

Fed is taking elevator up, S&P EPS will take stairs down



David Bianco

Americas Chief Investment Officer
DWS

As the Fed uses the elevator to lift rates, S&P EPS will likely take the stairs down

The Fed usually hikes rates with a staircase like climb by 25bp per meeting for a year or more, but usually cuts them in larger sizes like an elevator going down. Yet this time, the Fed is using the elevator to lift rates quickly to fight the highest inflation in four decades. Rates on a quick elevator up, means the economy and profits likely take the stairs down. Inflation hasn't yet peaked, thus neither has clarity on future hike sizes nor the top-floor. S&P EPS cuts are starting, which we expect to continue in staircase like fashion downward for the rest of this year. We expect a small recession in 4Q22-1Q23 and unemployment to climb to 4.2% from 3.6%. Bottom-up consensus 2023E S&P EPS will likely be cut from \$250 to \$230-235 by early 2023 or less if oil is below \$100/bbl and Euro stays near \$1.00.

S&P EPS falls 20% from 4-qtr high to low on average in recessions since 1950

Since 1950, S&P EPS declined by 21% on average in recessions as measured from peak to trough trailing 4-qtr EPS. In shallow and short recessions like 1960 and 1970, S&P EPS declined 10-15%. During the long and severe recession of the financial crisis, S&P EPS fell 45% from 4-qtr peak to trough. As discussed in prior notes, we expect the next recession to be mild and without deflation (rather just disinflation). A mild recession with disinflation from high levels, suggests a smaller than usual recessionary hit to S&P EPS, perhaps like 1980, if 1982 doesn't follow. But we also acknowledge risks from S&P profits and margins surging to record highs since late last year, led by digital firms and consumer goods producers/retailers. Thus, there could be closer to usual recessionary set-backs at Materials, Retailers, Consumer and Capital Goods. While we see the pandemic profit surge at digital firms as lasting, a mild recession and strong dollar will stall their profit growth. We expect growth at Health Care and at still recovering Consumer Services and Aerospace & Defense. These segments should help contain a 4-qtr S&P EPS decline to well less than 10% if the recession stays mild. Quarterly S&P EPS has been flattish at about \$55 for the last several quarters or \$220 annualized. Thus, perhaps a \$210-220 4-qtr trough next four quarters (scenarios inside), if credit costs don't surge and commodity prices don't collapse.

DWS profit indicator is turning down, suggests S&P EPS turns down sequentially

Quarterly S&P EPS y/y growth rates and many DWS profit indicator elements have been distorted by the sharp swings of the pandemic; first diving then surging in recovery. But sequential quarterly S&P EPS growth already slowed sharply since late last year; quarterly S&P EPS was \$54-55 since 3Q21 and likely 2Q21. But now, our profit indicator suggests profits will decline sequentially in 3Q. The profit indicator suggests a slight sequential downturn as of now, but recent data elements suggest an accelerating deteriorating trend. Also, FX is a headwind not incorporated in our profit indicator. See exhibits pages 6-14, these include our profit indicator and other economic reports we are closely monitoring.

Our sector strategy: Tilts toward Health Care, Utilities, Banks, Aerospace

Our most favored sector remains Health Care (since year start). We see Pharma and Biotech as plays on impressive R&D investment and innovation in medicine. If the 2020's turnout to be another great decade for stocks, HC likely plays a big part. We OW Utilities given upside risks on natural gas and electricity prices. We think Utilities are an attractive bond substitute with inflation protection, thus attractive non-cyclical real EPS and dividend yields. We expect its share of total energy production and distribution to rise with electric vehicles. We don't expect Russian natural gas to be shut off this winter, but intermittent disruptions or slow-flow possible if fighting intensifies in Ukraine or with ceasefire/territorial negotiations. Natural gas will be an essential commodity this winter and likely this decade. We are most cautious on Autos, Materials, Retailing, and cyclical parts of Industrials and Tech, including Machinery and Semiconductors. Our preferred cyclical sector is Financials/Banks. We don't expect a financial crisis or surge in credit costs. We are equal-weight Energy. It helps protect against intermediate term risks, but faces long term challenges.

Downside risks increasing around our 2022 yearend S&P target of 4100

We're concerned about 1H challenges of conflict, broadening inflation, Fed hiking and slowing growth persisting in 2H and that the lame duck session of Congress might attempt to pass some anti supply-side, investor unfriendly legislation. Global, European and US policy risks remain high. The S&P is likely to stay mostly between 3700-4100 for the rest of the year and early next with risk of materially breaking that range more to the downside.

Contributor: Ju Wang, Portfolio Manager Equity

Global Equity Index Forecasts: 12-months			
Index	Jun 2023F	NTM EPS Growth	Target PE
S&P 500	4,200	3.9%	18.2
EuroStoxx 50	3,650	3.0%	12.8
Stoxx 600	430	2.9%	13.3
MSCI Japan	1,150	6.4%	13.0
MSCI Asia xJ	695	3.9%	13.0
MSCI EM	1,060	0.1%	11.9
S&P 500 Outlook at Yearend			
	2021	2022F	2023F
S&P 500	4766	4100	4400
Dividend Yield	1.4%	1.6%	1.6%
S&P EPS	\$210	\$225	\$235
Trailing PE	22.7	18.2	18.7
DPS	\$60.50	\$68	\$72
Next 5%+ Price Move			
(Up / Balanced Risk / Down)			
Risk of near-term correction			
(Low / Moderate / High)			
Taxable U.S. Investor Asset Allocations			
Asset Class	Long-term	Current	
Fixed Income/Cash	30-35%	36.5%	
Equities	55-60%	54.5%	
US Equities	40%	39.0%	
S&P 500	35%	34.0%	
Small Caps	0-10%	5.0%	
Foreign DM	10-15%	9.5%	
Foreign EM	0-10%	6.0%	
Alternatives	10%	9%	
Key CIO Views			
Macro signal:	2021	Jun 2023F	
U.S. Fed Funds rate	0-0.25%	3.25-3.50%	
10yr Treasury yield	1.52%	3.25%	
US IG Corp Spreads	100bp	180bp	
US High Yield Spreads	340bp	570bp	
Crude Oil (WTI) \$/bbl	75	110	
EUR / USD FX rate	1.13	1.10	
GDP Forecasts			
Region	2021	2022F	2023F
US	5.7%	2.0%	0.8%
World	6.0%	3.1%	3.1%
Euro area	5.2%	2.9%	1.8%
China	8.1%	3.8%	5.3%
Japan	1.7%	1.7%	1.8%

* 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 7/18/2022 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	2020	2021	2022	Overweight	2020	2021	2022	Equal weight	2020	2021	2022	Underweight	2020	2021	2022
Over-weight	15.1%	19.6%	Health Care	21.5	16.8	15.9	Biotechnology Health Care Equipment & Supplies Health Care Technology Life Sciences Tools & Services Pharmaceuticals	15.7 30.7 32.6 30.6 21.0	11.2 23.1 28.3 23.4 15.9	11.9 22.4 25.9 24.7 13.7					Health Care Providers & Services	20.0	17.6	16.6
	8.9%	10.6%	Communication Services	16.3	15.3	15.5	Diversified Telecommunication Serv Entertainment Interactive Media & Services Media	8.3 33.5 29.5 15.0	7.6 24.2 17.7 12.6	8.8 19.7 17.9 11.9	Wireless Telecommunication Servi	56.5	57.0	53.7				
	10.8%	11.8%	Financials	17.4	10.9	11.9	Banks Diversified Financial Services Insurance	15.4 28.8 16.4	8.1 23.8 13.2	9.5 20.7 12.7					Capital Markets Consumer Finance	18.4 25.8	12.7 6.8	14.2 7.7
	3.1%	3.6%	Utilities	22.4	20.7	20.2	Electric Utilities Multi-Utilities	22.2 21.7	22.1 20.3	21.1 19.7	Gas Utilities Independent Power & Renewable E	24.6 15.4	21.4 7.0	21.3 8.4	Water Utilities	38.2	37.3	33.7
	2.9%	3.4%	Real Estate	25.0	20.6	20.5	Real Estate Mgmt. & Development REITs	23.9 24.5	14.6 21.4	13.1 20.9								
Equal-weight	4.2%	4.2%	Energy	-22.1	16.7	10.6	Energy Equipment & Services	60.4	28.1	18.4					Oil Gas & Consumable Fuels	-170	16.2	10.3
Under-weight	7.7%	7.4%	Industrials	40.8	23.6	18.2	Aerospace & Defense Electrical Equipment Industrial Conglomerates Road & Rail	37.5 26.5 26.8 25.4	29.3 20.2 20.0 20.5	22.3 17.8 19.1 17.3					Airlines Air Freight & Logistics Building Products Commercial Services & Supplies Construction & Engineering Machinery Professional Services Trading Companies & Distributors	-2.4 20.3 21.0 39.1 26.8 23.9 27.0 23.1	-4.9 13.6 16.8 32.3 22.3 16.7 22.8 19.5	23.4 14.0 15.1 29.5 19.0 15.7 19.7 16.1
	27.2%	26.0%	Information Technology	30.7	23.3	20.9	Communications Equipment Electronic Equipment IT Services	15.4 26.8 28.9	14.9 19.8 25.2	13.8 18.5 21.8					Semiconductors Software Technology Hardware Storage & Per	23.4 35.8 34.3	16.7 29.8 24.1	16.4 25.8 21.2
	10.7%	8.9%	Consumer Discretionary	45.3	26.7	23.9	Auto Components Hotels Restaurants & Leisure Household Durables	29.7 -83.0 10.9	19.3 785.4 7.3	18.2 31.4 6.1					Automobiles Distributors Internet & Direct Marketing Retail Leisure Products Multiline Retail Specialty Retail	67.1 26.3 55.8 21.3 19.9 25.4	31.4 17.9 46.5 15.1 16.4 18.0	30.1 17.4 44.5 15.2 15.4 17.0
	6.9%	4.4%	Consumer Staples	24.0	21.8	21.1	Textiles Apparel & Luxury Goods	37.8	21.8	19.2					Beverages Food Products Food & Staples Retailing Household Products Personal Products Tobacco	31.0 19.5 27.5 25.0 46.8 13.5	27.1 17.7 24.1 25.0 36.0 12.1	25.7 17.8 23.1 24.0 32.8 12.1
	2.5%	0.0%	Materials	26.5	14.2	13.1									Chemicals Construction Materials Containers & Packaging Metals & Mining	26.9 29.4 18.6 29.0	15.6 27.4 15.3 8.3	14.2 23.1 13.2 8.4
Aggregate PE: DWS View							Overweight	23.1	16.8	16.1	Equalweight	12.3	16.6	16.0	Underweight	32.5	20.6	18.4
	S&P 500							3863			2020, 2021 & 2022 EPS	143.00	208.21	225.00	2020, 2021 & 2022 PE	27.0	18.6	17.2
											Bottom-up Consensus EPS	143.39	207.11	228.67	Bottom-up Cons. PE	26.9	18.7	16.9
															2020, 2021 & 2022 Ex Energy PE	25.1	17.7	17.7
															Bottom-up Cons. Ex Energy PE	25.8	18.5	17.8

