	12%	0.74	5.65%	2,822	24%	3,495	1.0%	3,744	22.1	-17%	-9%
<i>Automobiles</i>	648	25.9	25.0	95%	23.8	-8%	21.9	24%	0.99	6.75%	324	40%	453	0.4%	493	20.8	-24%	-16%
<i>Broadline (Internet) Retail</i>	1,588	45.4	35.0	115%	40.3	-5%	38.2	1%	0.18	5.50%	695	60%	1,112	0.0%	1,201	29.8	-24%	-16%
<i>ex. Auto & Broadline (Internet) Retail</i>	2,258	20.9	108.0	98%	105.6	-7%	99.3	14%	0.75	5.51%	1,803	7%	1,929	1.5%	2,055	19.5	-9%	-1%
Consumer Staples	2,580	20.2	128.0	98%	125.7	-6%	118.2	15%	0.84	5.25%	2,251	0%	2,251	2.8%	2,363	18.8	-8%	0%
Energy	1,668	10.9	152.5	90%	137.8	-8%	126.8	14%	0.91	6.25%	2,029	-20%	1,623	2.6%	1,723	12.5	3%	11%
Financials	5,675	16.1	353.5	97%	343.2	-7%	319.2		1.10	6.50%	4,910	-3%	4,763	1.8%	5,106	14.9	-10%	-2%
<i>Banks</i>	1,388	11.1	125.0	95%	118.8	-10%	106.9		1.11	7.50%	1,425	-12%	1,254	3.0%	1,342	11.3	-3%	5%
Health Care	5,507	19.2	287.0	99%	283.7	-8%	261.0	10%	1.14	5.60%	4,660	10%	5,126	1.4%	5,472	19.3	-1%	7%
Industrials	3,521	20.5	171.5	101%	173.3	-7%	161.2	17%	0.88	5.75%	2,803	5%	2,943	1.7%	3,136	18.1	-11%	-3%
Information Technology	12,791	29.1	440.0	103%	453.8	-3%	440.1	2%	0.95	5.50%	8,003	30%	10,403	0.8%	11,150	24.6	-13%	-5%
Materials	989	20.4	48.5	97%	47.2	-8%	43.4	19%	0.89	6.25%	694	9%	757	1.5%	812	17.2	-18%	-10%
Real Estate	933	17.9	52.0	97%	50.3	-7%	46.8	36%	1.80	5.75%	814	8%	879	3.5%	921	18.3	-1%	7%
Utilities	894	15.4	58.2	103%	60.2	-7%	55.9	88%	-0.64	5.75%	973	3%	1,002	3.8%	1,046	17.4	17%	25%
S&P 500 (\$ bn)	43,086	20.8	2069.7	99%	2053.4	-6.2%	1926.1			5.75%	33,335	11.4%	37,125	1.4%	39,641	19.3	-8%	0%
S&P 500 Index (\$/sh)	5087	21.0	242.0	99%	240.0	-6.3%	225.0	11%	0.93	5.75%	3913	15.2%	4506	1.4%	4804	20.0	-6%	0%

>5%	Bigger upside vs. S&P 500
between -5% and 5%	Same upside as S&P 500
<-5%	Smaller upside vs. S&P 500

Source: IBES, DWS Investment GmbH as of 2/23/2024. Past performance may not be indicative of future results.

S&P 500 EPS historical constituents represents the earnings per share (EPS) of S&P 500 index constituents at the time, while S&P 500 EPS current constituents represents the earnings per share of index constituents as of the date the data was compiled 9/30/2023.

The estimated 2024 year end upside is on absolute valuation basis of each sector, not on relative sector valuation basis.

