

The illusions and confusions of inflation: It's dangerous to let them linger



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October CPI declined more than expected, but the inflation fight is far from over

The holiday rally came early, sparked by lower inflation in October than expected, along with bullish narratives circulating about reliable post midterm election rallies, China reopening and Russia retreating. It's likely best to take this gift rally and leave the festivities early. As the inflation fight is far from over. And neither are the other concerns. Inflation off its highs is welcome, yet it already took longer than hoped, but the big fight will be getting it under 4%. It's important that the Fed bring inflation closer to 3% by mid-2023, otherwise it risks the bond market demanding higher inflation risk premiums because of high inflation being a 2+ year experience. October CPI showed headline and core at 7.8% and 6.3% y/y, compared to 8.2% and 6.7% y/y in September. Most of the Goods categories slowed in price y/y and m/m increases (some with big declines unlikely to persist), however, most of the Service categories still ran y/y and m/m changes over 5%. Thus, disinflation is narrow and yet high inflation is broader at services and thus labor. The CPI report has noise related to adjustments at health care, shelter, and is generally noisy m/m. We're focusing on unit labor costs, i.e. wages/productivity. Very poor trends here YTD suggest it will take time and more hikes for inflation to normalize.

Markets, journalists and some FOMC members making the inflation fight harder The next FOMC decision is on December 14th and the next CPI report for Nov is Dec 13th. We doubt there is enough new information in Nov inflation or jobs reports to alter the Fed's near-term decisions and 2023 projections. Markets and financial conditions likely greater factors. If S&P over 3800 and broad financial conditions loosen in Nov-Dec vs. Sept-Oct, we think Fed hikes 75bp in Dec. or 50bp with at least another 50bp in 1Q. Current conditions raise risk Chair Powell takes hawkish tone at Dec post FOMC press conference (like in 2018). Dots likely show 5.0-5.5% median terminal Fed Funds rate through 2023.

Mid-term elections: A clear disappointment for Republicans and the supply-side Republicans make minor gains in House and not clear it will be a unified Rep majority. Small chance Reps take Senate with NV and then GA in the Dec 6th runoff, which extends midterm uncertainty into a period of budget and other lame duck session risks. History's strong S&P performance after midterms doesn't have a clear conceptual basis. Poor postelection performance in 2002 & 2018 shows that Fed policy and geopolitical issues can supersede. Russia-Ukraine war still ongoing. Asking Ukraine to concede territory to expedite a cease fire is odd given Russian invasion, atrocities and Ukraine resistance winning. We expect bipartisan tough-on-China and Ukraine support in new Congress.

Illusions and confusion of inflation: Beware measures of wages, sales and profits Oil is in a lot of things, but labor is in everything. The best structural measure of inflation is unit labor costs (ULCs). If wages are rising 5% and productivity is rising 5%, that's prosperity. If wages are rising 5% but productivity is low/ negative and CPI is over 5%, that's misery for both employees and employers. If ULCs (hourly wages less hourly output) are above the Fed's target then inflation is structurally too high. ULCs are rising since 3Q21 and now 6.1% y/y in 3Q22. Meanwhile, productivity is weak and -1.4% y/y in 3Q22. Also, there is nothing good about retail sales or corporate sales and profits lagging inflation either. S&P real EPS growth is very negative, healthy real growth is 5%.

How does high inflation impact equities? It weighs on the economy, lowers fair PE Although equities represent real assets and PE is driven by the real cost of equity, broadbased inflation is negative for equity performance. Broad-based inflation if lasting for multiple years have negative impact on the economy, such as lower productivity, greater uncertainty with higher inflation risk premium and thus higher real interest rates, higher effective taxation and lower earnings quality from inadequate depreciation expense, etc. All of these lower the fair PE and the real return earned on the ownership of equities.

We see downside risk to S&P 500 into early 2023

S&P is trading at about 18x forward EPS on our estimates. We find this a very demanding valuation with what Treasury bills/ bonds, corporate and muni bonds are yielding. We think bonds are better for 2023. In our view the S&P is likely to test its 2022 lows around 3600 before yearend or 1Q23 as the inflation fight lingers. There are risks around the lame duck session, budget setting and ceiling, into yearend tax loss selling and continued risks with Russia/Ukraine for Europe and the world.

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Global Equit	y Index Fo	recasts: 12-r	nonths
Index	Sep 2023F	NTM EPS Growth	Target PE
S&P 500	4,200	0.0%	18.9
EuroStoxx 50	3,750	3.6%	12.0
Stoxx 600	445	3.4%	12.7
MSCI Japan	1,250	5.5%	13.0
MSCI Asia xJ	660	3.2%	12.3
MSCI EM	1,030	1.7%	11.7
S&P 5	500 Outloo	k at Yearend	
	202	1 2022F	2023F
S&P 500	476	6 3800	4000
Dividend Yield	1.3%	% 1.75%	1.75%

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DPS	\$61	\$68	\$70	
Trailing PE	22.7	17.1	18.2	
S&P EPS	\$210	\$222	\$220	
Dividend Yield	1.3%	1.75%	1.75%	

Next 5%+ Price Move

(Up / Balanced Risk / Down) Risk of near-term further 10%+ correction

(Low / Moderate / High)

Taxab	le U.S. Inv	estor Asset Al	locations
Asset Class	S	Long-term	Current
Fixed Incor	ne/Cash	30-35%	38.0%
Equities		55-60%	52.5%
US Equitie	es	40%	36.0%
S&P 50	0	35%	32.0%
Small C	aps	0-10%	4.0%
Foreign D	M	10-15%	10.5%
Foreign E	M	0-10%	6.0%
Alternative	s	10%	9.5%
	Key	CIO Views	
Macro signa	l:	Current	Sep 2023F
U.S. Fed Fur	nds rate	3.0-3.25%	4.75%**
10yr Treasur	y yield	3.85%	3.75%**
US IG Corp S	Spreads	100bp	150bp
US High Yiel	d Spreads	340bp	550bp
Crude Oil (W	TI) \$/bbl	93	100
EUR / USD F	X rate	0.97	1.05
	GDF	P Forecasts	
Region	2021	2022F	2023F
US	5.7%	1.9%	0.7%
World	6.0%	3.1%	2.8%
Euro area	5.2%	3.1%	0.7%
China	8.1%	3.3%	5.3%
Japan	1.7%	1.5%	0.9%

* Q4/Q4 GDP growth. ** This estimate under review until next CIO day. EPS = Earnings Per Share

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 11/11/2022 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	2021	2022	2023	Overweight	2021	2022	2023	Equal weight	2021	2022	2023	Underweight	2021	2022	2023		
Over-	15.2%		Health Care	16.9	16.0		Biotechnology	12.2	12.7	13.1	Health Care Providers & Services	18.8	17.6	17.0	U U		-		Sector OW	10.21%
weight	10.270	13.770					Health Care Equipment & Supplies	21.6	21.5	20.8								1	Sector UW	-10.21%
weight							Life Sciences Tools & Services	22.5	24.4	23.4									Industry OW	18.70%
							Pharmaceuticals	15.6	13.5	13.3									Industry UW	-18.70%
	7.5%	9.7%	Communication	12.3	13.7	13.3	Diversified Telecommunication Servi	6.1	7.5		Wireless Telecommunication Servi	61.7	59.6	44.7						<u> </u>
			Services				Entertainment Interactive Media & Services	23.4 13.2	22.2 15.1	20.0 14.6									Macro tilts:	
							Media	10.0	9.2	9.4									Cyclicals	-2.97%
	11.4%	12 7%	Financials	11.4	13.2	12.8	Banks	8.6	10.3	10.0					Capital Markets	13.2	16.7	16.2	Defensive	2.95%
	111170	12.770	i manolalo				Diversified Financial Services	24.7	20.6	20.2					Consumer Finance	6.8	8.2	9.0	Value	-5.93%
							Insurance	14.6	14.6	13.7									Growth	5.93%
	2.6%	3.6%	Real Estate	18.1	17.2	16.5	Real Estate Mgmt. & Development	13.2	11.6	11.0									Consumer	-6.61%
	F 00/	0.00/	F	04.7	0.0	40.5	REITs Energy Equipment & Services	18.6 40.2	17.4	16.7	Oil Gas & Consumable Fuels	20.0	0.4	40.4					Services/experience	0.47%
	5.3%		Energy	21.7	9.9			40.2	24.0			20.9	9.4	12.1					Disc. Goods	-0.25%
	3.0%	3.5%	Utilities	19.4	18.4	17.7	Electric Utilities	21.0	19.2		Gas Utilities	19.7	19.3		Water Utilities	35.0	31.7	29.8	Retailing	-0.65%
							Multi-Utilities	18.1	17.8		Independent Power & Renewable I	8.8	9.4	9.4		15.0	17.0	17.0	Durables	0.43%
Under-	26.4%	26.0%	Information	21.3	20.5	19.7	Communications Equipment	15.7	15.1		Electronic Equipment	20.2	18.6		Semiconductors	15.0	17.0		Staples Goods/Retail	-1.51%
weight			Technology				IT Services	24.1	20.9	19.9	Software	26.6	24.0	22.6	Technology Hardware Storage & Per	21.7	20.8	20.0	Commodity	-1.30%
	8.2%	7.7%	Industrials	25.9	20.1	19.5	Aerospace & Defense	33.0	26.1	24.0					Air Freight & Logistics	11.8	12.2	13.3	Energy	0.84%
							Airlines	-5.2	21.9	11.7					Building Products	19.7	18.3	19.5		
							Electrical Equipment	22.6	20.1	19.3					Commercial Services & Supplies	34.2	27.2	26.7	Metals/Chemicals	-2.14%
							Industrial Conglomerates	23.1	21.8	20.5					Construction & Engineering	23.1	19.6		Сарех	3.24%
							Road & Rail	20.6	17.4	17.9					Machinery	20.0	18.4	18.8	Capacity additions	1.11%
															Professional Services	27.7	27.9		Productivity	2.13%
															Trading Companies & Distributors	22.9	18.1	18.1	Health Care	4.45%
	2.5%	0.0%	Materials	15.0	13.3	15.5									Chemicals	17.1	14.6	16.1	Innovation	3.06%
															Construction Materials	30.3	27.2		Marketers	1.64%
															Containers & Packaging Metals & Mining	13.0 8.9	11.1 9.1	10.8 14.9	Insurers	-0.32%
	6.9%	2 00/	Consumer	21.5	21.5	21.4					Personal Products	29.9	28.4	26.1	Beverages	26.6	26.8		Financials	1.22%
	0.9%	3.0%		21.0	21.5	21.4						20.0	20.4	20.1	Food Products	18.6	18.1	19.0	Up rates/low spreads	2.03%
			Staples												Food & Staples Retailing	24.0	23.2		Capital Markets	-1.88%
															Household Products	23.3	24.1	23.5	Insurance	1.07%
															Tobacco	12.5	13.0	13.1	Bond Substitutes	1.78%
	10.9%	6.9%	Consumer	24.6	23.6	22.7	Auto Components	21.0	18.7	17.0	Household Durables	6.7	5.8	7.0	Automobiles	25.4	23.3	22.3	Weak FX \$ plays	0.53%
			Discretionary				Hotels Restaurants & Leisure	-1460	53.8	35.3					Distributors	19.1	17.3	17.3	High R&D plays	4.78%
			,				Textiles Apparel & Luxury Goods	20.5	21.6	21.0					Internet & Direct Marketing Retail	26.3	37.5	33.9	Transports	-0.30%
			Automobiles	25.4	23.3	22.3				20					Leisure Products	11.1	10.7	10.7	Geopolitical risk	1.33%
			Internet Retail	26.3	37.5	33.9									Multiline Retail	16.3	19.7	19.7	Weak oil prices	-0.53%
			CD ex Auto &	20.3	20.0	19.7									Specialty Retail	18.5	17.7		Inflation shock	4.81%
Aggregate	PE: DWS	View	CD ON HUIC C	20.0	20.0		Overweight	16.7	16.2	15 <u>.5</u>	Equalweight	21.3	15.4	16 <u>.6</u>	Underweight	18.2	18.9		Domestic GDP	-2.10%
	S&P 500							3749			2020, 2021 & 2022 EPS	207.74	222.00		2020, 2021 & 2022 PE	18.0	16.9		Global GDP	-2.10%
											Bottom-up Consensus EPS	207.64	223.13	232.54	Bottom-up Cons. PE	18.1	16.8			
															2020, 2021 & 2022 Ex Energy PE	17.6	17.6		Consumer TMT	0.40%
															Btm-up Cons. Ex Energy PE	17.7	17.8	16.7	Trade sensitive	-1.83%