Sector OW	8.20%
Sector UW	-8.20%
Industry OW	16.75%
Industry UW	-16.75%

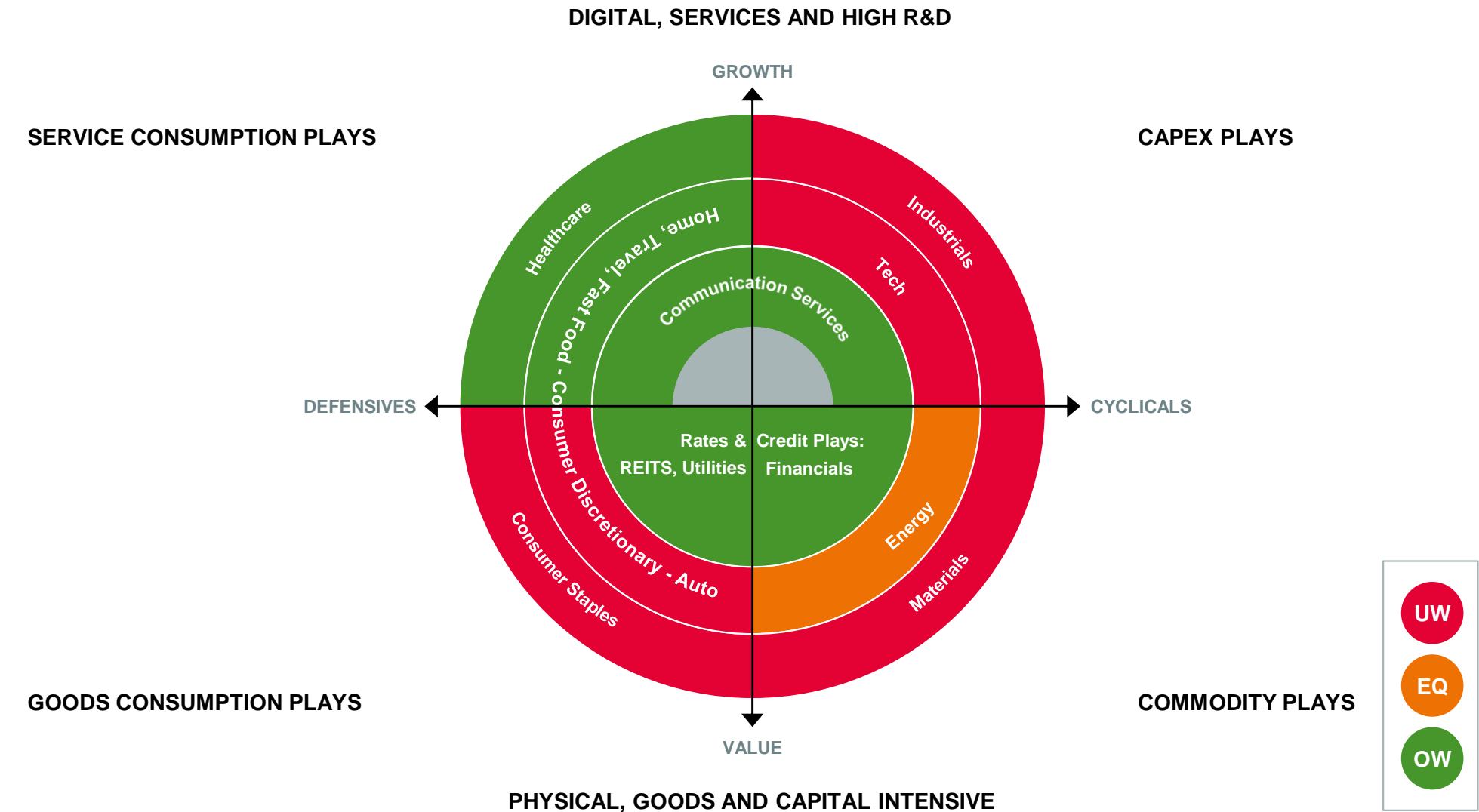
Macro tilts:	
Cyclicals	-2.89%
Defensive Value	3.00%
Growth	-5.33%
Consumer Services/experience	5.33%
Disc. Goods	-4.33%
Retailing	0.92%
Durables	0.21%
Staples Goods/Retail	-0.63%
Commodity	0.87%
Energy	-1.36%
Metals/Chemicals	-2.06%
Capex	0.03%
Capacity additions	-2.09%
Productivity	3.53%
Health Care	1.87%
Innovation	1.66%
Marketers	4.53%
Insurers	2.82%
Financials	1.76%
Up rates/low spreads	-0.36%
Capital Markets	1.03%
Insurance	1.17%
Bond Substitutes	-0.87%
Weak FX \$ plays	0.72%
High R&D plays	1.39%
Transports	0.67%
Geopolitical risk	4.60%
Weak oil prices	-0.68%
Inflation shock	-0.10%
Domestic GDP	-1.03%
Global GDP	1.95%
Consumer TMT	-0.86%
Trade sensitive	-3.25%

Note: Diversified Financial Services, Real Estate Management & Development and REITS moved from EW to OW; Gas Utilities, Wireless Telecommunication Services moved from UW to EW; Auto Components, Road & Rail moved from UW to OW; HC Providers & Services moved from OW to UW; Tobacco moved from EW to UW.

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

Price as of 7/15/2022

Source: DWS Investment Management GmbH



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S&P 500 EPS decline during recessions since 1900

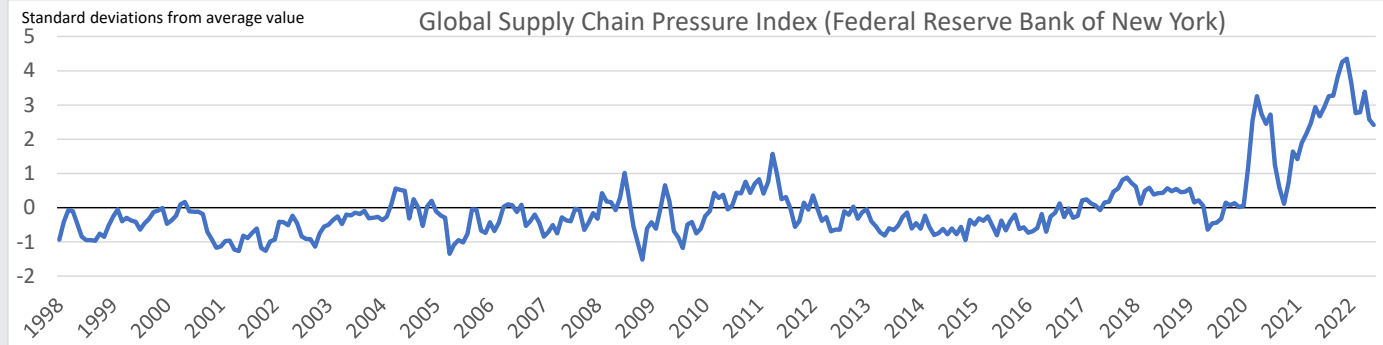
	Peak 4-qrtr	Trough 4-qrtr	PE on peak 4-qrtr	PE on trough 4-qrtr	Peak to trough EPS cycle			S&P low	PE on S&P low &
	EPS (\$/sh)	EPS (\$/sh)	EPS, qtr-end price	EPS, qtr-end price	EPS decline	Change in PE	S&P Price Return	Price	trough EPS
1902-04	\$4.94	\$3.81	13.4x	14.5x	-23%	8%	-16%		
1906-08	6.11	4.68	12.7	13.5	-23%	6%	-18%		
1909-11	6.20	4.76	12.7	15.6	-23%	23%	-6%		
1912-14	5.65	4.16	13.6	15.6	-26%	15%	-15%		
1916-21	12.43	2.33	6.2	25.2	-81%	308%	-24%		
1926-27	1.24	1.11	10.9	15.9	-10%	46%	31%		
1929-32	1.61	0.41	13.3	16.8	-75%	26%	-68%	4.4	10.7x
1937-38	1.22	0.62	11.3	19.7	-49%	75%	-11%	8.5	13.7
1941-46	1.19	0.84	8.6	21.9	-29%	156%	81%	13.55	16.1
1950-52	2.84	2.34	7.2	10.7	-18%	48%	22%	16.68	7.1
1956-58	3.69	2.88	13.1	17.4	-22%	32%	3%	38.98	13.5
1959-61	3.43	3.03	16.6	21.3	-12%	29%	14%	52.34	17.3
1969-70	5.89	5.13	15.8	18.0	-13%	14%	-1%	69.29	13.5
1974-75	9.11	7.76	7.0	10.8	-15%	55%	32%	62.28	8.0
1981-83	15.36	12.42	8.0	12.3	-19%	54%	25%	102.42	8.2
1989-91	25.53	18.48	12.5	22.6	-28%	81%	31%	295.46	16.0
2000-02	57.37	44.19	25.0	26.0	-23%	4%	-21%	1527.46	34.6
2007-09	92.15	50.84	16.3	20.8	-45%	27%	-30%	676.53	13.3
2019-20	164.38	141.00	18.0	23.9	-14%	33%	14%	2237.40	14.2
Avg (1900-2009)			12.7x	18.0x	-29%	55%	2%		14.3x
Avg (1950 - 2009)			13.9x	18.4x	-21%	38%	9%		14.6x
Avg ex. 1916-21 (WWI profits) & Great Depression			13.9x	17.7x	-23%	42%	8%		14.6x

Source: IBES, S&P, DWS Investment GmbH as of July 2022. Past performance may not be indicative of future results.