S&P 500 Intrinsic Valuation Model

S&P 500 Capitalized EPS Valuation		S&P 500 Dividend Discount Model		S&P 500 Long-term EPS & DPS Growth		S&P 500 Cost of Equity & Fair Book Multiple	
DWS 2024E S&P 500 EPS	\$242.00	DWS 2024E S&P 500 DPS	\$74.00	DWS 2024E S&P 500 aggregate ROE	22.0%	Fair long-term nominal return on S&P 500 index	8.25%
		2024E dividend payout ratio	31%	2023E end S&P 500 book value per share	\$1,100	Components of estimated fair S&P 500 return:	
DWS "normal 2024E" S&P 500 EPS	\$240.00	DWS "normal 2024E" S&P 500 DPS	\$74.00	DWS "normal 2024E" S&P 500 aggregate ROE	20.5%	+ Long-term real risk free interest rate	1.75%
"Normal 2024E" EPS / 2024 EPS	99%	Normal dividend payout ratio	33%			+ Long-term fair S&P 500 equity risk premium*	4.00%
				S&P EPS retained for true reinvestment	50%	= Long-term real S&P 500 cost of equity	5.75%
Accounting quality adjustment to pro forma EPS	-\$15.00	EPS directed to net share repurchases	\$38.00	Estimated ROE on reinvested S&P EPS	9.00%	+ Long-term inflation forecast	2.50%
		Normal share repurchase payout ratio	17%	Economic margin (EM) or ROE-CoE	0.75%	= S&P 500 nominal cost of equity	8.25%
Normal 2024E S&P 500 EPS fair to capitalize	\$225	Total payout of S&P 500 EPS	\$112.00	Sources of long-term earnings growth:		* S&P 500 ERP history 300-400bps, w/ real CoE @ 5% - 6.5%	
Key principle: steady-state value = normal EPS / real CoE		Total payout ratio of normal and quality adj. EPS	50%	+ Long-term inflation forecast	2.50%	<u>Fair S&P 500 Market Value and Book Value Multiple</u>	
				+ Fair return on true reinvestment	2.89%	2023E end S&P 500 book value per share	\$1,100
<u>S&P 500 EPS Capitalization Valuation</u>		<u>S&P 500 DPS Discount Model</u>		+ Value added return on true reinvestment	0.38%	Fair PB = Fair PE * normal aggregate ROE	4.10
Normal EPS / (real CoE - (EM/payout) - EM):		Normal DPS / (nominal CoE - DPS growth):		= Long-term earnings growth	5.76%	Fair PE = (inc ROE-g)/(inc real ROE*(real CoE-real g))	18.62
S&P 500 intrinsic value at 2024 start	4506	S&P 500 intrinsic value at 2024 start	4506	+ Growth from net share repurchases	0.84%	Implied S&P 500 fair value of book at 2024 start	4506
S&P 500 intrinsic value at 2024 end	4804	S&P 500 intrinsic value at 2024 end	4804	= Long-term S&P 500 EPS/DPS growth	6.61%	Steady-state PB = normal agg. ROE / real CoE	3.56
Implied fair fwd PE in early 2024 on 2024E \$242 EPS	18.6	Implied fair forward yield on 2024E DPS of \$74.0	1.64%	+ Fair normal dividend yield	1.64%	Confirmed by fair steady-state PE = 1 / real CoE	17.4
Implied fair trailing PE at 2024 end on 2024E \$242 EPS	19.9	Implied fair trailing yield on 2024E DPS of \$74.0	1.54%	= Total long-term return at constant PE	8.25%		
Normal EPS / (real CoE-value added EPS growth)	4187	DPS discount model using true DPS (all payout)	4506	Value added growth premium in fair value est.	15%	Normal 2024E economic profit per share	\$161.75

S&P 500 EPS discount model 5 steps to value:

- 1) Estimate normalized S&P 500 EPS
- 2) Adjust normalized EPS for pro forma accounting quality
- 3) Estimate a fair long-term real return on S&P 500 ownership (CoE)
- 4) Capitalize normalized and accounting quality adj. EPS at real CoE
- 5) Consider long-term potential for value added growth opportunities

	2024E Normal S&P 500 EPS				
	\$230	\$235	\$240	\$245	\$250
5.25%	5576	5787	6004	6227	6457
5.50%	4995	5164	5337	5513	5692
5.75%	4525	4664	4804	4946	5090
6.00%	4137	4252	4368	4485	4604
6.25%	3810	3908	4006	4104	4203

Source: DWS Investment Management GmbH. Forecasts are not a reliable indicator of future returns.