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

Price as of 11/9/2022

Source: DWS Investment Management GmbH

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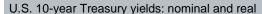
	Oct-22	Sep-22	Aug-22 J	Jul-22	Jun-22	May-22	Apr-22	Mar-22 F	eb-22 J	an-22 [Dec-21 M	Nov-21	Oct-21	Sep-21	Aug-21 J	ul-21 J	un-21 N	Nay-21
Expenditure Category All items	7.8	8.2	8.2	8.5	9.0	8.5	8.2	8.6	7.9	7.5	7.1	6.8	6.2	5.4	5.2	5.3	5.3	4.9
Food	10.9	11.2	11.4	10.9	10.4	10.1	9.4	8.8	7.9	7.0	6.3	6.1	5.3	4.6	3.7	3.4	2.4	2.1
Food at home	12.4	13.0	13.5	13.1	12.2	11.9	10.8	10.0	8.7	7.4	6.5	6.4	5.4	4.5	2.9	2.5	0.9	0.7
Cereals and bakery products	15.9	16.2	16.4	15.0	13.8	11.6	10.3	9.4	7.8	6.8	4.7	4.6	3.5	2.7	1.6	1.5	0.2	0.6
Meats, poultry, fish, and eggs Dairy and related products	8.0	9.0	10.6	10.9	11.8	14.2	14.4	13.7	13.0	12.3	12.6	12.8	11.9	10.5	8.0	5.8	0.6	0.1
Fruits and vegetables	15.5 9.4	15.9 10.4	16.2 9.4	14.9 9.2	13.5 8.0	11.8 8.1	9.1 7.7	7.0 8.5	5.2 7.7	3.1 5.7	1.6 5.0	1.6 4.0	1.8 3.0	0.6 3.1	-0.5 2.3	1.8 2.2	0.7 3.2	0.1 2.8
Nonalcoholic beverages and beverage materials	12.7	12.9	13.4	13.8	11.9	12.0	9.8	8.0	6.7	5.0	5.1	5.3	4.5	3.7	2.0	1.1	0.2	-0.2
Other food at home	15.4	15.7	16.6	15.8	14.4	12.6	11.0	10.3	8.2	7.4	5.6	5.7	4.1	3.1	1.4	1.3	0.4	0.4
Food away from home	8.6	8.5	8.0	7.6	7.7	7.4	7.2	6.9	6.8	6.4	6.0	5.8	5.3	4.7	4.7	4.6	4.2	4.0
Full service meals and snacks (1) Limited service meals and snacks (1)	9.0 7.1	8.8 7.1	9.0 7.2	8.9 7.2	8.9 7.4	9.0 7.3	8.7 7.0	8.0 7.2	7.5	7.1 8.0	6.6	6.0 7.9	5.9 7.1	5.2 6.7	4.9 6.9	4.3 6.6	4.1 6.2	4.1 6.1
Food at employee sites and schools (1)	95.2	91.4	23.7	-13.9	-14.1	-30.5	-30.0	-30.5	8.0 -40.7	-46.9	8.0 -49.3	-44.9	-45.4	-46.3	-42.5 -	0.0	-29.9	-34.4
Food from vending machines and mobile vendors (1)	11.2	7.2	6.9	7.3	7.6	8.0	7.1	5.5	5.9	5.6	4.8	6.4	6.1	6.0	6.7	6.1	5.7	3.6
Other food away from home (1)	5.4	5.4	6.5	6.7	6.8	5.0	5.5	5.5	5.5	4.9	4.9	4.4	4.5	3.5	2.6	3.1	1.6	2.6
Energy	17.6	19.9	23.9	32.9	41.5	34.4	30.2	32.2	25.7	27.0	29.4	33.1	29.8	24.9	25.1	23.8	24.5	28.0
Energy commodities Fuel oil and other fuels	19.3 44.2	19.7 39.9	27.2 48.8	44.9 54.6	60.7 70.4	50.4 75.9	44.7 58.8	48.3 51.7	37.8 33.4	39.8 36.4	48.7 37.7	57.2 48.4	49.4 48.4	41.7 36.5	42.0 28.8	41.3 30.8	44.5 32.3	54.8 35.2
Motor fuel	18.1	18.8	26.2	44.5	60.2	49.1	44.0	48.2	38.1	40.0	49.2	57.6	49.5	41.9	42.6	41.8	45.1	55.8
Energy services	15.6	19.9	19.9	18.9	19.6	16.2	13.7	13.4	12.2	13.5	10.1	10.4	11.1	8.7	8.8	7.4	6.5	6.2
Electricity	14.1	15.5	15.8	15.2	13.7	12.0	11.0	11.1	9.0	10.7	6.2	6.3	6.4	5.4	5.4	4.2	4.0	4.2
Utility (piped) gas service	20.0	33.1	33.0	30.5	38.4	30.2	22.7	21.6	23.8	23.9	24.0	25.0	28.1	20.7	21.2	19.1	15.7	13.5
All items less food and energy	6.3	6.7	6.3	5.9	5.9	6.0	6.1	6.4	6.4	6.0	5.5	5.0	4.6	4.0	4.0	4.2	4.4	3.8
Commodities less food and energy commodities	5.1	6.7	7.0	6.9	7.1	8.5	9.7	11.7	12.4	11.7	10.7	9.4	8.5	7.3	7.6	8.4	8.6	6.5
Household furnishings and supplies (7)	8.8	9.9 5.5	10.6	10.8	10.2	9.7 5.0	10.6 5.4	10.8	10.3	9.3 5.3	7.3	6.0 5.0	6.1 4 5	4.7	3.2	3.0 4 1	3.3 4 9	3.7 5.7
Apparel Transportation commodities less motor fuel (7)	4.1 5.5	5.5 8.5	5.0 9.0	5.1 8.7	5.2 9.5	5.0 14.1	5.4 17.1	6.8 21.6	6.6 24.0	5.3 23.6	5.7 21.9	5.0 19.2	4.5 16.5	3.4 15.0	4.1 17.1	4.1 19.7	4.9 20.2	5.7 13.3
Medical care commodities	3.1	3.7	4.1	3.7	3.2	2.4	2.1	21.0	24.0	1.4	0.4	0.2	-0.4	-1.6	-2.5	-2.1	-2.2	-1.9
Recreation commodities (7)	4.3	4.0	3.8	4.1	4.4	3.8	4.1	4.7	4.6	4.2	3.3	3.9	4.0	3.5	3.3	3.2	3.2	3.5
Education and communication commodities (7)	-9.0	-8.7	-7.7	-7.1	-5.6	-6.0	-4.0	1.5	0.4	0.9	0.2	0.9	2.5	2.6	-0.4	-0.2	-1.1	-1.4
Alcoholic beverages	5.0	4.1	4.3	4.2	4.0	4.0	3.9	3.7	3.5	2.7	2.3	1.9	2.3	2.8	2.6	2.4	1.9	1.6
Other goods (7)	7.2	7.9	7.6	6.7	6.6	6.2	5.2	5.3	4.9	4.3	4.6	4.3	4.5	3.4	3.4	2.7	2.5	2.5
Services less energy services	6.8	6.7	6.1	5.6	5.5	5.2	4.9	4.7	4.4	4.1	3.7	3.4	3.3	2.9	2.7	2.8	3.0	2.9
Shelter	6.9	6.6	6.3	5.7	5.6	5.4	5.1	5.0	4.8	4.4	4.2	3.9	3.5	3.2	2.8	2.8	2.6	2.2
Rent of shelter (11) Water and sewer and trash collection services (1)	7.0 4.8	6.7 4.9	6.3 4.6	5.8 4.4	5.7 4.4	5.5 4.4	5.2 4.2	5.1 4.0	4.8 4.2	4.4 4.0	4.2 3.5	3.9 3.5	3.5 3.7	3.2 3.7	2.9 3.5	2.9 3.7	2.6 3.6	2.2 3.5
Household operations (1)	6.5654	- 4.9	4.0 6.6 -	4.4	6.5	5.3	4.2 6.4 -	4.0	4.2	4.0	3.5	8.4	6.9	6.6	7.3	7.0	7.2	8.3
Medical care services	5.4	6.5	5.6	5.1	4.8	4.0	3.5	2.9	2.4	2.7	2.5	2.1	1.7	0.9	1.0	0.8	1.0	1.5
Transportation services	15.3	14.6	11.4	9.5	9.0	8.0	8.4	7.5	6.4	5.4	4.1	3.8	4.6	4.4	4.4	6.0	10.4	11.3
Recreation services (7)	3.9	4.1	4.2	4.5	4.7	4.9	4.4	4.8	5.1	5.1	3.3	2.8	3.8	3.5	3.5	3.7	1.9	0.6
Education and communication services (7)	1.3	1.4	1.5	1.5	1.7	1.7	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.3	1.2	2.4	2.2
Other personal services (7)	5.8	5.9	5.8	5.9	6.7	6.5	6.2	5.7	6.2	5.4	4.3	4.5	4.0	3.4	3.6	3.1	2.5	2.8
Special aggregate indexes																		
All items less food	7.3	7.8	7.8	8.1	8.8	8.3	8.0	8.5	7.9	7.6	7.2	6.9	6.4	5.5	5.4	5.6	5.8	5.4
All items less shelter	8.2	9.0	9.2	9.8	10.7	10.0	9.8	10.3	9.5	9.1	8.5	8.3	7.6	6.5	6.4	6.5	6.7	6.3
All items less food and shelter All items less food, shelter, and energy	7.5 5.9	8.5 6.7	8.7 6.4	9.6 6.0	10.7 6.1	10.0 6.4	9.9 6.8	10.7 7.5	9.9 7.6	9.7 7.2	9.2 6.4	8.9 5.7	8.2 5.4	7.0 4.7	7.1 4.8	7.4 5.2	7.9 5.8	7.5 5.0
All items less food, shelter, energy, and used cars and trucks	6.3	6.7	6.3	6.0	6.1	5.8	5.8	5.8	5.5	5.1	4.4	4.1	4.0	3.4	3.1	3.1	3.6	3.5
All items less medical care	8.0	8.4	8.5	8.8	9.4	9.0	8.7	9.1	8.4	8.0	7.6	7.3	6.7	5.9	5.7	5.8	5.8	5.3
All items less energy	7.0	7.3	7.0	6.6	6.6	6.6	6.6	6.8	6.6	6.2	5.6	5.1	4.7	4.1	3.9	4.1	4.1	3.6
Commodities	8.6	9.6	10.5	12.0	13.4	13.0	12.9	14.2	13.1	12.4	12.2	12.0	10.5	9.0	8.9	9.1	8.9	8.1
Commodities less food, energy, and used cars and trucks Commodities less food	5.9	6.7	6.9	7.0	7.2	7.2	7.6	8.1	7.8	7.2	6.5	5.9	5.5	4.5	3.9	3.5	3.4	3.1
Commodities less food and beverages	7.4 7.4	8.7 8.9	10.1 10.3	12.6 12.9	15.0 15.5	14.6 15.1	14.9 15.4	17.3 17.9	16.1 16.7	15.7 16.2	15.8 16.4	15.5 16.1	13.7 14.2	11.7 12.1	12.0 12.4	12.5 13.0	13.0 13.5	11.9 12.4
Services	7.2	7.4	6.8	6.3	6.2	5.7	5.4	5.1	4.8	4.6	4.0	3.8	3.7	3.2	3.0	3.0	3.2	3.1
Services less rent of shelter (11)	7.5	8.2	7.4	6.8	6.9	6.0	5.6	5.2	4.8	4.7	3.8	3.6	3.8	3.2	3.2	3.3	3.9	4.0
Services less medical care services	7.5	7.5	7.0	6.4	6.4	6.0	5.6	5.4	5.1	4.8	4.2	4.0	3.9	3.5	3.3	3.3	3.5	3.3
Durables	4.8	7.1	7.8	7.9	8.4	11.4	14.0	17.4	18.7	18.4	16.7	14.9	13.2	11.8	12.8	14.2	14.6	10.3
Nondurables	10.5	10.8	12.0	14.3	16.2	14.3	12.8	13.1	10.7	9.8	10.1	10.6	9.4	7.9	7.4	7.2	6.8	7.5
Nondurables less food Nondurables less food and beverages	10.1 10.4	10.4 10.9	12.6 13.3	17.9 18.9	22.3 23.8	18.6 19.7	16.4 17.4	17.7 18.8	13.7 14.6	13.0 13.9	14.6 15.8	15.9 17.2	14.1 15.1	11.7 12.5	11.6 12.4	11.4 12.2	12.0 12.9	13.7 14.9
Nondurables less food and beverages, and apparel	12.2	12.4	15.6	22.6	28.9	23.9	20.9	22.4	17.1	16.6	18.9	21.0	18.6	15.5	15.0	14.7	15.5	17.9
Nondurables less food and apparel	11.6	11.6	14.5	21.0	26.6	22.1	19.3	20.6	15.7	15.2	17.0	19.1	16.9	14.2	13.6	13.3	13.8	16.1
Housing	7.9	8.0	7.8	7.4	7.3	6.9	6.5	6.4	5.9	5.7	5.1	4.8	4.5	3.9	3.5	3.3	3.1	2.9
Education and communication (1)	0.0	0.1	0.4	0.5	0.8	0.8	1.0	1.6	1.6	1.7	1.6	1.7	1.8	1.7	1.2	1.1	2.1	1.9
Education (1) Communication (1)	3.0	3.1 -2.0	3.1 -1.5	2.6	2.7 -0.6	2.5 -0.5	2.5 -0.1	2.5 0.9	2.1	2.1	2.0	2.1	2.1 1.5	2.0 1.5	1.4	1.1	1.2 2.8	1.0 2.6
Communication (1) Information and information processing (1)	-2.1 -2.3	-2.0 -2.2	-1.5 -1.7	-1.0 -1.2	-0.6 -0.7	-0.5 -0.6	-0.1 -0.2	0.9 0.8	1.2 1.1	1.3 1.2	1.3 1.1	1.3 1.1	1.5 1.4	1.5 1.5	1.1 1.0	1.1 1.0	2.8 2.8	2.6 2.6
Information technology, hardware and services (13)	-2.3	-2.2	-3.4	-1.2	-0.7	-0.6	-0.2	1.9	2.0	2.1	1.1	1.1	2.7	2.8	1.4	0.6	2.0	0.1
Recreation (1)	4.1	4.1	4.1	4.4	4.6	4.5	4.3	4.8	4.9	4.8	3.3	3.2	3.8	3.5	3.4	3.5	2.4	1.6
Video and audio (1)	1.1	0.3	0.7	1.6	2.7	3.4	2.7	2.6	3.1	3.3	2.2	3.2	3.2	3.4	3.5	3.6	4.0	3.0
Pets, pet products and services (1)	11.6	11.0	10.1	9.1	8.8	8.1	8.1	7.5	5.5	4.4	4.1	3.5	3.8	3.4	2.5	3.2	2.9	2.5
Photography (1)	5.6	6.3	6.1	4.8	4.2	4.8	4.1	3.2	2.1	3.5	3.6	3.3	2.0	2.3	2.6	2.2	1.5	3.1
Food and beverages Domestically produced farm food	10.6 12.7	10.8 13.3	10.9 13.8	10.5 13.3	10.0 12.4	9.7 12.0	9.0 10.9	8.5 10.3	7.6 8.9	6.7 7.7	6.0 6.6	5.8 6.5	5.1 5.4	4.5 4.5	3.6 3.0	3.4 2.6	2.3 0.9	2.1 0.8
Other services	2.7	2.8	3.0	3.1	3.3	3.3	3.2	3.2	8.9 3.4	3.3	2.6	6.5 2.5	5.4 2.7	4.5 2.5	3.0 2.3	2.6	2.2	1.8
Apparel less footwear	4.6	6.0	5.1	4.7	5.0	5.1	5.6	6.9	6.5	5.1	5.6	5.1	4.3	2.5	3.8	4.0	4.4	5.2
	14.2	17.0	17.3	16.7	17.7	15.5	13.0	12.5	11.0	11.9	9.4	9.8	10.4	8.3	8.1	7.2	6.6	6.4
Fuels and utilities		20.9	21.4	20.7	22.1	19.2	15.9	15.3	13.3	14.6	11.3	12.0	12.6	9.9	9.6	8.4	7.6	7.4
Fuels and utilities Household energy	17.2			4.0	4.5	3.7	3.2	2.9	2.4	2.5	2.2	1.7	1.3	0.4	0.4	0.3	0.4	0.9
Fuels and utilities Household energy Medical care	5.0	6.0	5.4	4.8				<i>c</i> -										
Fuels and utilities Household energy Medical care Transportation	5.0 11.2	12.6	13.4	16.4	19.6	19.3	19.8	22.5	21.1	20.9	21.3	21.1	18.7	16.5	17.6	19.1	21.4	19.8
Fuels and utilities Household energy Medical care Transportation Private transportation	5.0 11.2 10.5	12.6 12.0	13.4 13.2	16.4 16.5	19.6 19.8	19.3 19.4	19.8 20.1	23.2	22.1	22.2	22.8	22.9	20.2	17.7	18.3	19.5	21.7	20.1
Fuels and utilities Household energy Medical care Transportation Private transportation New and used motor vehicles (1)	5.0 11.2 10.5 7.0	12.6 12.0 9.9	13.4 13.2 9.8	16.4 16.5 9.2	19.6 19.8 9.7	19.3 19.4 13.7	19.8 20.1 17.3	23.2 21.5	22.1 23.5	22.2 23.3	22.8 21.0	22.9 18.4	20.2 16.3	17.7 15.0	18.3 16.9	19.5 19.6	21.7 20.6	20.1 13.9
Fuels and utilities Household energy Medical care Transportation Private transportation New and used motor vehicles (1) Utilities and public transportation	5.0 11.2 10.5	12.6 12.0	13.4 13.2	16.4 16.5	19.6 19.8	19.3 19.4	19.8 20.1	23.2	22.1	22.2	22.8	22.9	20.2	17.7	18.3	19.5	21.7	20.1
Fuels and utilities Household energy Medical care Transportation Private transportation New and used motor vehicles (1)	5.0 11.2 10.5 7.0 9.9	12.6 12.0 9.9 11.4	13.4 13.2 9.8 10.9	16.4 16.5 9.2 10.1	19.6 19.8 9.7 10.9	19.3 19.4 13.7 10.0	19.8 20.1 17.3 8.4	23.2 21.5 7.6	22.1 23.5 6.7	22.2 23.3 6.7	22.8 21.0 4.9	22.9 18.4 4.8	20.2 16.3 4.9	17.7 15.0 4.5	18.3 16.9 5.3	19.5 19.6 5.7	21.7 20.6 6.7	20.1 13.9 6.2