S&P trough price is 15x trough EPS on average in recessions

Recessions are only evident in hindsight, market prices usually react earlier than corporate earnings. That's why S&P price typically reaches its trough earlier than EPS. It helps to forecast market troughs by evaluating the possible PE on trough trailing 4-qrtr S&P EPS, even though they usually don't happen at the same time. The average such PE during past recessions is about 15 since 1950. If we apply 15x to an expected \$210-\$220 trough S&P EPS, it suggests 3200 for the price trough. However, real long-term interest rates are now and likely to stay lower than history. They've rarely gone above 1% since the financial crisis. DWS forecasts that the Fed Funds rate will likely rise to 3.25%-3.50% by year end and then the Fed will pause when the recession is evident. Under this backdrop, the real long-term interest rate is not likely to significantly exceed 1%. This will provide some extra support for the S&P PE. Therefore, for this downturn, we think the S&P PE on trough price and trough EPS should be higher than history, between 16x-18x, which suggests a trough S&P price of 3500-3700. If the recession is short lived and a recovery in S&P EPS is visible with healthy growth to follow in the mid years of this decade being credible, then the 3666 recent S&P price low might hold.

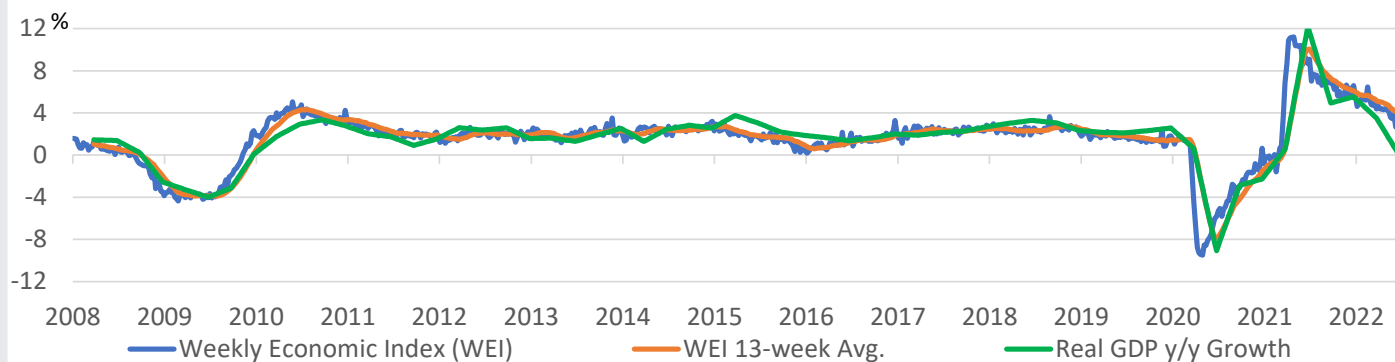
Global Supply Chain Pressure Index (GSCPI)



Note: The GSCPI integrates a number of commonly used metrics with the aim of providing a comprehensive summary of potential supply chain disruptions. Global transportation costs are measured by employing data from the Baltic Dry Index (BDI) and the Harpex index, as well as airfreight cost indices from the U.S. Bureau of Labor Statistics. The GSCPI also uses several supply chain-related components from Purchasing Managers' Index (PMI) surveys, focusing on manufacturing firms across seven interconnected economies: China, the euro area, Japan, South Korea, Taiwan, the United Kingdom, and the United States.

Source: Federal Reserve Bank of New York, DWS Investment GmbH as of June 2022. Past performance may not be indicative of future results.

Weekly Economic Index (WEI) vs. GDP growth

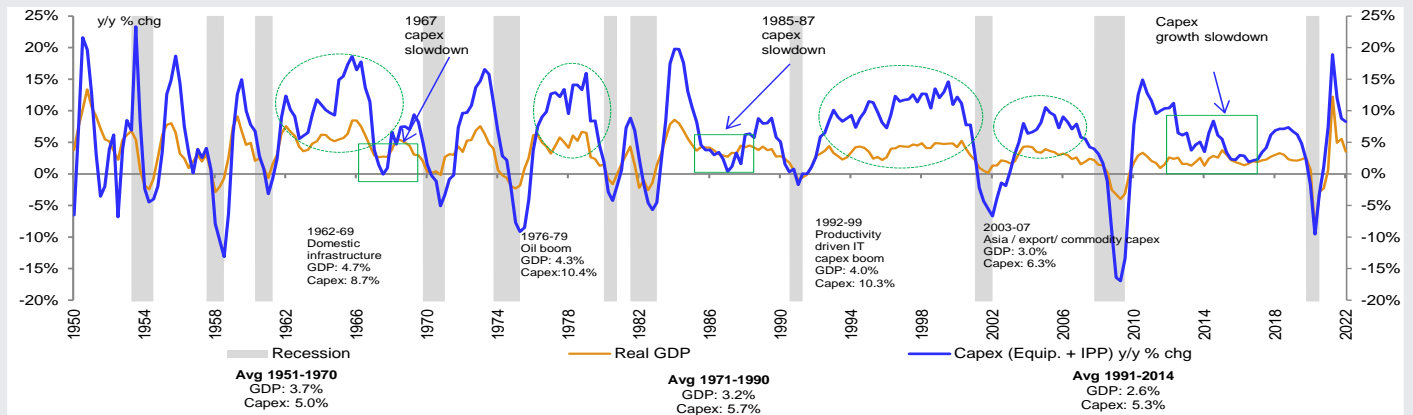


The WEI represents the common component of ten daily and weekly series covering consumer behavior, the labor market, and production, including:

- Initial unemployment insurance claims
- Continuing unemployment insurance claims
- Federal taxes withheld
- Redbook same-store sales
- Rasmussen Consumer Index
- The American Staffing Association Staffing Index
- Raw steel production
- U.S. railroad traffic
- U.S. fuel sales to end users
- U.S. electricity output

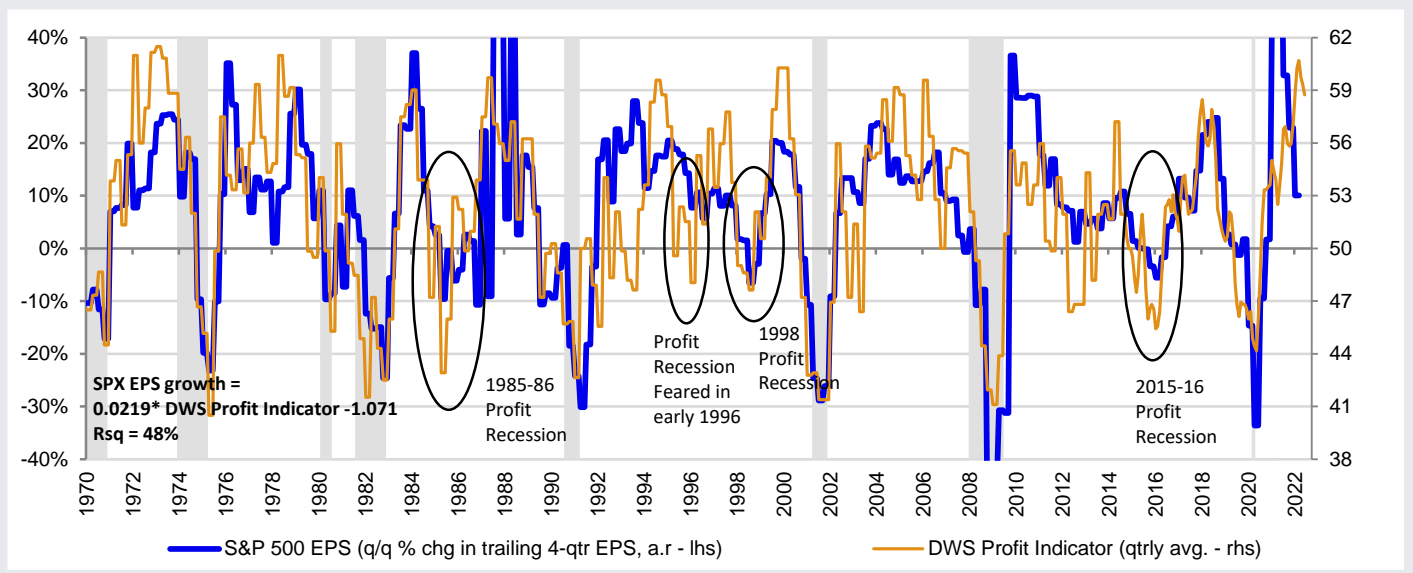
Source: Federal Reserve Bank of New York, DWS Investment GmbH as of 7/7/2022. Past performance may not be indicative of future results.

Capex growth vs. U.S. real GDP



Source: Haver, DWS Investment GmbH as of 1Q 2022. Past performance may not be indicative of future results.

DWS Profit Indicator



Source: Haver, IBES, DWS Investment GmbH as of 7/8/2022. Past performance may not be indicative of future results.