DWS September 2024 equity index targets

Index	3M relative View	Current Level	Previous Target CIO Day Sep	Target Dec 24	Chg in Target	Expected Total Return Dec 24	thereof		Assumptions					
							EPS growth NTM*	LTM/multiple impact	Dividend Yield	EP \$ NTM* (e)	DWS vs. Cons.	Target LTM P/E in Dec 24	Target PE discount to US	
S&P 500		4,503	4,500	4,700	4%	6.0%	USD	10.0%	-6%	1.7%	242	-1.5%	19.3x	
Stoxx 600		455	470	465	-1%	6.0%	EUR	4.0%	-2%	3.7%	36.9	-2.8%	12.6x	-35%
Euro Stoxx 50		4,316	4,350	4,350	0%	4.5%	EUR	4.0%	-3%	3.7%	366	-2.9%	11.9x	-38%
DAX40		15,748	16,700	16,600	-1%	5.4%	EUR	4.3%	-2%	3.7%	1440	-3.6%	11.2x	-42%
SMI		10,708	11,300	10,950	-3%	5.5%	CHF	7.0%	-5%	3.3%	685	-2.8%	16.0x	-17%
FT SE 100		7,487	7,400	7,400	0%	3.3%	GBP	4.0%	-5%	4.5%		0.7%	10.1x	-48%
MSCI EM		982	1,010	1,010	0%	5.7%	USD	11.0%	-8%	2.8%	77.7	-8.4%	13.0x	-33%
MSCI AC Asia xJ		620	655	640	-2%	5.8%	USD	13.0%	-8%	2.6%	46.3	-8.2%	13.9x	-28%
MSCI Japan		1,458	1,500	1,520	1%	6.6%	YEN	6.0%	-2%	2.3%	99.6	-2.2%	15.2x	-21%
MSCI Australia		1,413	1,350	1,400	4%	3.5%	AUD	0.0%	-2%	4.4%	93.0	-1.2%	14.8x	-23%

S&P 500 industry monitor (1 of 2)

Sector	Industry	PE on 2022 EPS	PE on 2023 Consensus EPS	2023 Consensus EPS Growth	2024 Consensus EPS Growth	2023 EPS 3m Revision	3m Total Return Momentum	2024 End Upside (Intrinsic Valuation)	Combined Signal
Consumer Discretionary		40.2	25.7	40.2%	11.6%	2.7%	10.1%	-14.5%	1
	Automobile Components	16.3	11.5	25.7%	12.9%	1.3%	-7.5%	43.4%	0
	Automobiles	24.9	23.1	3.9%	3.8%	3.3%	-11.2%	-26.4%	0
	Household Durables	10.6	11.4	-9.3%	2.3%	1.2%	17.2%	-6.4%	0
	Leisure Products	11.5	15.0	-42.3%	33.5%	3.3%	10.2%	-1.5%	0
	Textiles Apparel & Luxury Goods	27.9	24.5	0.6%	13.1%	-1.8%	3.2%	-7.2%	-1
	Hotels Restaurants & Leisure	98.4	23.4	290.9%	7.7%	3.0%	10.7%	-2.7%	1
	Distributors	16.7	16.3	-2.7%	5.3%	1.3%	8.6%	-1.3%	0
	Broadline Retail	152.0	40.3	170.6%	39.2%	7.8%	18.7%	-22.1%	1
	Specialty Retail	22.8	21.9	0.6%	3.4%	-0.1%	16.0%	-9.8%	0
Consumer Staples		22.1	20.0	5.7%	4.8%	0.2%	7.1%	-4.8%	0
	Consumer Staples Distribution & Retail	27.0	24.7	3.4%	5.5%	1.1%	18.5%	-13.6%	0
	Food Products	14.4	15.3	-5.6%	-0.1%	-1.0%	-0.5%	6.9%	-1
	Beverages	25.0	20.8	12.8%	6.8%	0.6%	1.9%	-0.7%	0
	Tobacco	12.2	11.3	2.8%	4.3%	-0.9%	-1.0%	-2.8%	-1
	Household Products	28.2	23.6	10.4%	8.3%	0.6%	6.8%	-11.3%	0
	Personal Care Products	43.4	24.7	85.4%	-5.1%	1.5%	6.9%	-3.3%	0
Energy		9.2	12.1	-18.8%	-7.0%	-1.0%	2.7%	10.3%	-1
	Energy Equipment & Services	25.9	13.0	74.1%	14.8%	2.7%	-7.6%	20.2%	1
	Oil Gas & Consumable Fuels	8.7	12.1	-21.6%	-8.4%	-1.2%	3.7%	7.7%	-1
Financials		18.1	15.6	9.1%	6.0%	-0.1%	14.1%	-6.5%	0
	Banks	11.5	10.9	12.0%	-6.1%	-1.6%	18.8%	-4.1%	0
	Financial Services	29.8	23.4	16.5%	9.2%	-0.1%	13.8%	-5.1%	0
	Consumer Finance	11.1	12.4	-18.7%	9.8%	-2.5%	31.0%	-4.5%	-1
	Capital Markets	19.4	17.9	-5.4%	14.8%	0.1%	11.2%	-27.0%	0
	Insurance	20.2	13.6	23.6%	20.0%	4.2%	8.5%	5.2%	1
Health Care		18.0	19.5	-19.9%	15.1%	0.7%	12.8%	4.3%	0
	Health Care Providers & Services	17.6	15.3	8.4%	6.3%	0.5%	2.9%	15.3%	0
	Health Care Equipment & Supplies	29.2	26.4	3.4%	6.8%	1.2%	16.1%	-4.9%	0
	Life Sciences Tools & Services	24.5	28.9	-16.2%	1.2%	-2.0%	13.9%	-26.0%	-1
	Biotechnology	13.5	17.3	-27.9%	8.2%	0.4%	16.9%	7.8%	0
	Pharmaceuticals	15.5	18.9	-41.4%	39.4%	1.8%	15.8%	5.3%	1
Industrials		29.1	21.0	27.4%	9.0%	1.7%	13.2%	-7.2%	0
	Aerospace & Defense	48.3	22.0	70.9%	28.6%	2.0%	5.1%	-4.3%	1
	Building Products	22.1	19.5	10.1%	3.0%	1.0%	16.9%	-14.3%	0
	Trading Companies & Distributors	29.3	21.9	26.6%	5.9%	0.9%	25.8%	-8.9%	1
	Electrical Equipment	29.2	23.7	10.5%	11.4%	0.6%	17.9%	1.6%	0
	Construction & Engineering	37.4	27.9	15.1%	16.6%	0.1%	27.6%	-10.0%	1
	Industrial Conglomerates	24.8	20.7	1.2%	18.7%	1.7%	12.3%	-0.9%	0