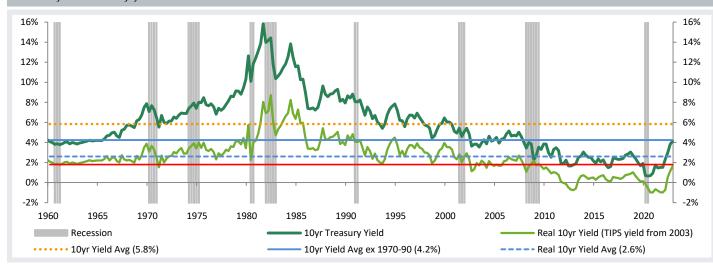
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Source: Haver, DWS Investment GmbH as of October 2022. Past performance may not be indicative of future results.

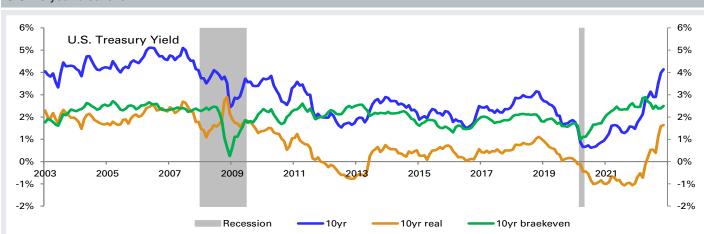
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Source: Haver, DWS Investment GmbH as of 11/8/2022. Past performance may not be indicative of future results.



U.S. 10-year breakeven

Source: Haver, DWS Investment GmbH as of 11/8/2022. Past performance may not be indicative of future results.

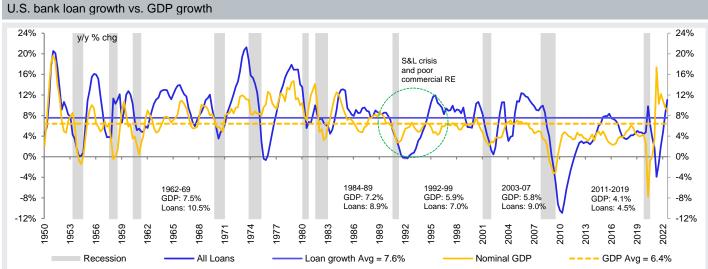


Productivity vs. Unit Labor Costs

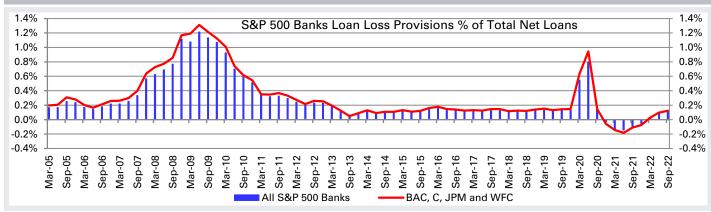
Source: Haver, DWS Investment GmbH as of 3Q2022. Past performance may not be indicative of future results.

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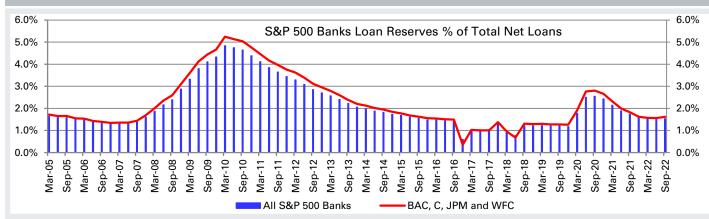


Source: Haver, DWS Investment GmbH as of 3Q2022. Past performance may not be indicative of future results.



S&P 500 Banks loan loss provisions % total net loans

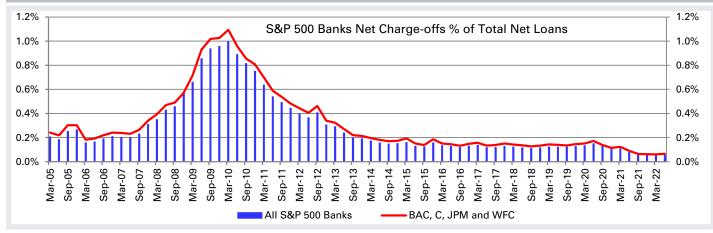
Source: Factset, DWS Investment GmbH as of 3Q2022. Past performance may not be indicative of future results.



S&P 500 Banks loan reserves% total net loans



S&P 500 Banks net charge-offs % total net loans



Source: Factset, DWS Investment GmbH as of 2Q2022. Past performance may not be indicative of future results.

A wage-price spiral and easy money usually cause broad-based inflation

Elevated and persistent inflation requires a wage-price spiral to sustain itself. Once price levels adjust for an inflationary shock, such as a surge in commodity prices or excessive money supply, prices should stop rising. However, if rising prices bleed into future expectations, then it can perpetuate itself as a wage-price spiral. A persistent wage-price spiral requires growth in base money supply or loan growth.



3Q S&P EPS Reporting Tracker and Estimate Revisions:

450 S&P 500 companies or 92% of index earnings have reported. 61% beat on EPS and 35% missed (the rest is in-line), with an aggregate surprise of -0.9%, -2.3% ex Energy. Historic average beat is +3.3% (2011-2019 average). 46% beat on sales and 28% missed, with an aggregate surprise of +1.4%, +1.4% ex Energy.

Bottom-up blended 3Q EPS is \$55.90, +3.6% y/y. Blended sales growth is +11.1% y/y. Blended pro-forma net margin is 12.6%, vs. 13.1% in 2Q22 and 13.6% a year ago. Bottom-up consensus 2022 EPS is \$223.13. Our estimate is \$222 (55+58+55+54=\$222). Bottom-up consensus 2023 S&P EPS has been cut to \$232.54, our estimate is \$220 (52+55+56+57=\$220).

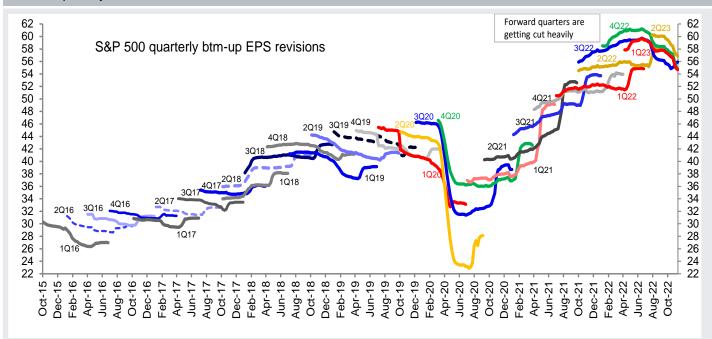
We model trough quarterly S&P EPS of \$52 in 1Q23, down 5-10% from the 1Q22 peak ex. Energy and down 10% from the 2Q22 peak of \$58 with Energy for 4 main reasons: 1) small recession expected for US and Europe over the next couple of quarters followed by slow growth, causing a 5% dip or near \$3 hit to 1Q23 EPS from \$55 in 1Q22, 2) dollar strength that hits S&P EPS from 1Q22 levels by \$1-\$1.50 quarterly through 2023, 3) minimum book profit and buyback taxes of near \$3 annually in 2023, 4) energy profits \$2-3 above 1Q22 levels quarterly in 1H23.

By sector, 3Q blended EPS y/y growth is strongest at Energy (+144% y/y), Industrials (19%), Consumer Discretionary (11%) and Real Estate (5.9%). EPS y/y growth is weakest at Communication Services (-22%), Financials (-17%), Utilities (-9.4%) and Materials (-8.8%).

3Q blended sales y/y growth is strongest at Energy (+50% y/y), Utilities (23%), Real Estate (14%), Consumer Discretionary (13%), Industrials (12%) and Consumer Staples (7.4%). Sales y/y growth is weakest at Communication Services (-1.9%), Financials (4.4%, but banks are a spread or net interest margin business), Tech (5.2%) and Health Care (5.5%).

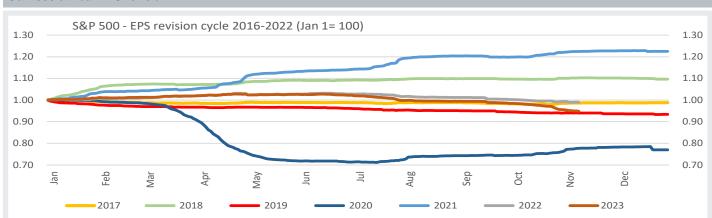
S&P net margins surged to record high of 13.8% last year, led by digital firms, banks and consumer goods producers/retailers. We see some usual recessionary set-backs in net margins. S&P 500 net margins are cyclical, but not mean reverting, they have been rising since mid-1990s for structural reasons.