DWS Profit Indicator

	2Q22	1Q22	4Q21	3Q21	Tactical Signal		
DWS Profit Indicator (qtrly avg.)	58.8	60.6	59.8	56.0	Positive		
	June	May	Apr				
DWS Profit Indicator (monthly)	57.9	60.0	58.3				
		Current	Prior		Prior 3mo	Prior 6mo	Current
		Month	Month	Chg.	avg.	avg.	Signal
Mfg. ISM	Jun-22	53.0	56.1	-3.1	54.8	56.3	Neutral
ISM New Orders Index	Jun-22	49.2	55.1	-5.9	52.6	55.2	
ISM Production Index	Jun-22	54.9	54.2	0.7	54.2	55.6	
Industrial Production (seq 3mo chg, ar)	Jun-22	6.1%	7.7%	-1.6%	6.9%	5.9%	Positive
Capacity Utilization (%)	Jun-22	80.0	80.3	-0.3	80.2	79.8	
Nondefense Cap Gds ex Aircraft mfr shipments (seq 3mo chg, ar)	May-22	9.0%	11.8%	-2.8%	10.4%	12.5%	
Auto Sales (seq 3mo chg, ar)	Jun-22	-21.4%	-21.4%	0.0%	-15.9%	13.7%	
Exports (seq 3mo chg, ar)	May-22	38.9%	27.4%	11.4%	25.8%	23.3%	Positive
Capital Goods exports (seq 3mo chg, ar)	May-22	12.0%	11.2%	0.9%	11.1%	14.0%	
China Machinery & Transport Equip. imports (seq 3mo chg, ar)	May-22	-42.2%	-10.5%	-31.7%	-11.3%	5.3%	
Mfg ISM Export Orders Index - 3mo avg.	Jun-22	52.1	52.9	-0.8	53.1	53.8	
Initial claims (month avg., 000's)	Jun-22	232	207	25	208	204	Neutral
Unemployment Rate (%)	Jun-22	3.6	3.6	0.0	3.6	3.7	
Change in non-farm payroll (000's)	Jun-22	372	384	-12	375	457	
JOLTS Job Openings (000's)	Jan-21	11254	11681	-427	11597	11478	
Loan growth (seq 3mo chg, ar)**	May-22	10.8%	9.6%	1.2%	10.0%	9.3%	Negative
C&I loan growth (seq 3mo chg, ar)	May-22	12.7%	10.0%	2.7%	10.8%	8.8%	
CRE loan growth (seq 3mo chg, ar)	May-22	8.8%	8.5%	0.3%	8.5%	7.9%	
Home Equity & Other Residential loan growth (seq 3mo chg, ar)	May-22	7.5%	5.7%	1.8%	6.0%	5.8%	
Consumer loan growth (seq 3mo chg, ar)	May-22	13.8%	12.9%	0.9%	12.8%	12.1%	
Oil price (% chg from prior quarter avg. price)	Jun-22	10.7%	16.7%				Positive
WTI spot month end, \$/bbl	Jun-22	109.07	114.96	-5.89	109.54	104.03	
Brent spot month end, \$/bbl	Jun-22	122.21	125.53	-3.32	116.88	108.61	

Source: Haver, ISM, FRB, Census, China Customs, DOL, BLS, WSJ, EIA, CME, DWS Investment GmbH as of 7/15/2022. Past performance may not be indicative of future results.

Regional Federal Reserve manufacturing surveys

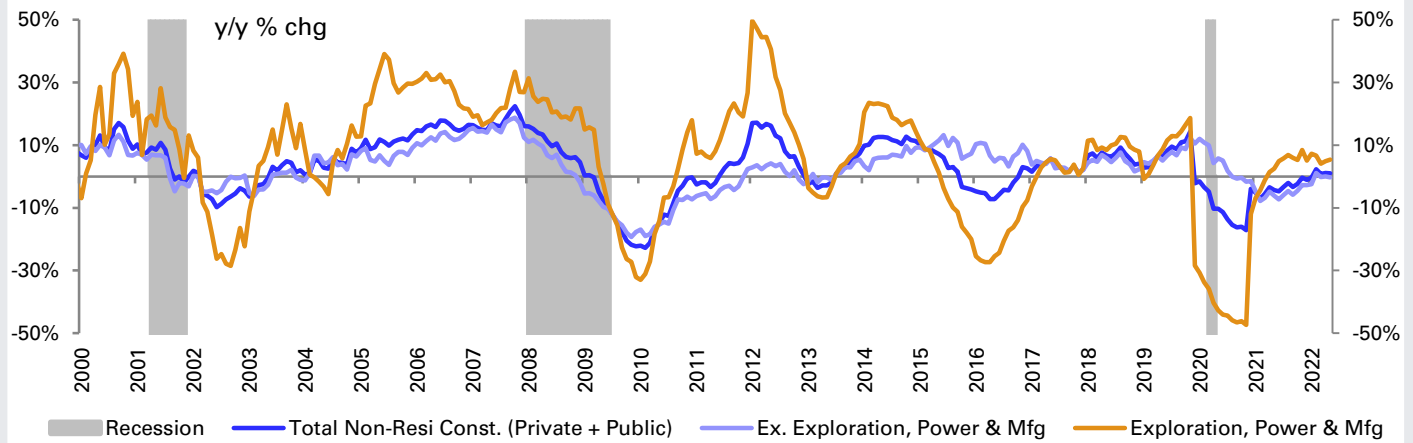
Federal Reserve Manufacturing Surveys

		Current Month	m/m Chg.	Prior 3mo avg	Regions
Current Business Activity Index					
Empire State Mfg Survey (NY)	Jun-22	-1.2	10.4	3.9	NY
Philly Fed Business Outlook Survey	Jun-22	-3.3	-5.9	5.6	DE, NJ, PA
Texas Mfg Outlook Survey (Dallas)	Jun-22	-17.7	-10.4	-8.0	TX
Richmond Mfg Survey	Jun-22	-11.0	-2.0	-2.0	MD, NC, SC, VA, WV
Kansas City Fed Mfg Survey	Jun-22	12.0	-11.0	20.0	CO, KS, MO, OK, NE, NM, W
Future 6mo Capital Expenditures Index					
Empire State Mfg Survey (NY)	Jun-22	25.6	0.2	27.6	
Philly Fed Business Outlook Survey	Jun-22	11.7	2.1	13.7	
Richmond Mfg Survey	Jun-22	18.0	-9.0	25.7	
Kansas City Fed Mfg Survey	Jun-22	14.0	-10.0	22.3	

Note: Level: % of firms reporting increase less % of firm reporting decrease

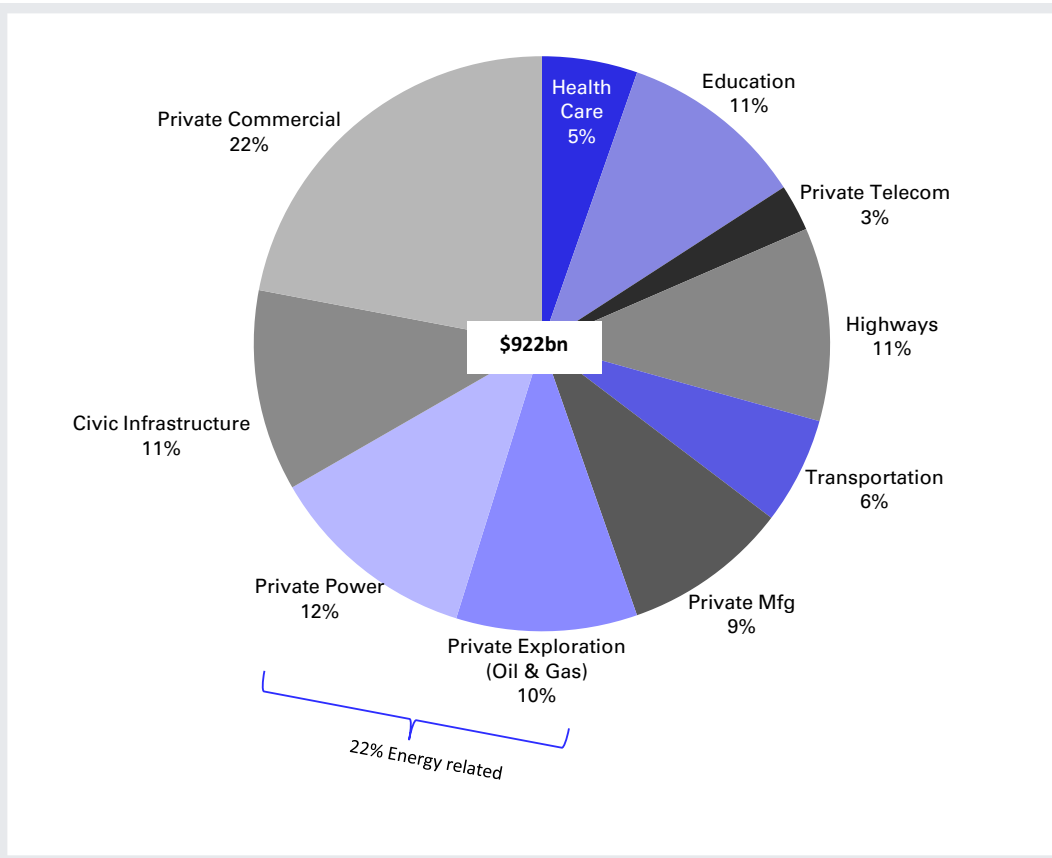
Source: Haver, FRB, DWS Investment GmbH as of 7/15/2022. Past performance may not be indicative of future results.