Combined signal rules: Green – at least 2 of the following 3 must be green: EPS growth, EPS revision, price momentum

Red – at least 2 of the following 3 must be red: EPS growth, EPS revision, price momentum

Source: Factset, DWS Investment GmbH as of 2/23/2024. Past performance may not be indicative of future results.

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S&P 500 industry monitor (2 of 2)

Sector	Industry	PE on 2022 EPS	PE on 2023 Consensus EPS	2023 EPS Growth	2024 Consensus EPS Growth	2023 EPS 3m Revision	3m Total Return Momentum	2024 End Upside (Intrinsic Valuation)	Combined Signal
	Machinery	23.5	17.7	34.2%	-1.1%	0.4%	16.4%	-1.9%	1
	Commercial Services & Supplies	46.2	32.5	28.7%	10.5%	1.9%	11.0%	-34.7%	1
	Professional Services	31.4	26.2	10.1%	9.0%	0.7%	10.0%	-20.8%	0
	Air Freight & Logistics	12.0	16.3	-28.9%	3.6%	-1.4%	-1.9%	-16.7%	-1
	Passenger Airlines	31.0	7.2	327.6%	0.5%	4.5%	22.5%	33.6%	1
	Ground Transportation	47.8	28.2	51.9%	11.5%	7.9%	22.0%	-15.7%	1
Information Technology		35.6	28.8	5.1%	17.3%	2.2%	14.3%	-11.3%	0
	IT Services	26.2	23.2	7.1%	5.2%	1.1%	12.4%	-15.1%	0
	Software	45.4	32.8	19.9%	15.7%	1.6%	9.0%	-5.9%	0
	Communications Equipment	19.5	16.6	17.4%	0.2%	-0.9%	6.5%	3.8%	0
	Technology Hardware Storage & Peripherals	28.0	26.3	-2.5%	9.2%	0.4%	-2.5%	-13.4%	0
	Electronic Equipment Instruments & Components	22.3	22.1	-4.1%	5.2%	0.3%	14.6%	-20.3%	0
	Semiconductors & Semiconductor Equipment	39.2	30.1	-3.2%	34.3%	5.8%	39.7%	-25.8%	1
Materials		14.9	20.4	-25.9%	-1.3%	0.5%	7.1%	-11.6%	0
	Chemicals	16.9	21.5	-21.6%	0.2%	0.1%	6.3%	-6.9%	-1
	Construction Materials	46.2	28.0	44.3%	14.4%	2.9%	20.1%	-47.1%	1