S&P 500 quarterly EPS revision

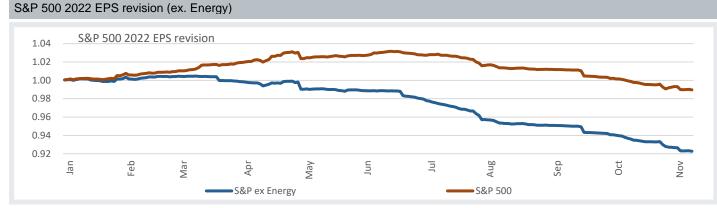




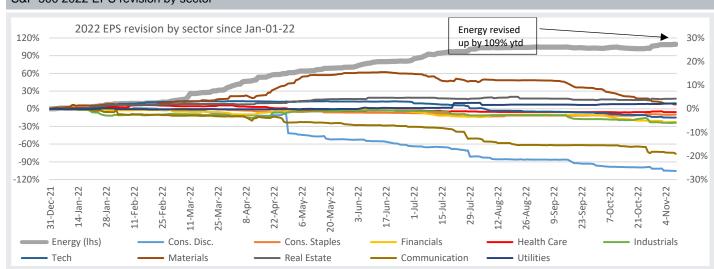
S&P 500 annual EPS revision



Source: Factset, IBES, DWS Investment GmbH as of 11/9/2022. Past performance may not be indicative of future results.

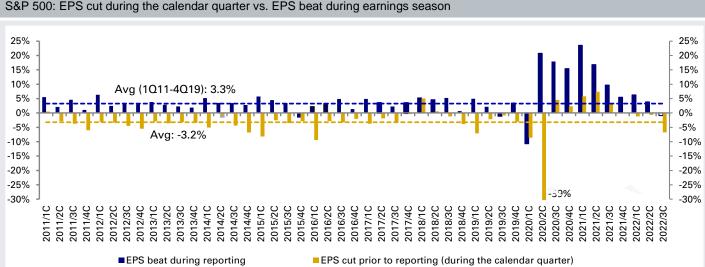


Source: Factset, IBES, DWS Investment GmbH as of 11/9/2022. Past performance may not be indicative of future results.



S&P 500 2022 EPS revision by sector





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

Source: Factset, DWS Investment GmbH as of 11/9/2022. Past performance may not be indicative of future results.

S&P 500: 3Q22 earnings season summary statistics

	3Q22	Summary	(Based or	reported	companies)					
	% of EPS	# Cos	EPS (%	of co's)	EPS	EPS	Sales (%		Sales	Sales
	reported	reported	% beat	% miss	surprise (%)	y/y (%)	% beat	% miss	surprise (%)	y/y (%)
S&P 500	92.0%	450	61%	35%	-0.9%	3.9%	46%	28%	1.4%	12.2%
S&P 500 ex. Financials & Real Est	90.5%	354	65%	32%	0.6%	8.6%	49%	29%	0.9%	13.3%
S&P 500 ex. Energy	90.9%	429	62%	34%	-2.3%	-4.6%	45%	28%	1.4%	8.3%
S&P ex. Tech	94.4%	390	58%	37%	-1.7%	5.3%	47%	29%	1.5%	12.9%
S&P ex. Energy, Financials & Real Est	88.9%	333	66%	31%	-0.9%	-1.8%	48%	29%	0.9%	8.8%
Communication Services	100.0%	25	52%	48%	-7.9%	-22.4%	32%	40%	-0.7%	-1.9%
Consumer Discretionary	70.0%	40	63%	38%	-6.5%	19.1%	43%	45%	-0.9%	18.6%
Consumer Staples	86.9%	26	62%	31%	3.8%	1.7%	69%	19%	2.6%	8.4%
Energy	100.0%	21	48%	52%	9.1%	144%	62%	33%	1.3%	49.9%
Financials	100.0%	65	48%	48%	-8.3%	-16.9%	46%	32%	4.8%	5.1%
Health Care	95.8%	59	71%	24%	5.8%	-0.1%	47%	24%	1.7%	5.8%
Industrials	92.0%	67	73%	21%	-6.8%	17.2%	43%	37%	-0.6%	11.8%
Information Technology	82.7%	60	78%	20%	3.0%	-2.0%	40%	17%	0.6%	5.8%
Materials	97.3%	27	37%	56%	-13.6%	-9.4%	37%	44%	-1.6%	5.6%
Real Estate	98.4%	31	45%	42%	-2.2%	5.9%	13%	6%	-0.2%	13.7%
Utilities	100.0%	29	59%	41%	-3.9%	-9.4%	93%	3%	13.8%	22.9%

* # Beat, # miss and weighted surprise % is based on EPS and sales estimate as of 9/30/2022 (as of 9/1/2022 for pre-season reporters)

EPS is considered beat or miss when the difference between actual and estimate as of 9/30/2022 is more than \$0.01 (9/1/2022 for pre-season reporters) Sales is considered beat or miss when the difference between actual and estimate as of 9/30/2022 is more than \$20 million (9/1/2022 for pre-season reporters) Source: Factset, DWS Investment GmbH as of 11/9/2022. Past performance may not be indicative of future results.

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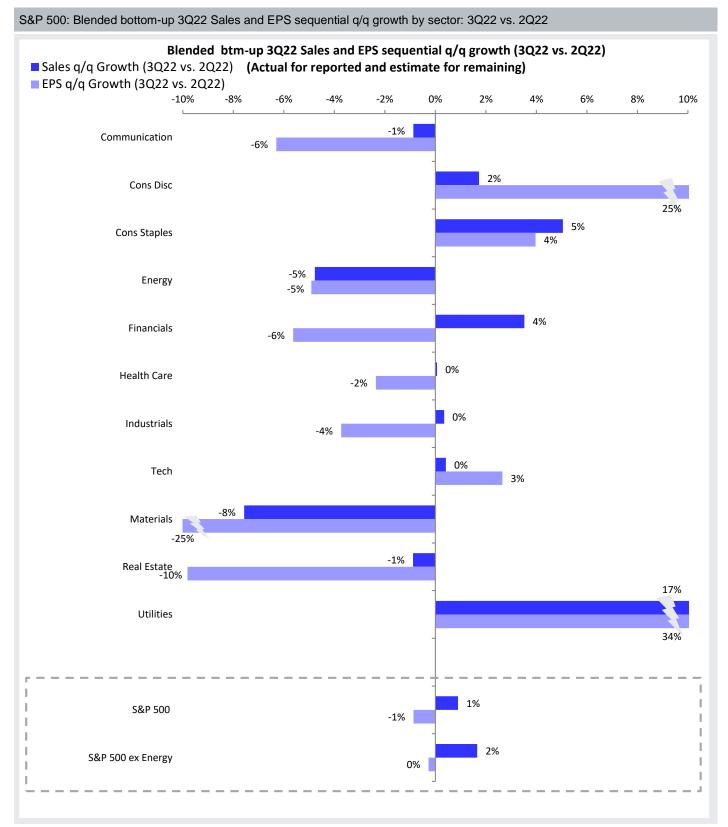
S&P 500 EPS & Sales growth and Net Margins by sector (3Q22 is blended with actual for reported and consensus for the rest)

		20	10				20	10			1	20	20				20	21				2022	
EPS growth (v/v)	1018	2Q18	3Q18	4Q18	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021	1022	2022 2Q22	3Q22
S&P 500	27.2%	28.4%	27.2%	14.7%	21.6%	2.9%	1.9%	1.3%	3.5%	2.1%	-12.6%	-31.3%	-6.9%	4.4%	-8.9%	48.9%	90.2%	39.9%	29.9%	46.8%	9.9%	8.1%	3.6%
S&P 500 ex, Financials & Real Est	27.2%	29.4%	25.1%	14.5%	20.6%	1.8%	0.0%	1.0%	2.4%	0.8%	-6.1%	-27.8%	-7.7%	1.2%	-6.8%	36.1%	79.9%	41.5%	35.5%	43.8%	17.4%	15.0%	7.9%
S&P 500 ex. Energy	25.6%	26.1%	24.4%	12.2%	19.3%	4.1%	2.6%	3.6%	6.2%	3.8%	-12.1%	-25.4%	-3.0%	8.0%	-5.1%	49.8%	76.7%	32.6%	22.3%	40.1%	4.3%	-2.2%	-4.1%
S&P 500 ex. Tech	25.1%	27.0%	26.5%	17.1%	22.1%	4.9%	3.5%	2.2%	1.2%	1.8%	-17.9%	-38.7%	-9.6%	1.2%	-14.6%	52.5%	105.0%	40.4%	31.8%	52.3%	8.9%	10.2%	5.1%
S&P ex. Energy, Fin & Real Est	25.2%	26.5%	21.6%	11.4%	17.7%	3.3%	0.8%	3.8%	5.7%	2.9%	-5.1%	-20.0%	-2.8%	5.5%	-1.8%	36.7%	64.2%	32.3%	25.8%	35.6%	10.2%	2.0%	-1.5%
S&P ex. Energy, Fin, Real Est, Healthcare	27.6%	28.8%	22.8%	10.8%	19.1%	1.6%	-1.9%	2.7%	4.8%	1.3%	-7.8%	-26.5%	-5.6%	5.1%	-4.3%	39.4%	79.6%	33.7%	25.7%	37.9%	8.3%	0.2%	-1.9%
FANG (FB, AMZN, NFLX, Google)	36.4%	113.5%	50.0%	31.3%	55.9%	28.6%	14.7%	-6.0%	16.2%	4.4%	-14.5%	-1.5%	60.3%	56.7%	41.5%	149.8%	110.3%	26.3%	36.1%	66.0%	-40.2%	-39.8%	-28.5%
FANG & AAPL	32.9%	72.9%	45.3%	17.0%	35.5%	8.6%	5.4%	-1.3%	17.9%	3.4%	-7.0%	5.8%	29.9%	45.1%	34.4%	136.2%	106.8%	41.2%	30.8%	57.3%	-20.4%	-27.5%	-15.3%
S&P ex FANG	26.8%	26.3%	26.3%	14.0%	20.5%	1.9%	1.4%	1.6%	2.9%	2.0%	-12.5%	-32.8%	-9.7%	1.4%	-11.2%	44.1%	88.7%	40.9%	29.3%	45.4%	14.1%	11.8%	5.7%
S&P ex FANG & AAPL	26.7%	25.9%	25.8%	14.4%	20.5%	2.4%	1.7%	1.5%	1.9%	2.0%	-13.1%	-34.3%	-10.0%	-0.8%	-12.8%	41.0%	88.1%	39.8%	29.7%	45.3%	14.4%	12.8%	5.8%
S&P ex. Energy & Fin & Real Est & FANG	24.7%	23.6%	20.2%	10.2%	16.0%	2.0%	-0.1%	4.4%	5.0%	2.9%	-4.5%	-21.2%	-6.3%	1.6%	-4.4%	29.9%	60.4%	32.9%	24.6%	32.8%	16.0%	6.5%	0.9%
Communication Services	22.7%	38.2%	27.2%	17.1%	25.6%	9.7%	9.9%	0.7%	8.4%	3.4%	-9.1%	-21.3%	2.8%	10.4%	3.1%	54.2%	73.2%	35.6%	16.7%	39.5%	-3.0%	-14.7%	-21.7%
Consumer Discretionary	17.7%	21.7%	27.2%	18.2%	21.1%	11.2%	4.3%	2.8%	1.6%	1.1%	-46.6%	-62.8%	1.6%	3.6%	-19.3%	174.1%	262.6%	14.8%	47.5%	71.2%	-27.3%	-12.4%	11.1%
Multiline & Specialty Retail	22.9%	30.4%	24.4%	18.8%	23.1%	9.7%	6.5%	10.9%	6.3%	9.2%	-40.7%	22.5%	39.6%	17.4%	11.5%	204.5%	36.8%	16.3%	17.1%	40.5%	-0.8%	-8.7%	-2.9%
Consumer Staples	13.0%	14.0%	9.3%	4.3%	9.1%	-0.8%	-0.6%	3.4%	2.8%	1.3%	6.9%	-5.0%	5.5%	6.0%	4.8%	10.2%	19.5%	7.0%	7.3%	10.7%	7.7%	2.2%	0.1%
Energy	75.4%	107.8%	103.5%	86.8%	87.0%	-24.3%	-12.3%	-36.6%	-41.5%	-29.9%	-28.2%	-169.1%	-109.6%	-102.0%	-109.5%	17.9%	247.1%	1899%	12874%	-1626%	261.3%	299.1%	143.9%
Financials	29.9%	27.4%	41.0%	16.6%	28.3%	7.2%	10.5%	2.4%	9.6%	7.7%	-39.5%	-48.8%	-3.6%	20.4%	-18.6%	138.4%	167.5%	36.3%	10.0%	67.6%	-17.4%	-20.2%	-17.1%
Financials ex. BAC, C & JPM	26.0%	25.2%	45.3%	13.0%	26.9%	5.2%	6.6%	0.8%	4.6%	4.8%	-32.6%	-45.8%	-2.4%	23.6%	-15.1%	106.0%	152.5%	34.0%	16.0%	61.5%	-9.9%	-17.6%	-18.1%
Health Care	16.9%	17.9%	17.1%	13.9%	12.1%	10.0%	12.1%	8.6%	10.0%	9.9%	4.6%	3.5%	8.3%	7.3%	7.9%	28.3%	25.5%	27.7%	26.2%	28.0%	16.5%	8.2%	-0.1%
Industrials	29.5%	25.8%	28.2%	33.9%	24.6%	8.2%	-9.0%	2.5%	-9.9%	-3.6%	-27.0%	-80.1%	-47.0%	-29.0%	-47.1%	-1.7%	387.0%	76.6%	39.0%	71.0%	36.5%	29.6%	18.8%
Industrials ex. BA	26.7%	25.5%	28.0%	30.6%	22.8%	9.8%	5.7%	6.2%	3.2%	5.0%	-19.4%	-74.5%	-43.6%	-24.6%	-42.8%	-2.0%	244.1%	71.2%	43.4%	62.6%	38.2%	31.3%	28.4%
Industrials ex. Defense	30.4%	26.2%	26.4%	25.8%	23.7%	6.6%	-11.0%	2.6%	-12.2%	-4.9%	-29.9%	-88.6%	-51.9%	-34.0%	-52.7%	-3.8%	706.7%	99.4%	46.2%	87.8%	43.7%	38.2%	16.6%
Information Technology	35.6%	34.2%	29.8%	7.3%	19.6%	-4.5%	-4.1%	-2.0%	11.8%	3.4%	9.9%	1.3%	3.8%	14.8%	14.0%	37.5%	49.8%	38.2%	24.1%	29.6%	13.4%	0.0%	-1.6%
Materials	67.1%	63.3%	-28.3%	-22.8%	11.1%	-12.7%	-19.5%	80.2%	-11.5%		-7.5%	-34.6%	-13.0%	12.8%	-6.1%	47.6%	133.0%	86.6%	63.8%	83.9%	47.0%	18.6%	-8.8%
Real Estate	8.3%	8.9%	6.8%	7.7%	8.0%	4.7%	0.9%	4.3%	0.0%	2.0%	-3.0%	-12.2%	-5.6%	0.4%	-4.2%	9.0%	28.9%	17.2%	10.0%	14.7%	16.8%	10.5%	5.9%
Utilities	18.9%	7.5%	11.9%	-10.4%	7.6%	-0.7%	1.4%	7.3%	18.0%	6.3%	4.3%	6.9%	0.8%	-2.8%	1.3%	-1.2%	12.7%	10.2%	-1.3%	5.1%	26.3%	-4.8%	-9.4%