U.S. non-residential construction



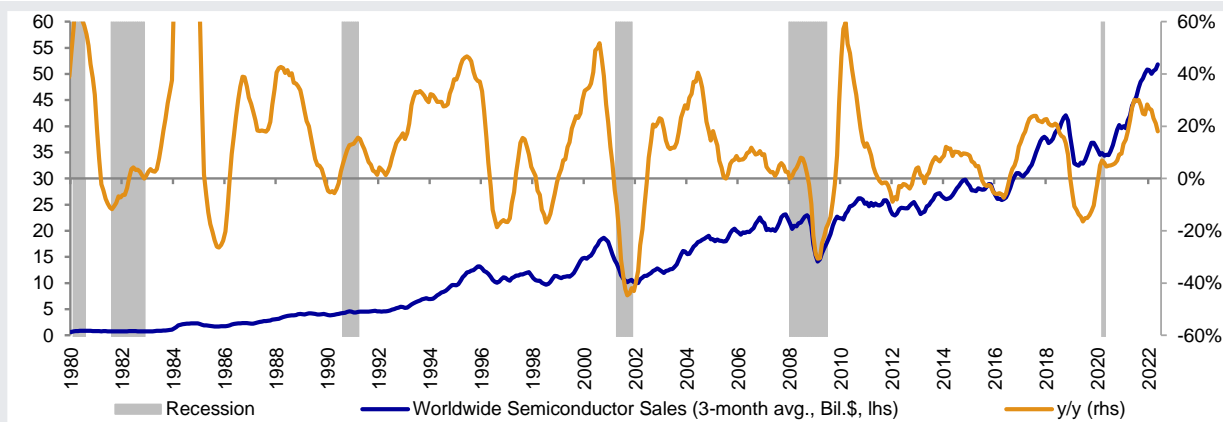
Source: Haver, DWS Investment GmbH as of 5/31/2022. Past performance may not be indicative of future results.

U.S. non-residential construction (12-month average: June 2021 – May 2022)



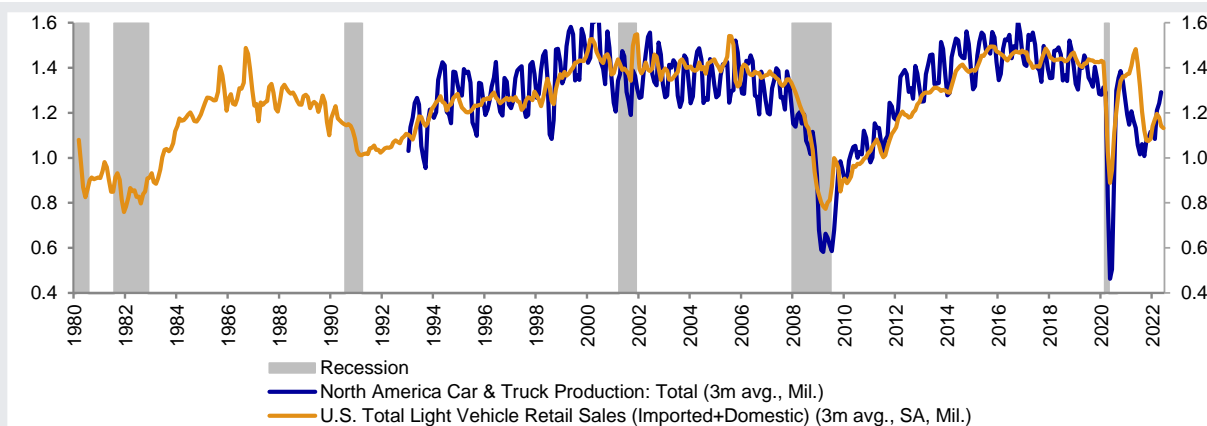
Source: Haver, DWS Investment GmbH as of 5/31/2022. Past performance may not be indicative of future results.

Worldwide semiconductor sales



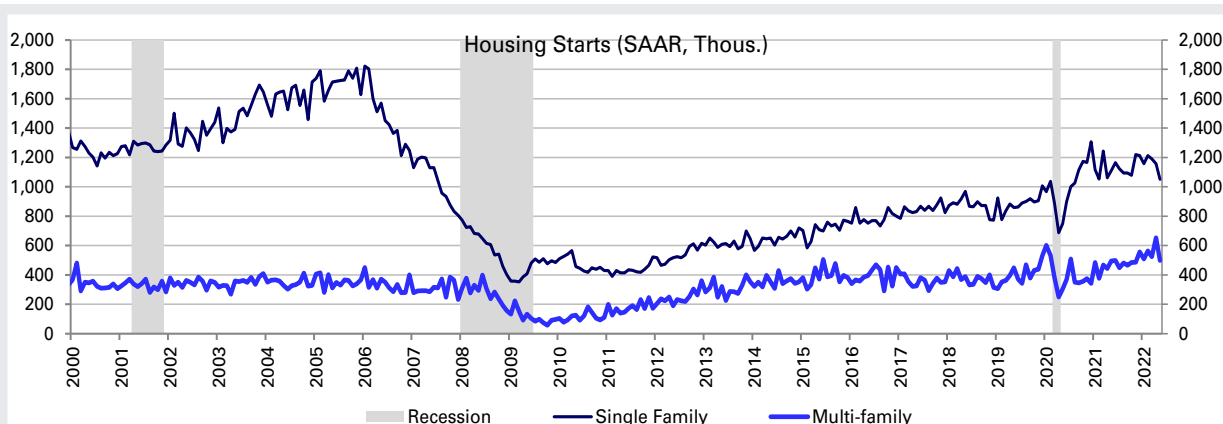
Source: Haver, DWS Investment GmbH as of May 2022. Past performance may not be indicative of future results.

Cars and trucks production and sales



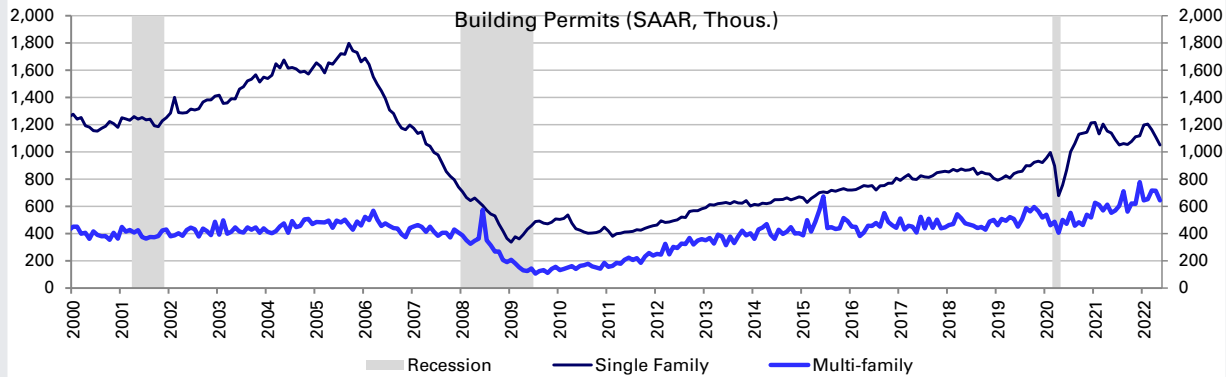
Source: Haver, DWS Investment GmbH as of 7/8/2022. Past performance may not be indicative of future results.

Housing Starts



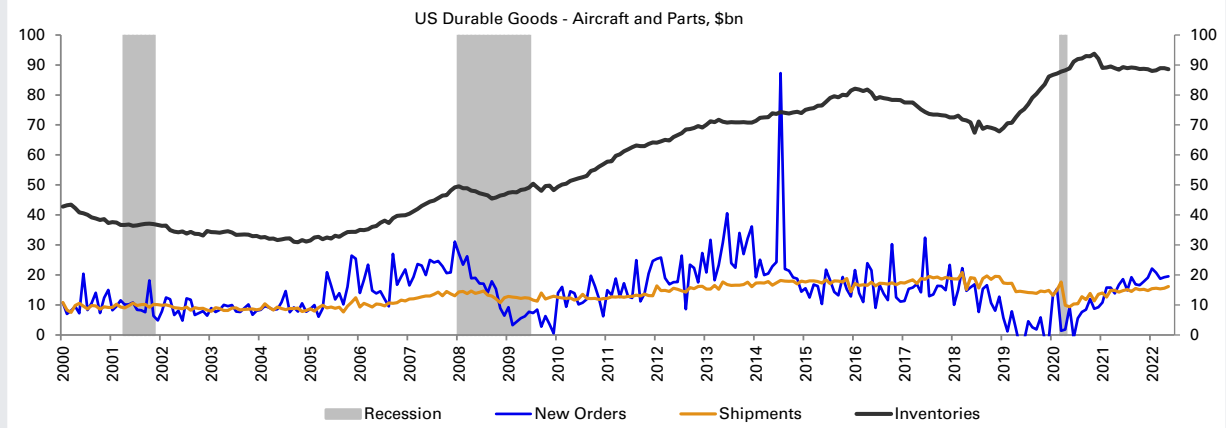
Source: Haver, DWS Investment GmbH as of May 2022. Past performance may not be indicative of future results.

Building Permits



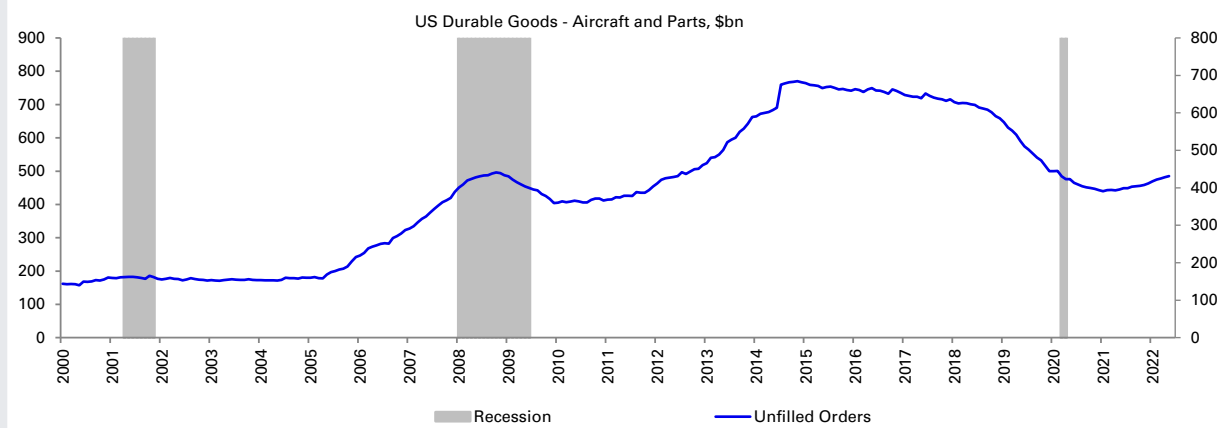
Source: Haver, DWS Investment GmbH as of May 2022. Past performance may not be indicative of future results.