	Metals & Mining	8.6	16.1	-40.6%	-9.9%	1.0%	3.4%	-25.9%	-1
	Containers & Packaging	13.6	18.1	-26.6%	2.0%	0.4%	10.5%	-18.9%	0
Real Estate		30.1	37.8	-16.2%	-4.8%	2.9%	7.7%	-2.8%	0
	Industrial REITs	30.7	52.2	-24.4%	-22.2%	4.1%	19.9%	-25.2%	1
	Hotel & Resort REITs	18.3	21.2	-8.0%	-6.3%	2.0%	21.2%	22.6%	1
	Office REITs	21.0	34.7	-80.8%	215.7%	-45.9%	18.7%	-10.0%	-1
	Health Care REITs	107.3	108.0	-14.0%	15.7%	-10.8%	3.5%	0.5%	-1
	Residential REITs	27.4	40.6	-6.6%	-27.7%	11.8%	5.0%	7.2%	0
	Retail REITs	31.9	28.5	17.2%	-4.2%	7.0%	11.3%	-3.8%	1
	Specialized REITs	28.7	34.7	-17.9%	0.6%	1.5%	4.5%	-0.1%	-1
Real Estate Management & Development	25.9	37.9	-29.9%	-2.7%	2.1%	5.0%	-38.2%	-1	
Communication Services		24.1	19.0	8.5%	17.3%	0.9%	14.8%	7.7%	0
	Diversified Telecommunication Services	6.8	8.3	-13.5%	-5.3%	-0.4%	7.9%	-5.2%	-1
	Wireless Telecommunication Services	94.0	18.2	298.3%	29.7%	-3.5%	10.2%	21.0%	0
	Media	11.7	10.4	4.0%	8.5%	0.2%	-3.4%	-1.5%	0
	Entertainment	37.4	28.4	-15.6%	56.0%	-0.8%	14.3%	0.5%	-1
	Interactive Media & Services	33.8	22.4	22.9%	22.6%	1.9%	18.1%	12.0%	1
Utilities		17.5	15.4	3.1%	10.2%	-1.5%	-0.9%	16.1%	-1
	Multi-Utilities	16.4	15.8	-14.7%	21.8%	-12.2%	-2.3%	6.5%	-1
	Water Utilities	27.9	22.8	14.2%	7.0%	1.9%	-8.8%	-17.7%	1
	Gas Utilities	20.2	17.0	10.0%	7.9%	0.5%	2.0%	-1.9%	0
	Electric Utilities	17.9	15.2	10.8%	6.2%	2.7%	0.0%	20.2%	0
	Independent Power and Renewable Electricity Producers	9.8	8.5	5.5%	10.0%	-0.1%	-4.5%	27.2%	-1
S&P 500		23.7	21.2	1.8%	10.0%	0.9%	12.0%	-3.9%	0

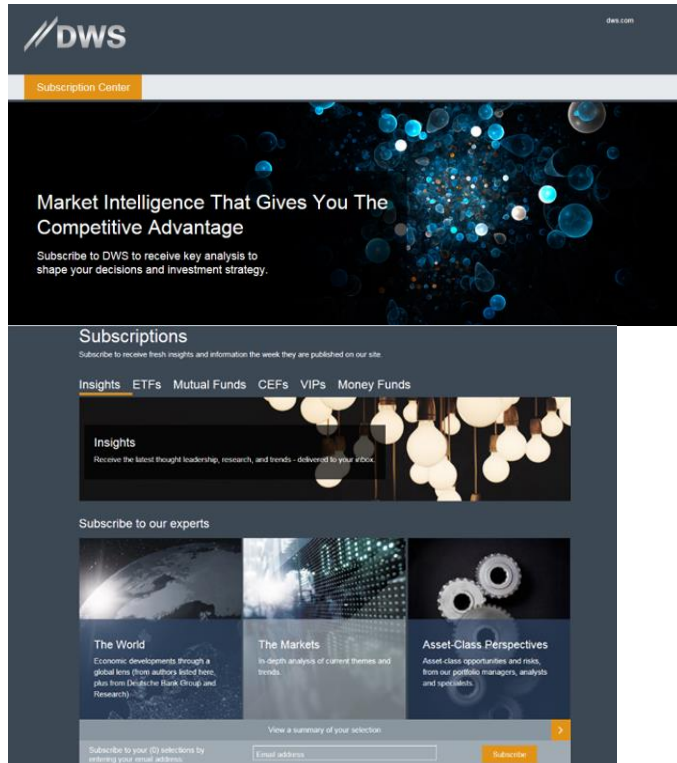
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