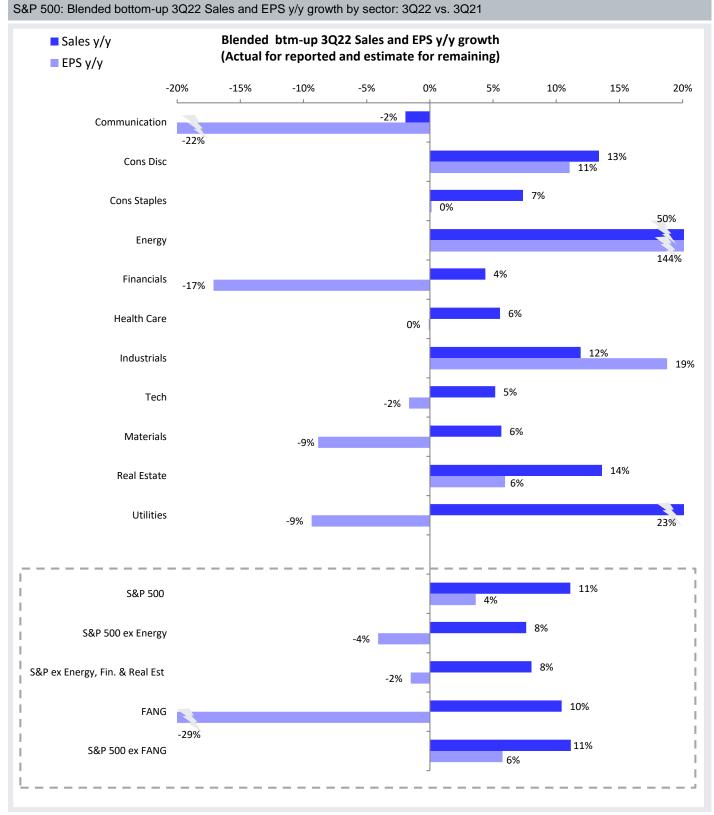
			2018					2019					2020					2021				2022	
Sales growth (y/y) 1Q1	18	2Q18	3Q18	4Q18	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22
S&P 500 9.49			10.7%	4.0%	8.7%	5.8%	5.2%	4.0%	7.8%	5.7%	-1.8%	-10.3%	-2.3%	-0.5%	-3.7%	9.5%	21.8%	13.9%	15.2%	15.0%	13.6%	12.2%	11.1%
S&P 500 ex. Financials & Real Est 9.29	%	10.2%	9.6%	1.7%	7.6%	3.3%	2.9%	2.1%	6.5%	3.7%	-2.8%	-11.7%	-2.5%	1.5%	-3.9%	12.2%	26.7%	17.5%	16.5%	18.8%	15.3%	13.1%	12.0%
S&P 500 ex. Energy 7.99		8.5%	7.7%	1.6%	6.3%	3.7%	3.4%	3.4%	7.6%	4.5%	-1.7%	-6.8%	0.2%	4.0%	-1.1%	12.4%	20.7%	13.5%	11.8%	15.1%	10.4%	6.9%	7.6%
S&P 500 ex. Tech 8.09	1%	9.7%	8.7%	2.2%	7.1%	3.8%	3.4%	2.4%	6.4%	4.0%	-3.2%	-12.5%	-3.4%	-0.1%	-5.2%	10.5%	24.8%	16.3%	15.9%	17.3%	13.7%	12.5%	11.9%
S&P ex. Energy, Fin & Real Est 8.49		8.6%	8.0%	1.0%	6.4%	3.5%	3.3%	3.3%	7.9%	4.5%	-2.0%	-7.2%	0.7%	4.7%	-1.0%	13.0%	22.3%	13.9%	12.0%	16.6%	11.8%	7.5%	8.0%
S&P ex. Energy, Fin, Real Est, Healthcare 8.79	'%	8.8%	8.2%	-0.6%	6.4%	0.8%	0.5%	0.2%	6.5%	1.9%	-5.3%	-10.1%	-2.1%	2.5%	-4.2%	13.8%	23.0%	13.6%	11.6%	17.9%	10.9%	6.7%	8.9%
FANG (FB, AMZN, NFLX, Google) 37.6	6%	35.0%	27.4%	21.7%	29.4%	18.2%	20.9%	23.5%	20.6%	20.8%	21.3%	22.6%	27.7%	35.7%	27.5%	40.6%	38.8%	24.6%	16.9%	28.6%	11.7%	7.8%	10.4%
FANG & AAPL 27.8	3%	28.1%	24.3%	9.5%	21.5%	8.8%	13.8%	15.2%	15.9%	12.6%	14.0%	18.9%	18.6%	30.2%	22.5%	44.6%	38.1%	25.9%	14.9%	27.5%	10.7%	6.0%	9.6%
S&P ex FANG 7.99	%	9.3%	8.5%	1.5%	6.7%	3.0%	2.4%	1.7%	5.9%	3.2%	-3.2%	-11.9%	-3.7%	-0.4%	-4.8%	10.4%	23.8%	16.2%	15.6%	16.4%	13.6%	12.1%	11.2%
S&P ex FANG & AAPL 7.79	%	9.2%	8.3%	1.7%	6.6%	3.2%	2.5%	1.7%	5.8%	3.3%	-3.3%	-12.4%	-3.8%	-1.1%	-5.2%	9.5%	23.5%	15.9%	15.8%	16.2%	13.8%	12.4%	11.2%
S&P ex. Energy & Fin & Real Est & FANG 7.59	%	7.7%	7.3%	0.1%	5.6%	2.9%	2.6%	2.4%	7.2%	3.8%	-3.1%	-8.7%	-0.7%	2.9%	-2.5%	11.4%	21.2%	13.2%	11.6%	15.8%	11.8%	7.4%	7.9%
Communication Services 12.1	1%	10.8%	13.2%	12.9%	11.7%	12.3%	14.9%	11.2%	3.9%	9.2%	4.0%	-7.1%	0.8%	5.7%	2.7%	12.5%	26.1%	16.8%	11.7%	15.3%	7.5%	3.9%	-1.9%
Consumer Discretionary 10.0		9.9%	10.3%	7.7%	9.0%	4.4%	5.3%	5.6%	2.9%	4.2%	0.5%	-11.8%	6.5%	11.9%	6.9%	19.7%	35.3%	10.6%	11.2%	13.2%	9.1%	11.0%	13.4%
Multiline & Specialty Retail 5.3		7.6%	5.9%	3.1%	0.0%	4.6%	3.2%	4.2%	2.7%	0.0%	0.8%	11.4%	16.5%	15.5%	0.0%	28.5%	17.2%	9.2%	10.0%	0.0%	3.1%	2.4%	2.8%
Consumer Staples 5.3		5.5%	3.0%	1.9%	4.0%	2.7%	2.5%	3.6%	3.4%	2.7%	5.8%	-0.3%	3.4%	4.7%	5.1%	3.8%	12.5%	10.1%	9.5%	6.5%	9.5%	8.5%	7.4%
Energy 18.1		28.1%	25.7%	8.6%	20.2%	0.6%	-0.7%	-8.6%	-6.1%	-4.0%	-10.8%	-54.0%	-34.4%	-32.1%	-32.9%	3.3%	110.8%	73.0%	88.6%	51.5%	58.7%	75.7%	49.9%
Financials 4.3	%	8.2%	5.3%	4.7%	5.4%	4.7%	3.4%	4.1%	6.2%	4.6%	0.1%	-4.0%	-2.7%	-0.6%	-1.6%	9.3%	11.3%	10.7%	9.5%	5.5%	0.5%	2.4%	4.4%
Financials ex. BAC, C & JPM 3.75		9.3%	5.6%	4.6%	5.6%	5.6%	3.6%	4.3%	6.4%	5.0%	-0.3%	-6.5%	-2.1%	0.2%	-1.8%	10.6%	16.2%	12.1%	10.4%	6.6%	1.0%	1.9%	3.2%
Health Care 7.49	%	7.5%	7.2%	7.7%	6.5%	14.4%	14.6%	15.4%	13.0%	15.1%	9.2%	2.7%	10.3%	12.6%	9.9%	10.6%	20.0%	15.0%	13.4%	12.7%	14.6%	9.8%	5.5%
Industrials 10.4	4%	9.7%	7.9%	4.8%	4.9%	5.0%	-0.3%	0.7%	2.0%	2.3%	-7.4%	-23.7%	-15.4%	-8.7%	-11.0%	-0.8%	28.5%	16.5%	13.3%	14.2%	12.6%	13.0%	11.9%
Industrials ex. BA 6.4	%	5.2%	3.8%	14.5%	7.6%	-2.1%	-12.1%	-20.8%	-27.8%	-16.4%	-26.5%	-45.1%	-29.5%	-23.4%	-31.2%	-10.2%	44.3%	7.9%	-6.8%	24.2%	-8.5%	-2.2%	12.3%
Industrials ex. Defense 11.0	2%	9.6%	7.0%	3.9%	4.2%	3.6%	-1.1%	0.2%	1.4%	1.5%	-8.4%	-26.5%	-17.3%	-10.4%	-12.6%	-1.5%	31.9%	18.8%	15.2%	15.6%	14.6%	15.0%	13.0%
Information Technology 14.3	3%	12.8%	12.2%	2.0%	9.5%	0.5%	-0.1%	2.1%	6.8%	2.7%	5.0%	6.0%	5.4%	11.5%	10.6%	22.4%	22.7%	19.2%	13.9%	15.4%	11.9%	6.9%	5.2%
Materials 24.0	0%	27.7%	11.3%	15.2%	13.1%	0.0%	-16.4%	-13.6%	-14.9%	-7.5%	-16.5%	-14.7%	-5.3%	3.0%	-5.0%	11.9%	37.1%	31.4%	27.0%	23.5%	23.7%	16.4%	5.7%
Real Estate 12.5	5%	11.3%	10.6%	9.7%	10.2%	5.1%	5.0%	5.8%	4.4%	4.9%	5.2%	-5.9%	-3.2%	-2.2%	-1.2%	1.9%	18.1%	15.7%	18.8%	9.6%	20.5%	17.2%	13.6%
Utilities 6.3	%	3.2%	5.3%	4.0%	3.5%	1.1%	1.1%	0.5%	-0.7%	7.6%	-6.3%	-6.2%	-3.1%	-3.1%	-4.4%	16.2%	10.6%	9.4%	27.3%	7.7%	8.5%	23.1%	22.9%