U.S. Durable Goods – Aircraft and Parts: New Orders, Shipments and Inventories



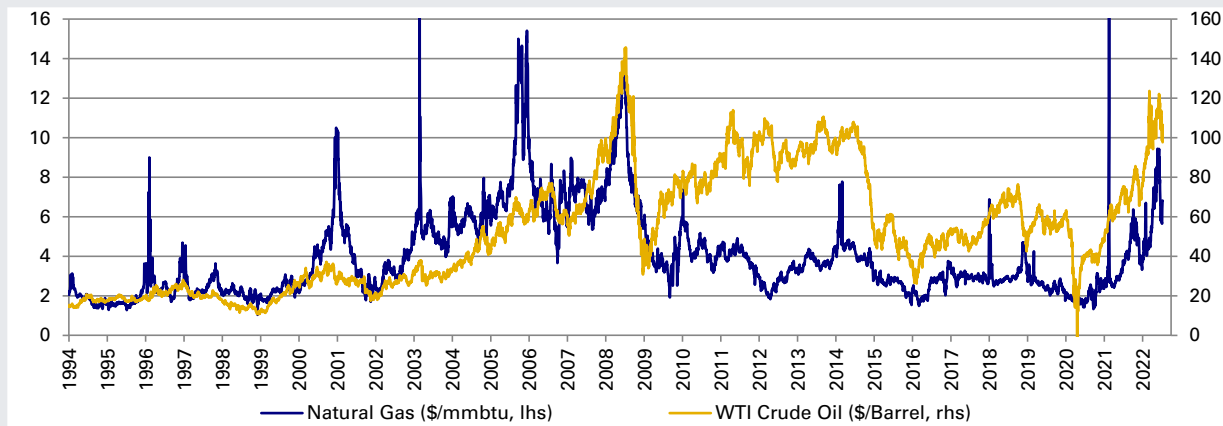
Source: Haver, DWS Investment GmbH as of May 2022. Past performance may not be indicative of future results.

U.S. Durable Goods – Aircraft and Parts: Unfilled Orders



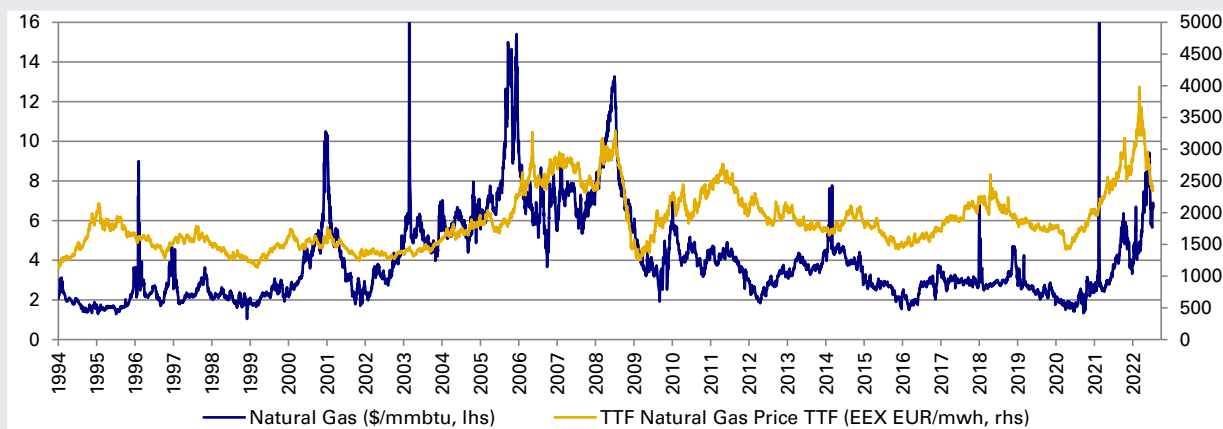
Source: Haver, DWS Investment GmbH as of May 2022. Past performance may not be indicative of future results.

WTI crude oil and natural gas prices



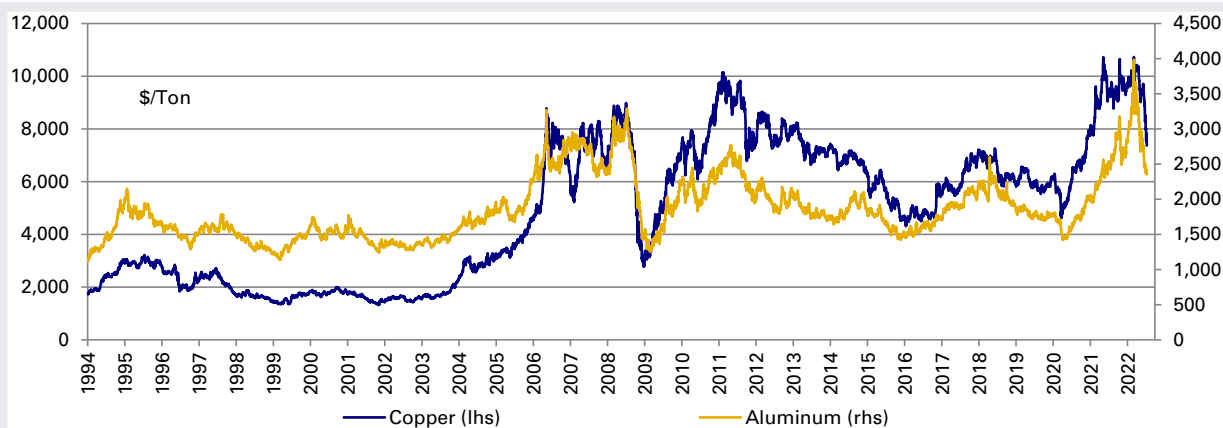
Source: Haver, DWS Investment GmbH as of 7/12/2022. Past performance may not be indicative of future results.

Natural gas prices: US vs. Europe



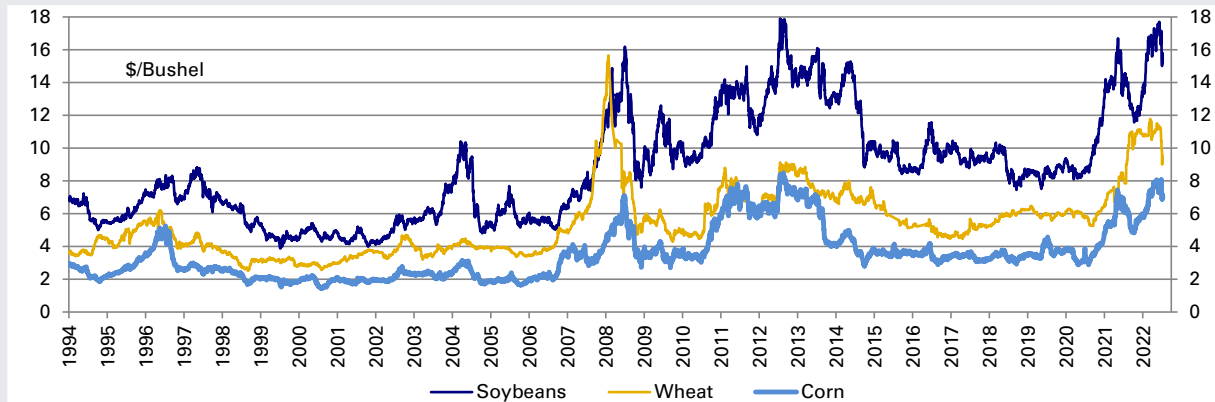
Source: Haver, Factset, DWS Investment GmbH as of 7/15/2022. Past performance may not be indicative of future results.

Copper and aluminum prices



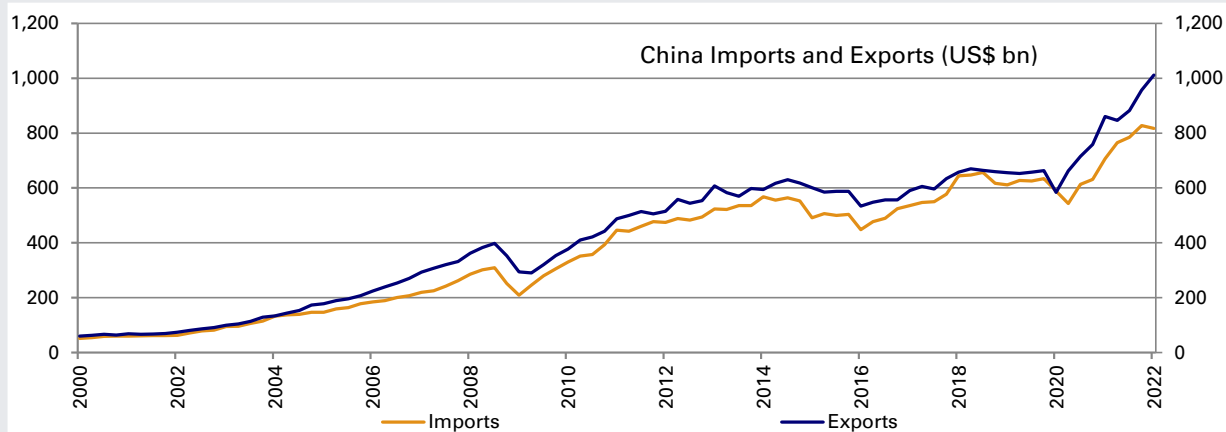
Source: Haver, DWS Investment GmbH as of 7/12/2022. Past performance may not be indicative of future results.

Soybeans, wheat and corn prices



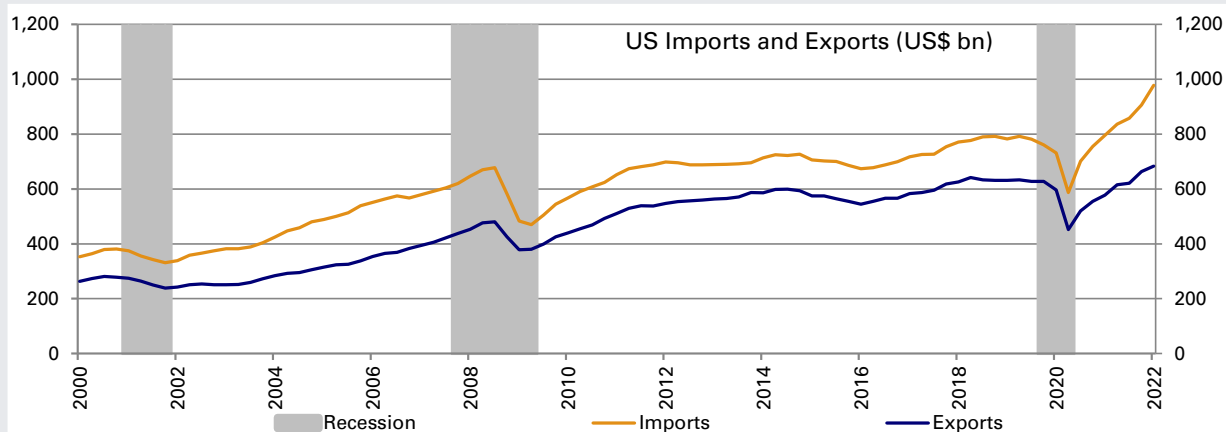
Source: Haver, DWS Investment GmbH as of 7/12/2022. Past performance may not be indicative of future results.

China imports and exports



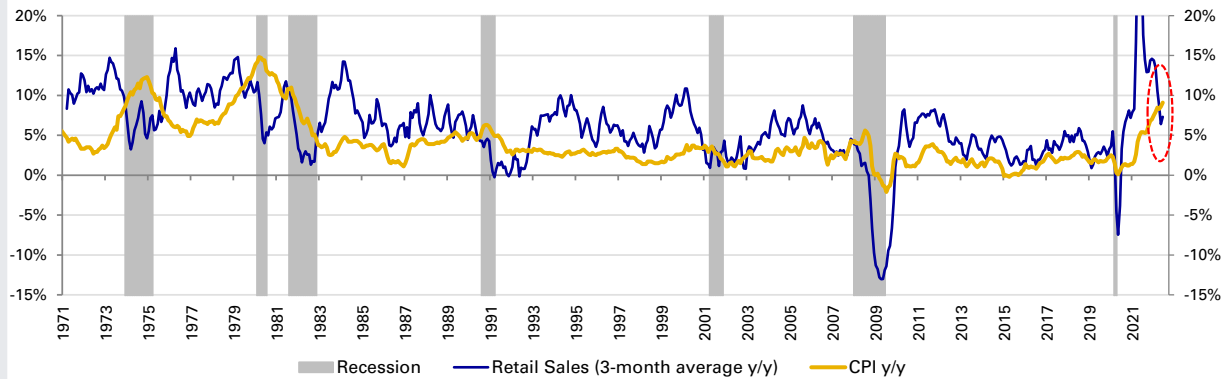
Source: Haver, DWS Investment GmbH as of 1Q2022. Past performance may not be indicative of future results.

U.S. imports and exports



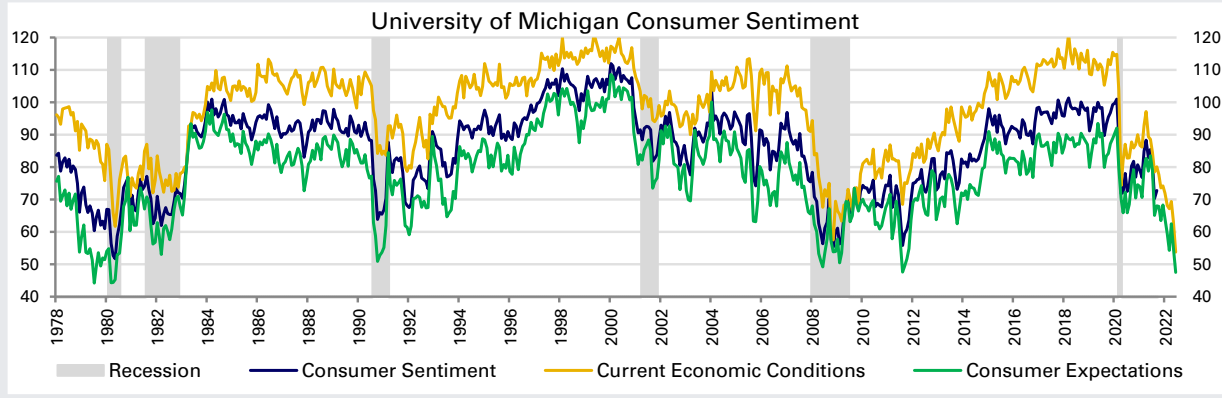
Source: Haver, DWS Investment GmbH as of 1Q2022. Past performance may not be indicative of future results.

U.S. retail sales



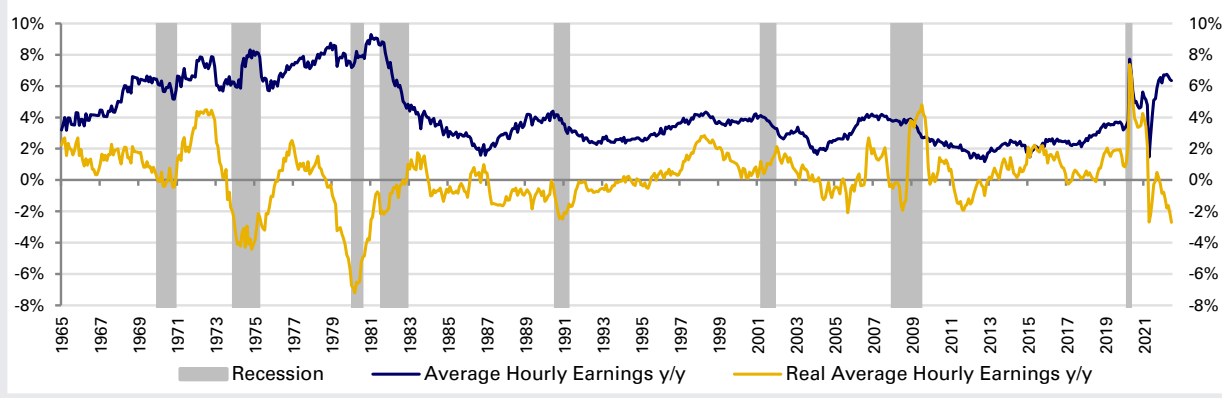
Source: Haver, DWS Investment GmbH as of June 2022. Past performance may not be indicative of future results.

University of Michigan consumer sentiment



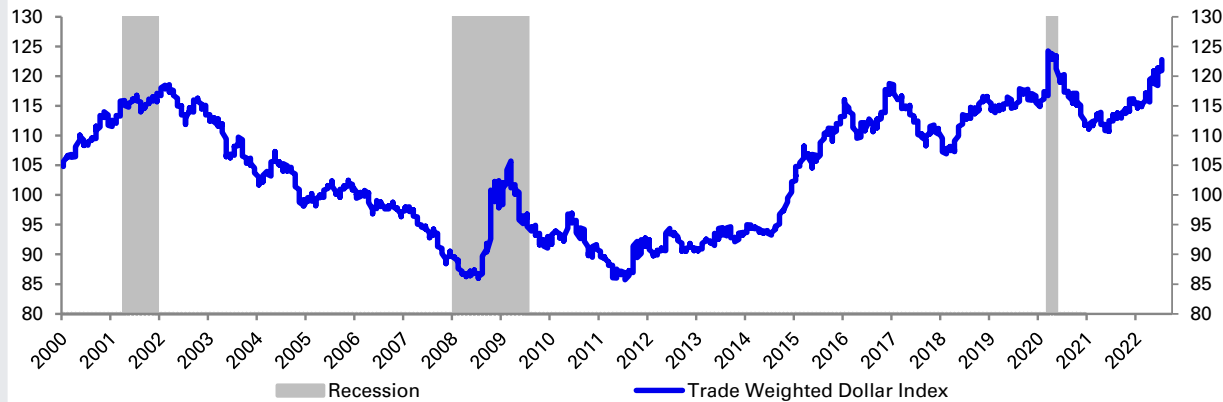
Source: Haver, DWS Investment GmbH as of June 2022. Past performance may not be indicative of future results.