		2018					2019					2020					2021				2022	
1Q18	2Q18	3Q18	4Q18	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22
11.7%	12.0%	12.2%	11.9%	11.7%	11.5%	11.8%	11.9%	11.4%	11.3%	10.2%	9.0%	11.3%	11.7%	10.6%	13.5%	13.8%	13.6%	13.0%	13.3%	13.0%	13.1%	12.6%
10.5%	11.0%	11.2%	11.0%	10.6%	10.2%	10.6%	11.0%	10.5%	10.2%	9.9%	8.7%	10.4%	10.4%	9.9%	11.9%	12.4%	12.5%	12.1%	12.0%	12.0%	12.3%	12.0%
12.2%	12.6%	12.6%	12.3%	12.1%	12.0%	12.3%	12.5%	11.9%	11.8%	10.7%	9.8%	12.0%	12.3%	11.3%	14.2%	14.4%	13.9%	13.3%	13.7%	13.2%	12.9%	12.4%
10.3%	10.7%	10.8%	10.4%	10.4%	10.3%	10.6%	10.7%	9.8%	10.1%	8.7%	7.5%	9.9%	9.9%	9.1%	12.0%	12.3%	12.0%	11.2%	11.8%	11.4%	11.8%	11.3%
10.9%	11.5%	11.6%	11.4%	11.0%	10.8%	11.1%	11.6%	11.1%	10.7%	10.4%	9.6%	11.1%	11.1%	10.6%	12.5%	12.9%	12.9%	12.3%	12.3%	12.2%	12.0%	11.7%
10.9%	11.7%	11.7%				11.3%	11.9%	11.4%	10.9%	10.5%	9.1%	11.3%	11.6%	10.8%	12.7%	13.3%	13.3%	12.8%	12.5%	12.2%	12.2%	11.9%
14.0%	15.7%	16.1%	14.1%	14.3%	15.1%	14.8%	12.2%	13.5%	12.3%	10.6%	11.8%	15.3%	15.6%	13.6%	18.8%	17.9%	15.3%	17.9%	17.4%	9.7%	9.6%	5.7%
17.5%	17.8%	18.5%	18.0%	17.4%	16.8%	16.0%	15.3%	17.6%	15.4%	13.3%	13.9%	16.5%	19.2%	16.4%	21.3%	20.5%	18.1%	21.4%	19.9%	14.8%	13.5%	12.2%
11.6%	11.9%	12.1%	11.8%	11.6%	11.3%	11.7%	11.9%	11.3%	11.3%	10.2%	8.9%	11.1%	11.5%	10.5%	13.2%	13.6%	13.5%	12.7%	13.0%	13.1%	13.3%	12.9%
11.4%	11.8%	11.9%	11.4%	11.4%	11.1%	11.5%	11.7%	10.9%	11.1%	10.0%	8.6%	10.9%	10.9%	10.1%	12.8%	13.2%	13.2%	12.1%	12.7%	12.8%	13.1%	12.7%
10.8%	11.3%	11.4%	11.2%	10.8%	10.6%	11.0%	11.5%	10.9%	10.6%	10.4%	9.4%	10.8%	10.7%	10.4%	12.0%	12.5%	12.7%	11.8%	11.9%	12.3%	12.1%	12.0%
15.6%	16.5%	16.7%	15.3%	15.6%	15.9%	16.4%	15.3%	16.1%	15.1%	13.9%	13.8%	15.6%	16.8%	15.1%	19.1%	18.9%	18.0%	17.3%	18.2%	17.0%	14.7%	12.3%
6.8%	7.9%	8.5%	7.1%	7.6%	7.0%	7.6%	8.0%	6.8%	7.1%	3.6%	3.0%	7.3%	6.3%	5.2%	8.1%	8.1%	7.6%	8.0%	7.8%	5.1%	6.1%	7.3%
6.6%	8.0%	6.8%	7.1%	7.9%	6.7%	7.9%	6.9%	7.0%	8.3%	3.8%	8.4%	8.1%	7.1%	9.0%	8.8%	9.6%	8.4%	7.2%	12.3%	8.0%	8.1%	7.8%
7.4%	8.1%	8.0%	7.6%	7.6%	7.1%	7.8%	8.0%	7.5%	7.5%	7.1%	7.4%	8.1%	7.6%	7.4%	7.5%	7.9%	7.8%	7.4%	7.7%	7.3%	7.3%	7.2%
6.4%	6.5%	7.9%	7.8%	7.3%	4.8%	5.9%	5.6%	4.8%	5.4%	3.8%	-8.9%	-0.8%	-0.1%	-0.8%	4.6%	6.6%	9.1%	9.8%	8.4%	10.7%	14.8%	14.5%
18.5%	17.7%	17.7%	16.2%	17.4%	18.1%	18.0%	16.6%	15.9%	17.1%	10.6%	9.4%	16.0%	19.2%	13.8%	23.1%	22.5%	19.5%	18.7%	21.7%	18.4%	17.0%	15.3%
16.4%	15.6%	15.5%	14.0%	15.2%	15.7%	15.4%	14.4%	13.3%	14.7%	10.5%	8.9%	14.1%	16.4%	12.6%	19.6%	19.4%	16.8%	16.8%	18.9%	16.9%	15.3%	13.3%
10.8%	10.9%	11.0%	10.0%	10.6%	10.4%	10.7%	10.4%	9.8%	10.1%	10.0%	11.0%	10.4%	9.5%	10.0%	11.8%	11.6%	11.7%	10.6%	11.5%	11.9%	11.3%	10.9%
9.3%	10.6%	10.5%	10.2%	10.4%	9.3%	9.4%	10.5%	8.8%	9.7%	7.3%	2.5%	6.2%	6.7%	5.7%	6.9%	9.3%	9.4%	8.0%	8.4%	8.2%	10.4%	9.8%
9.3%	10.8%	10.7%	10.1%	10.2%	9.4%	11.1%	10.9%	9.8%	10.6%	8.0%	3.7%	6.8%	7.9%	6.9%	7.6%	9.7%	10.0%	9.7%	9.5%	9.0%	11.0%	11.2%
9.2%	10.7%	10.4%	10.2%	10.4%	9.2%	9.4%	10.5%	8.7%	9.7%	7.0%	1.5%	5.7%	6.3%	5.2%	6.5%	9.2%	9.6%	7.8%	8.3%	7.9%	10.8%	9.7%
24.0%	24.2%	24.9%	23.7%	22.6%	21.8%	22.2%	23.0%	24.1%	21.9%	22.4%	20.9%	22.4%	24.3%	22.2%	24.8%	25.4%	25.7%	26.2%	24.6%	25.0%	23.5%	23.7%
9.1%	10.2%	4.2%	8.3%	8.9%	7.6%	11.4%	10.5%	9.5%	9.2%	9.0%	8.7%	9.6%	10.3%	9.2%	11.8%	14.7%	13.5%	13.0%	13.6%	13.6%	14.4%	11.2%
34.2%	34.8%	33.8%	34.0%	34.4%	34.9%	34.3%	34.3%	33.2%	34.3%	32.9%	33.5%	34.7%	35.6%	34.6%	36.4%	37.5%	36.2%	34.2%	37.4%	36.9%	37.1%	35.2%
12.9%	12.1%	15.3%	9.1%	12.5%	13.2%	12.6%	16.8%	11.2%	12.9%	15.1%	14.6%	17.7%	11.4%	13.9%	13.0%	15.0%	18.1%	9.0%	13.7%	15.3%	11.7%	13.4%
	11.7% 10.5% 12.2% 10.3% 10.9% 10.9% 11.9% 11.6% 11.6% 11.6% 11.4% 15.6% 6.8% 6.6% 7.4% 18.5% 16.4% 10.8% 9.3% 9.2% 24.0% 9.1% 34.2%	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $												$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	1018 2018 4018 2018 4018 2018 4018 2018 4019 2019 4020 2020 3020 4020 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3024 4021 2021 3024 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2026 12.3% 11.3% 13.3%	1018 2018 4018 2018 1019 2019 1020 2020 3020 4020 2020 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2021 3021 4021 2008 11.% 10.% 10.% 10.% 10.% 10.4%



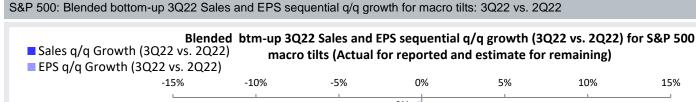


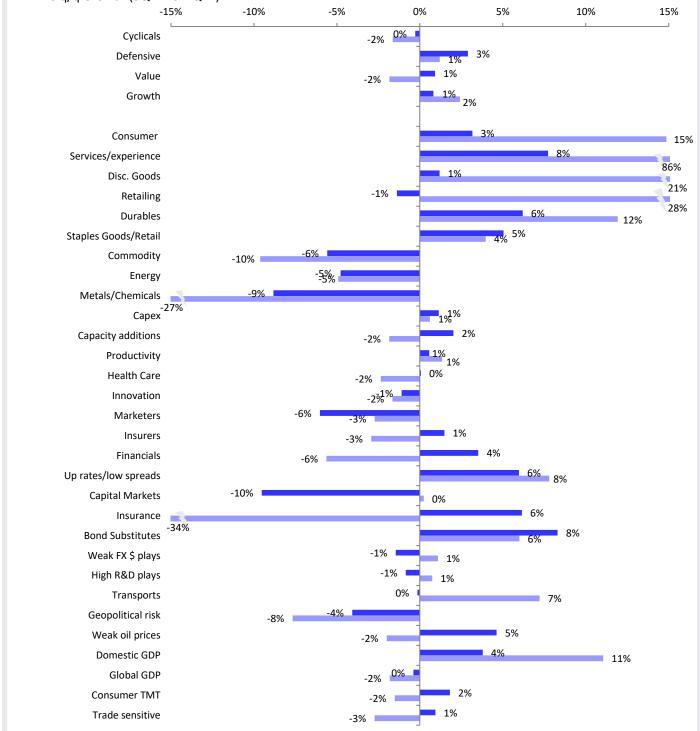




Source: Factset, DWS Investment GmbH as of 11/9/2022. Past performance may not be indicative of future results.

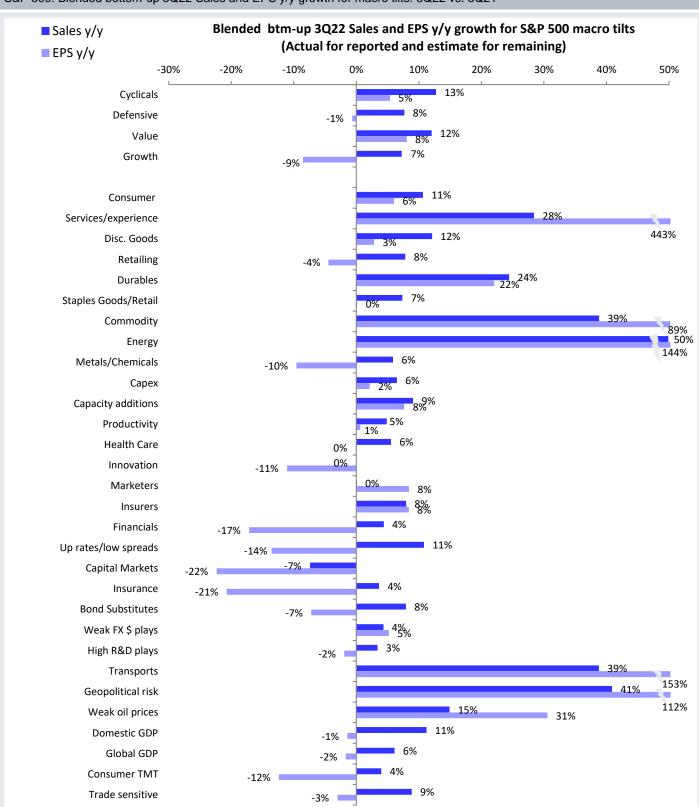






Source: Factset, DWS Investment GmbH as of 11/9/2022. Past performance may not be indicative of future results.





S&P 500: Blended bottom-up 3Q22 Sales and EPS y/y growth for macro tilts: 3Q22 vs. 3Q21



2018 and 2002 are relevant examples of the S&P 500 performing weakly after midterms owing to hawkish Fed in 2018 and second Iraq war looming in 2002. And while the S&P tends to perform well after elections, this is not the case in election years with recessions as occurred in multiple general election years.

S&P 500 performance statistics in election years

	Years v	/ith 10%+	Jan-Apr I	Returns		All Y	'ears	1		Non-reces	sion Yea	rs	Mic	l-term Ele	ection Ye	ars	Non-red		/lid-term ars	Election		Election	Years			ecession sidential a		
Time Period	Avg	Std Dev	Max	Min	Avg	Std Dev	Мах	Min	Avg	Std Dev	Max	Min	Avg	Std Dev	Max	Min	Avg	Std Dev	Max	Min	Avg	Std Dev	Max	Min		Std Dev		Min
Jan	5.9%	4.1%	13.2%	0.2%	0.9%	5.0%	13.2%	-8.6%	1.0%	4.6%	13.2%	-7.1%	-2.0%	3.4%	3.3%	-7.6%	-1.1%	3.1%	3.3%	-6.2%	-0.7%	4.6%	11.8%	-7.6%	0.3%	4.2%	11.8%	-6.2%
Feb	2.6%	3.5%	7.1%	-2.9%	0.2%	3.7%	7.1%	-11.0%	0.3%	3.2%	7.1%	-9.2%	1.0%	4.0%	7.1%	-6.1%	1.4%	3.9%	7.1%	-3.0%	0.5%	3.3%	7.1%	-6.1%	0.9%	3.3%	7.1%	-3.9%
Mar	3.2%	1.0%	5.3%	2.1%	1.2%	3.4%	9.7%	-10.2%	1.5%		9.7%	-4.6%	1.1%	3.1%	5.9%	-4.6%	1.7%	3.4%	5.9%	-4.6%	0.6%	3.7%	9.7%	-10.2%	1.5%	3.4%	9.7%	-4.6%
Apr	2.1%	2.9%	7.5%	-1.4%	1.3%	3.8%	9.4%	-9.0%	1.3%	3.3%	8.5%	-6.2%	-0.7%	4.6%	8.5%	-9.0%	0.2%	4.2%	8.5%	-6.2%	0.2%	3.9%	8.5%	-9.0%	0.5%	3.5%	8.5%	-6.2%
May	0.3%	3.7%	5.0%	-6.3%	0.2%	3.7%	9.2%	-8.6%	0.2%	3.6%	9.2%	-8.6%	-1.7%	5.0%	9.2%	-8.6%	-1.9%	4.5%	5.0%	-8.6%	-0.8%	4.2%	9.2%	-8.6%	-1.3%	3.7%	5.0%	-8.6%
Jun	1.4%	3.1%	4.8%	-4.8%	-0.2%	3.3%	5.4%	-8.6%	0.1%	3.2%	5.4%	-8.2%	-2.1%	3.4%	3.9%	-8.2%	-2.0%	4.0%	3.9%	-8.2%	-0.6%	3.7%	4.3%	-8.6%	-0.1%	3.6%	4.3%	-8.2%
Jul	0.6%	4.6%	8.8%	-6.8%	0.6%	4.1%	8.8%	-7.9%	0.7%	4.0%	8.8%	-7.9%	0.1%	5.2%	7.3%	-7.9%	0.4%	5.0%	6.9%	-7.9%	-0.1%	4.1%	7.3%	-7.9%	-0.1%	3.8%	6.9%	-7.9%
Aug	0.7%	5.0%	7.1%	-14.6%	0.1%	4.7%	11.6%	-14.6%	0.4%	4.2%	10.6%	-14.6%	-0.6%	7.4%	11.6%	-14.6%	-0.6%	6.5%	7.1%	-14.6%	0.5%	5.8%	11.6%	-14.6%	0.5%	5.4%	10.6%	-14.6%
Sept	-0.1%	3.7%	6.2%	-8.5%	-0.6%	4.3%	8.8%	-11.9%	0.1%	3.8%	8.8%	-11.0%	-1.8%	6.1%	8.8%	-11.9%	-1.3%	6.1%	8.8%	-11.0%	-0.8%	5.3%	8.8%	-11.9%	0.2%	4.8%	8.8%	-11.0%
Oct	-0.8%	7.1%	8.0%	-21.8%	1.1%	5.9%	16.3%	-21.8%	0.9%	5.1%	10.8%	-21.8%	3.9%	6.1%	16.3%	-9.2%	2.9%	5.0%	8.6%	-9.2%	1.6%	5.9%	16.3%	-16.9%	1.6%	3.7%	8.6%	-9.2%
Nov	0.5%	3.7%	5.9%	-8.5%	1.4%	4.4%	10.2%	-11.4%	1.5%	3.9%	10.2%	-8.5%	2.5%	4.1%	10.2%		2.6%	3.9%	10.2%	-4.0%	1.9%	4.6%	10.2%	-8.0%	1.8%	4.1%	10.2%	-8.0%
Dec	3.1%	4.0%	11.2%	-2.8%	1.5%	3.1%	11.2%	-6.0%	1.7%	3.1%	11.2%	-6.0%	1.1%	3.4%	6.5%	-6.0%	0.8%	3.6%	6.5%	-6.0%	1.0%	3.0%	6.5%	-6.0%	0.8%	3.0%	6.5%	-6.0%
Q1	12.2%	4.6%	21.6%	5.5%	2.3%	7.7%	21.6%	-12.1%	2.9%	6.4%	20.5%	-8.4%	0.1%	6.7%	13.5%	-8.6%	2.0%	6.9%	13.5%	-6.2%	0.5%	6.9%	13.9%	-9.9%	2.6%	6.5%	13.9%	-6.5%
Q2	3.8%	5.0%	14.2%	-3.3%	1.4%		16.9%	-21.3%	1.6%	6.7%	16.9%	-21.3%	-4.2%	9.3%	7.1%	-21.3%	-3.4%	9.4%	7.1%	-21.3%	-1.1%	8.0%	11.9%	-21.3%	-0.8%	7.4%	10.4%	-21.3%
Q3	1.1%	6.8%	9.8%	-11.9%	0.2%	8.3%	15.8%	-26.1%	1.1%	6.6%	15.0%	-17.6%	-2.1%	12.3%	15.8%	-26.1%	-1.5%	9.3%	10.7%	-17.6%	-0.3%	9.4%		-26.1%	0.5%	6.9%	10.7%	-17.6%
Q4	2.8%	9.3%	20.9%	-23.2%	4.0%	7.7%	20.9%	-23.2%	4.3%		20.9%	-23.2%	7.6%	6.7%	20.9%	-6.3%	6.4%	7.3%	20.9%	-6.3%	4.5%	8.1%	20.9%	-22.6%	4.3%	6.3%	20.9%	-8.1%
Jan - Apr	14.5%	4.5%	27.3%	10.6%	3.6%	7.9%	27.3%	-11.4%	3.8%	7.0%		-9.4%	-0.6%	7.8%		-11.4%	2.1%	7.5%	14.6%	-8.8%	0.6%	7.0%	14.6%	-11.4%	3.1%	6.2%	14.6%	-8.8%
May - Sep	2.6%	6.6%	13.5%	-8.5%	0.6%	9.7%	21.1%	-29.6%	1.0%		18.2%	-24.3%	-6.0%	11.3%	5.9%	-29.6%	-5.3%	10.1%	5.9%	-24.3%	-1.8%	10.2%	18.0%	-29.6%	-0.9%	8.1%	5.9%	-24.3%
Oct - Dec	2.8%	9.3%	20.9%	-23.2%	4.0%		20.9%	-23.2%	4.5%	6.3%	20.9%	-23.2%	7.6%	6.7%	20.9%	-6.3%	6.4%	7.3%	20.9%	-6.3%	4.5%	8.1%	20.9%	-22.6%	4.3%	6.3%	20.9%	-8.1%
Whole Year	20.4%	8.6%	34.1%	2.0%	8.1%	16.0%	34.1%	-38.5%	10.7%	8.6%	34.1%	-23.4%	0.6%	16.2%	26.7%	-29.7%	3.0%	15.5%	26.7%	-23.4%	3.6%	16.1%	26.7%	-38.5%	6.5%	12.6%	26.7%	-23.4%

		All Ye	ears		N	lon-reces	sion Yea	rs	Non Pr	esidentia	I Election	Years	Pres	idential E	Election Y	'ears		ential Elec sions (196			Presid	lential Ele 200		ars ex.		lential Ele sions (19		
Time Period	Avg	Std Dev	Мах	Min	Avg	Std Dev	Max	Min	Avg	Std Dev	Max	Min	Avg	Std Dev	Max	Min	Avg	Std Dev	Max	Min	Avg	Std Dev	Max	Min	Avg	Std Dev	Мах	Min
Jan	0.9%	5.0%	13.2%	-8.6%	1.0%	4.6%	13.2%	-7.1%	1.1%	5.0%	13.2%	-8.6%	0.3%	5.3%	13.2%	-7.1%	1.0%	3.9%	11.8%	-5.1%	0.8%	5.2%	11.8%	-7.1%	-2.5%	7.2%	5.8%	-7.1%
Feb	0.2%	3.7%	7.1%	-11.0%	0.3%	3.2%	7.1%	-9.2%	0.3%	4.1%	7.1%	-11.0%	0.1%	2.5%	7.1%	-3.9%	0.3%	2.0%	4.2%	-3.9%	0.3%	2.4%	4.2%	-3.9%	-1.0%	2.2%	0.9%	-3.5%
Mar	1.2%	3.4%	9.7%	-10.2%	1.5%	2.9%	9.7%	-4.6%	1.4%	3.0%	8.5%	-6.4%	0.6%	4.5%	9.7%	-10.2%	1.7%	3.0%	9.7%	-3.3%	0.6%	4.6%	9.7%	-10.2%	-4.1%	5.3%	-0.6%	-10.2%
Apr	1.3%	3.8%	9.4%	-9.0%	1.3%	3.3%	8.5%	-6.2%	1.5%	4.1%	9.4%	-9.0%	1.0%	2.9%	9.4%	-3.1%	0.7%	2.2%	8.2%	-3.1%	0.8%	2.8%	8.2%	-3.1%	2.4%	3.6%	4.8%	-1.8%
May	0.2%	3.7%	9.2%	-8.6%	0.2%	3.6%	9.2%	-8.6%	0.2%	3.9%	9.2%	-8.6%	0.1%	3.0%	9.2%	-6.3%	-0.5%	2.3%	2.3%	-6.3%	0.1%	3.1%	4.7%	-6.3%	2.8%	1.8%	4.7%	1.1%
Jun	-0.2%	3.3%	5.4%	-8.6%	0.1%	3.2%	5.4%	-8.2%	-0.5%	3.3%	5.4%	-8.2%	0.9%	3.2%	5.4%	-8.6%	1.4%	1.8%	4.3%	-2.2%	1.6%	2.0%	4.3%	-2.2%	-1.3%	6.3%	2.7%	-8.6%
Jul	0.6%	4.1%	8.8%	-7.9%	0.7%	4.0%	8.8%	-7.9%	0.8%	4.4%	8.8%	-7.9%	0.0%	3.0%	8.8%	-4.6%	-0.3%	2.0%	3.9%	-4.6%	0.0%	3.1%	6.5%	-4.6%	1.0%	4.8%	6.5%	-2.5%
Aug	0.1%	4.7%	11.6%	-14.6%	0.4%	4.2%	10.6%	-14.6%	-0.3%	5.0%	11.6%	-14.6%	1.4%	3.5%	11.6%	-3.9%	1.4%	3.2%	10.6%	-3.9%	1.4%	3.6%	10.6%	-3.9%	1.5%	1.0%	2.6%	0.6%
Sept	-0.6%	4.3%	8.8%	-11.9%	0.1%	3.8%	8.8%	-11.0%	-0.9%	4.4%	8.8%	-11.9%	0.2%	4.1%	8.8%	-9.1%	1.4%	2.3%	5.4%	-5.3%	0.9%	3.3%	5.4%	-6.0%	-4.2%	6.0%	2.5%	-9.1%
Oct	1.1%	5.9%	16.3%	-21.8%	0.9%	5.1%	10.8%	-21.8%	1.8%	6.1%	16.3%	-21.8%	-0.9%	4.7%	16.3%	-16.9%	0.2%	1.3%	2.6%	-2.2%	0.3%	1.6%	2.6%	-2.2%	-5.2%	10.2%	1.6%	-16.9%
Nov	1.4%	4.4%	10.2%	-11.4%	1.5%	3.9%	10.2%	-8.5%	1.4%	4.2%	10.2%	-11.4%	1.4%	5.0%	10.2%	-8.0%	1.2%	3.3%	7.3%	-8.0%	2.1%	4.5%	10.2%	-8.0%	2.3%	9.0%	10.2%	-7.5%
Dec	1.5%	3.1%	11.2%	-6.0%	1.7%	3.1%	11.2%	-6.0%	1.7%	3.2%	11.2%	-6.0%	0.9%	2.6%	11.2%	-4.2%	1.0%	1.9%	5.2%	-4.2%	0.9%	2.7%	5.2%	-4.2%	0.7%	4.0%	4.6%	-3.4%
Q1	2.3%	7.7%	21.6%	-12.1%	2.9%	6.4%	20.5%	-8.4%	2.8%	7.9%	21.6%	-12.1%	0.9%	7.0%	16.9%	-9.9%	3.1%	4.9%	13.9%	-6.5%	1.7%	6.5%	13.9%	-7.6%	-7.6%	2.3%	-5.4%	-9.9%
Q2	1.4%	7.4%	16.9%	-21.3%	1.6%	6.7%	16.9%	-21.3%	1.2%	8.1%	16.9%	-21.3%	2.0%	4.7%	15.8%	-3.8%	1.6%	3.2%	10.4%	-3.8%	2.4%	4.6%	11.9%	-3.8%	3.8%	7.6%	11.9%	-3.2%
Q3	0.2%	8.3%	15.8%	-26.1%	1.1%	6.6%	15.0%	-17.6%	-0.3%	9.2%	15.8%	-26.1%	1.6%	4.9%	20.9%	-8.9%	2.4%	2.6%	8.4%	-2.3%	2.3%	4.1%	9.8%	-6.0%	-1.7%	10.1%	9.8%	-8.9%
Q4	4.0%	7.7%	20.9%	-23.2%	4.3%	6.8%	20.9%	-23.2%	4.8%	7.5%	20.9%	-23.2%	1.5%	8.0%	36.2%	-22.6%	2.4%	3.7%	8.7%	-8.1%	3.2%	4.7%	8.7%	-8.1%	-1.9%	17.9%	8.6%	-22.6%
Feb - Aug *	6.0%	13.5%	43.8%	-39.3%	7.4%	12.2%	37.3%	-30.2%	5.7%	15.3%	43.8%	-39.3%	6.7%	6.2%	21.2%	-11.6%	8.0%	5.1%	21.2%	-4.0%	8.1%	5.0%	21.2%	-4.0%	1.5%	9.4%	12.7%	-11.6%
Sep - Oct *	2.6%		128.5%	-81.5%	6.5%	14.2%	128.5%	-80.2%	4.6%	15.5%	128.5%	-80.2%	-2.9%	19.0%	60.2%	-81.5%	10.0%	7.6%	60.2%	-30.2%	7.6%	10.2%	60.2%	-32.2%	-42.7%	35.5%	27.7%	-81.5%
Nov - Jan *	16.3%	14.2%	88.2%	-47.2%	18.3%	10.9%	88.2%	-24.2%	16.8%	14.4%	88.2%	-41.6%	14.9%	14.2%	79.3%	-47.2%	17.9%	8.0%	54.4%	-16.6%	20.8%	10.3%	79.3%	-16.6%	3.5%	30.5%	79.3%	-47.2%
Whole Year	8.1%	16.0%	34.1%	-38.5%	10.7%	8.6%	34.1%	-23.4%	8.5%	16.4%	34.1%	-29.7%	6.7%	15.5%	25.8%	-38.5%	9.6%	8.1%	20.3%	-10.1%	9.9%	9.5%	25.8%	-10.1%	-5.2%	32.2%	25.8%	-38.5%



DWS Investment GmbH S&P 500 Annual EPS Outlook

										Botton	n-up Cons	ensus (IBE	S)		DWS \	/iew		Normalize	d 2022
	2014A	2015A	2016A	2017A	2018A	2019A	2020A	2021A	y/y	2022E	у/у	2023E	у/у	2022E	y/y	2023E	у/у	(\$)	% of 2022
S&P 500 EPS (historical index)	\$118.82	\$117.46	\$118.10	\$132.00	\$161.93	\$162.93	\$139.72	\$208.12	49.0%										
S&P 500 EPS (current constituents)	\$116.42	\$117.21	\$117.46	\$129.27	\$155.86	\$161.35	\$144.07	\$207.74	46.4%	\$223.13	7.4%	\$232.54	4.2%	\$222	6.4%	\$220	-0.9%	\$220	99%
Sector (\$ bn)																			
Communication Services	68.6	79.2	91.9	97.5	124.6	132.2	135.7	188.3	38.8%	167.6	-11.0%	178.7	6.6%	170.0	-9.7%	175.0	2.9%	162.0	95%
Consumer Discretionary	64.1	74.9	83.6	87.7	103.5	101.4	79.7	134.2	68.4%	139.0	3.5%	161.0	15.8%	140.0	4.3%	145.0	3.6%	149.1	106%
Consumer Staples	78.4	76.8	79.2	83.8	90.4	91.1	95.1	104.6	10.0%	106.8	2.1%	112.4	5.2%	104.5	-0.1%	105.0	0.4%	104.5	100%
Energy	93.1	39.0	10.6	36.8	68.6	48.8	-4.8	77.4	1722%	201.4	160.1%	172.0	-14.6%	170.0	119.5%	135.0	-20.6%	129.3	76%
Financials	171.2	186.0	187.6	194.8	241.3	248.1	197.1	326.9	65.9%	278.6	-14.8%	314.2	12.8%	283.5	-13.3%	292.5	3.2%	287.5	101%
Health Care	137.6	152.6	157.5	171.8	188.8	206.8	226.8	293.5	29.4%	308.5	5.1%	298.7	-3.2%	310.0	5.6%	315.0	1.6%	301.4	97%
Industrials	99.4	102.9	97.0	105.7	129.2	123.5	64.7	108.9	68.2%	140.4	28.9%	158.9	13.2%	140.5	29.0%	144.2	2.6%	142.5	101%
Information Technology	176.7	184.1	193.6	228.4	266.5	264.6	296.6	379.8	28.1%	391.7	3.1%	419.0	7.0%	395.0	4.0%	410.0	3.8%	400.0	101%
Materials	24.3	23.4	22.2	28.0	34.9	33.4	31.7	57.9	82.3%	62.3	7.6%	56.3	-9.6%	65.0	12.3%	56.0	-13.8%	55.4	85%
Real Estate	23.5	26.8	29.6	32.6	36.2	37.9	37.7	44.7	18.5%	48.9	9.6%	50.8	3.8%	47.0	5.2%	49.0	4.3%	46.1	98%
Utilities	31.4	31.7	33.9	35.3	38.9	43.0	44.3	47.3	6.8%	48.9	3.5%	52.1	6.5%	50.0	5.8%	52.0	4.0%	50.6	101%
S&P 500	968.1	977.1	986.6	1102.4	1323.0	1330.7	1204.5	1763.4	46.4%	1894.1	7.4%	1974.0	4.2%	1875.5	6.4%	1878.7	0.2%	1828.4	97%
S&P ex. Energy (\$bn)	875.1	938.1	976.0	1065.6	1254.4	1281.9	1209.3	1686.0	39.4%	1692.7	0.4%	1802.1	6.5%	1705.5	1.2%	1743.7	2.2%	1699.1	100%
S&P ex. Tech (\$bn)	791.5	793.0	793.0	874.0	1056.5	1066.1	908.0	1383.7	52.4%	1502.5	8.6%	1555.0	3.5%	1480.5	7.0%	1468.7	-0.8%	1428.3	96%
S&P 500 Sales/Share (historical index)	\$1,163	\$1,127	\$1,151	\$1,232	\$1,339	\$1,415	\$1,362	\$1,567	15.0%										
S&P 500 Non-GAAP Net Margin	10.2%	10.4%	10.3%	10.7%	12.1%	11.5%	10.3%	13.3%											

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
2022E	222	55	58	55	54
2023E	220	52	55	56	57

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 9/30/2022.



DWS Investment GmbH View: S&P 500 fair value by sector: Assuming a ~5.75% real cost of equity (CoE) for overall S&P 500

	Market Value (\$bn)	Current 2022 PE	2022E Earnings (\$bn)	Normal Ratio	Normal 2022E Earnings	Accounting Quality Adjustment	Fully Adjusted Earnings	Net Debt / Market Cap	Real CoE	Steady State Value	Growth Premium	2022 Start Fair Value (\$bn)	2021E Dividend Yield	2022 End Fair Value (\$bn)	PE on Normal 2022E EPS	2022 end Upside %
Communication Services	2,322	13.7	170.0	95%	162.0	-8%	149.0	15%	5.75%	2,592	0%	2,592	1.9%	2,770	17.1	19%
Consumer Discretionary	3,297	23.6	140.0	106%	149.1	-8%	137.2	12%	5.75%	2,385	32%	3,142	1.1%	3,382	22.7	3%
Automobiles	570	23.3	24.5	110%	27.0	-10%	24.3	19%	6.50%	373	50%	560	0.5%	610	22.6	7%
Internet & Direct Marketing Retail	899	37.5	24.0	110%	26.4	-8%	24.3	1%	5.75%	422	130%	972	0.1%	1,056	40.0	17%
CD ex Auto & Internet Retail	1,829	20.0	91.5	100%	91.5	-8%	84.2	17%	5.75%	1,464	10%	1,610	1.8%	1,723	18.8	-6%
Consumer Staples	2,248	21.5	104.5	100%	104.5	-8%	96.1	13%	5.00%	1,923	0%	1,923	2.6%	2,027	19.4	-10%
Energy	1,682	9.9	170.0	76%	129.3	-10%	116.3	16%	6.25%	1,861	-20%	1,489	3.2%	1,579	12.2	-6%
Financials	3,741	13.2	283.5	101%	287.5	-10%	258.7		6.50%	3,981	-5%	3,782	2.0%	4,065	14.1	9%
Banks	1,294	10.3	125.0	105%	131.3	-10%	118.1		7.00%	1,688	-10%	1,519	3.3%	1,621	12.4	25%
Health Care	4,960	16.0	310.0	97%	301.4	-10%	271.2	9%	5.50%	4,931	0%	4,931	1.5%	5,275	17.5	6%
Industrials	2,817	20.1	140.5	101%	142.5	-8%	131.1	18%	5.75%	2,281	0%	2,281	1.4%	2,449	17.2	-13%
Information Technology	8,079	20.5	395.0	101%	400.0	-5%	380.0	2%	5.75%	6,609	10%	7,270	1.1%	7,824	19.6	-3%
Materials	866	13.3	65.0	85%	55.4	-10%	49.9	17%	6.25%	798	0%	798	2.0%	856	15.4	-1%
Real Estate	807	17.2	47.0	98%	46.1	-8%	42.4	29%	5.00%	848	0%	848	3.5%	887	19.2	10%
Utilities	919	18.4	50.0	101%	50.6	-8%	46.6	60%	5.00%	931	0%	931	3.3%	975	19.3	6%
S&P 500 (\$ bn)	31,739		1875.5	97%	1828.4	-8.2%	1678.6		5.75%	29141	2.9%	29987	1.7%	32089.1	17.6	1%
S&P 500 Index (\$/sh)	3749	16.9	222.0	99%	220.0	-8.2%	202.0	11%	5.75%	3513	0.0%	3513	1.7%	3752	17.1	0%

>5% between -5% and 5%

<-5%

Source: IBES, DWS Investment GmbH as of 11/9/2022. 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 9/30/2022.

The estimated 2022 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	S&P 500 Long-term EP	S & DPS Growth		S&P 500 Cost of Equity & Fair Book Multiple						
DWS 2022E S&P 500 EPS		DWS 2022E S&P 500 DPS	\$68.00		DWS 2022E S&P 500 aggregate ROE		21.1%	Fair long-term nomin	nal return on S&P !	500 index	8.75%
		2022E dividend payout ratio		31%	2021E end S&P 500 boo	k value per share	\$1,050	Components of estimated fair S&P 500 return:			
DWS "normal 2022E" S&P 500 EPS	\$220.00	DWS "normal 2022E" S&P 5	00 DPS	\$68.00	DWS "normal 2022E" S&	&P 500 aggregate	ROE 19.2%	+ Long-term real risk	free interest rate		1.25%
"Normal 2022E" EPS / 2022E EPS		Normal dividend payout ratio		34%				+ Long-term fair S&P 500 equity risk premium*		remium*	4.50%
					S&P EPS retained for t	rue reinvestment	47%	= Long-term real S	&P 500 cost of eq	luity	5.75%
Accounting quality adjustment to pro forma EPS	-\$18.00	3.00 EPS directed to net share repurchases			Estimated ROE on rein	stimated ROE on reinvested S&P EPS		6 + Long-term inflation forecast			3.00%
		Normal share repurchase payout ratio		19%	Economic margin (EM)	0.00%	= S&P 500 nominal cost of equity			8.75%	
Normal 2022E S&P 500 EPS fair to capitalize	Total payout of S&P 500 EPS	ayout of S&P 500 EPS \$107.00 S			rnings growth:		* S&P 500 ERP hist	ry 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			+ Long-term inflation forecast						
		+			 + Fair return on true reinvestment 			6 Fair S&P 500 Market Value and Book Value Multiple			
S&P 500 EPS Capitalization Valuation		S&P 500 DPS Discount Model			+ Value added return on true reinvestment			2021E end S&P 500 book value per share			\$1,050
Normal EPS / (real CoE - (EM/payout) - EM):		Normal DPS / (nominal CoE - DPS growth):			= Long-term earnings growth			Fair PB = Fair PE * normal aggregate ROE			3.35
S&P 500 intrinsic value at 2022 start	3513	S&P 500 intrinsic value at 202		+ Growth from net share		1.11%	Fair PE =(inc ROE-g	g)/(inc real ROE*(re	eal CoE-real g))	17.4	
S&P 500 intrinsic value at 2022 end	3752	752 S&P 500 intrinsic value at 2022 end			2 = Long-term S&P 500 EPS/DPS growth			% Implied S&P 500 fair value of book at 2022 start			
Implied fair fwd PE in early 2022 on 2022E \$222 EPS	15.8				+ Fair normal dividend yi			% Steady-state PB = normal agg. ROE / real CoE			
Implied fair trailing PE at 2022 end on 2022E \$222 EPS	16.9	Implied fair trailing yield on 2	022E DPS of \$68.0	1.81%	= Total long-term return	n at constant PE	8.75%	Confirmed by fair steady-state PE = 1 / real CoE			
Normal EPS / (real CoE-value added EPS growth)	3513	DPS discount model usin	g true DPS (all payout)	3513	Value added growt	h premium in fair	value est. 0%	Norn	nal 2022E econom	nic profit per share	\$141.63
S&P 500 EPS discount model 5 steps to value:								Normal 2022E S	&P 500 EPS		
1) Estimate normalized S&P 500 EPS							\$210	\$215	\$220	\$225	\$230
2) Adjust normalized EPS for pro forma accounting of	quality					5.25%	4215	4348	4482	4617	4754
3) Estimate a fair long-term real return on S&P 500 ownership (CoE)					Real	5.50%	3862	3973	4084	4197	4309
4) Capitalize normalized and accounting quality adj. EPS at real CoE					cost of	5.75%	3563	3658	3752	3847	3942
5) Consider long-term potential for value added gro	wth oppor	tunities			equity	6.00%	3308	3390	3471	3552	3632
						6.25%	3088	3158	3229	3299	3368

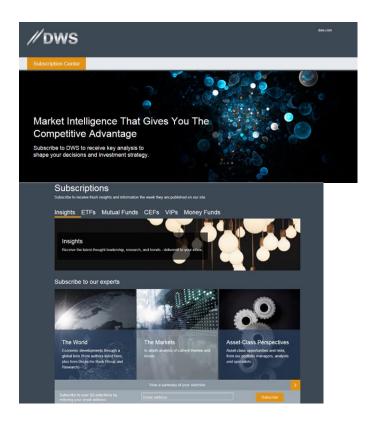
Source: DWS Investment Management GmbH

Optimistic 2023 end 10yr yield outlook: 2.5% inflation expectation + 1% overnight real rate + 0.75% inflation risk premium - 0.5% risk asset hedge = 3.75% Pessimistic 2023 end 10yr yield outlook: 2.5% inflation expectation + 1% overnight real rate + 1.5% inflation risk premium - 0% risk asset hedge = 5.00%



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