U.S. wage growth



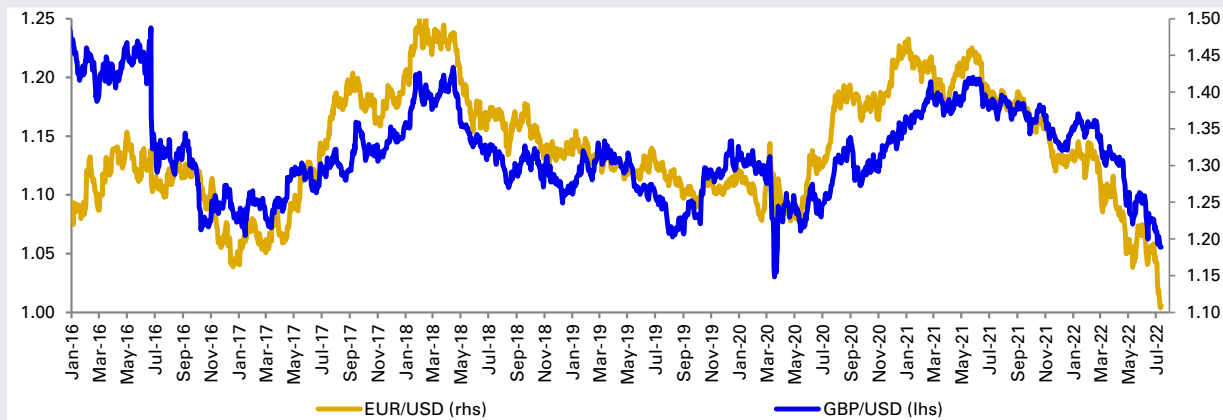
Source: Haver, DWS Investment GmbH as of June 2022. Past performance may not be indicative of future results.

Trade weighted dollar index



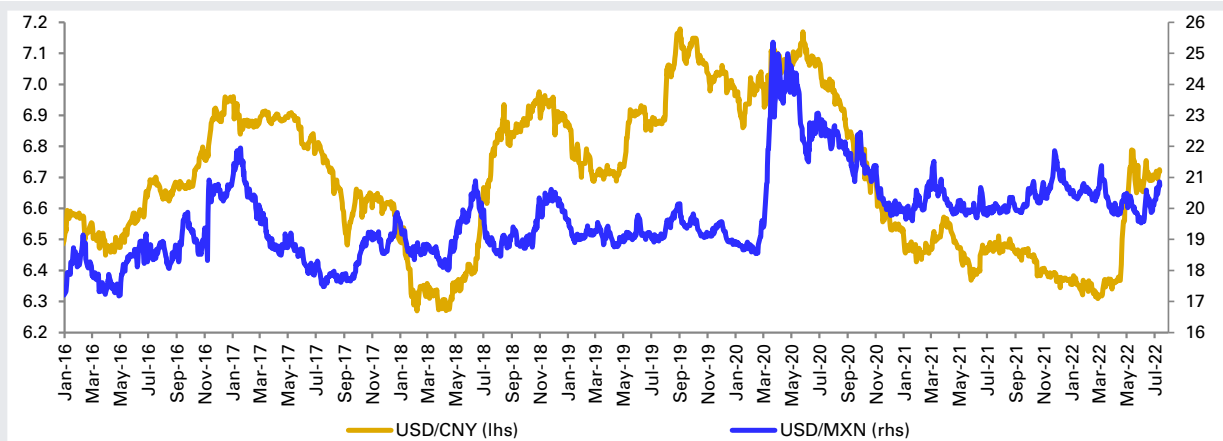
Source: Haver, DWS Investment GmbH as of 7/13/2022. Past performance may not be indicative of future results.

EUR and GBP



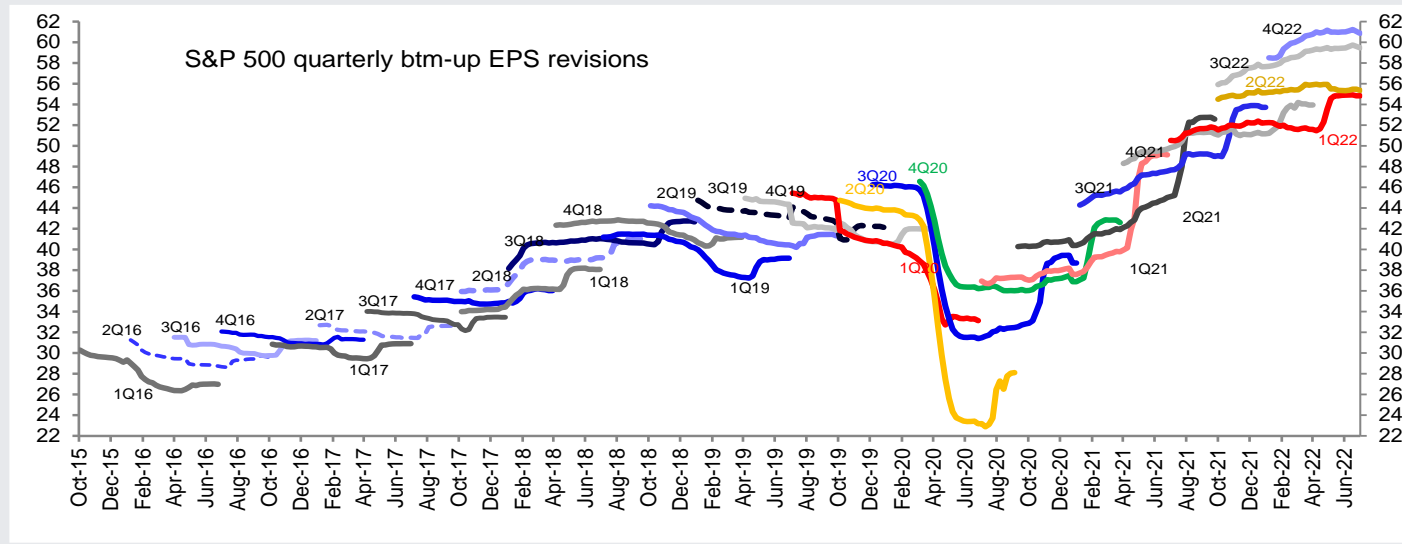
Source: Haver, DWS Investment GmbH as of 7/13/2022. Past performance may not be indicative of future results.

CNY and MXN



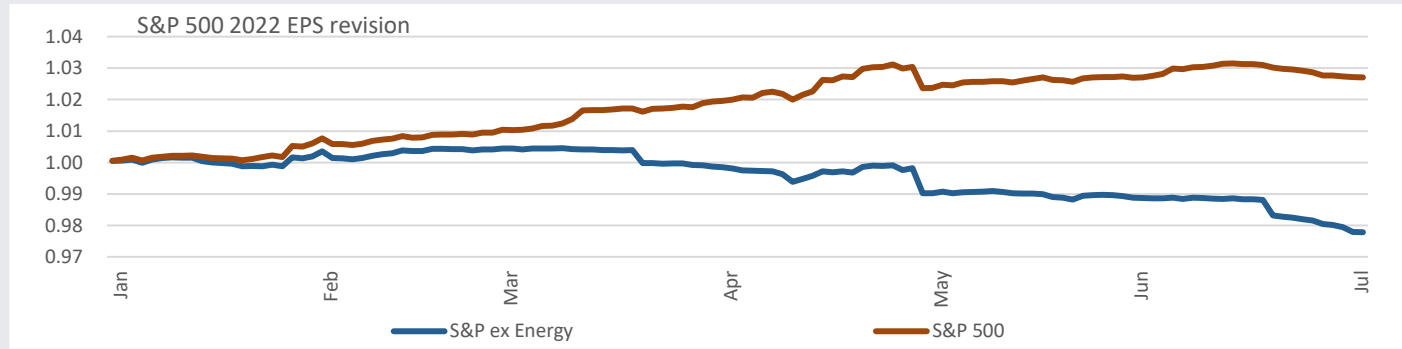
Source: Haver, DWS Investment GmbH as of 7/13/2022. Past performance may not be indicative of future results.

S&P 500 quarterly EPS revision



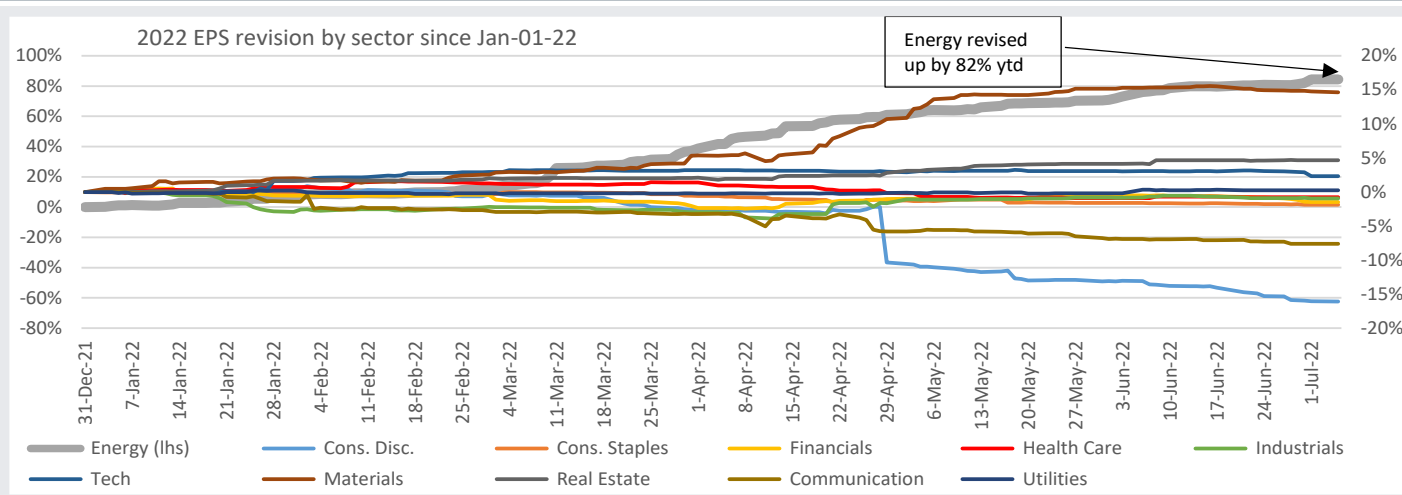
Source: Factset, IBES, DWS Investment GmbH as of 7/5/2022. Past performance may not be indicative of future results.

S&P 500 2022 EPS revision (ex. Energy)



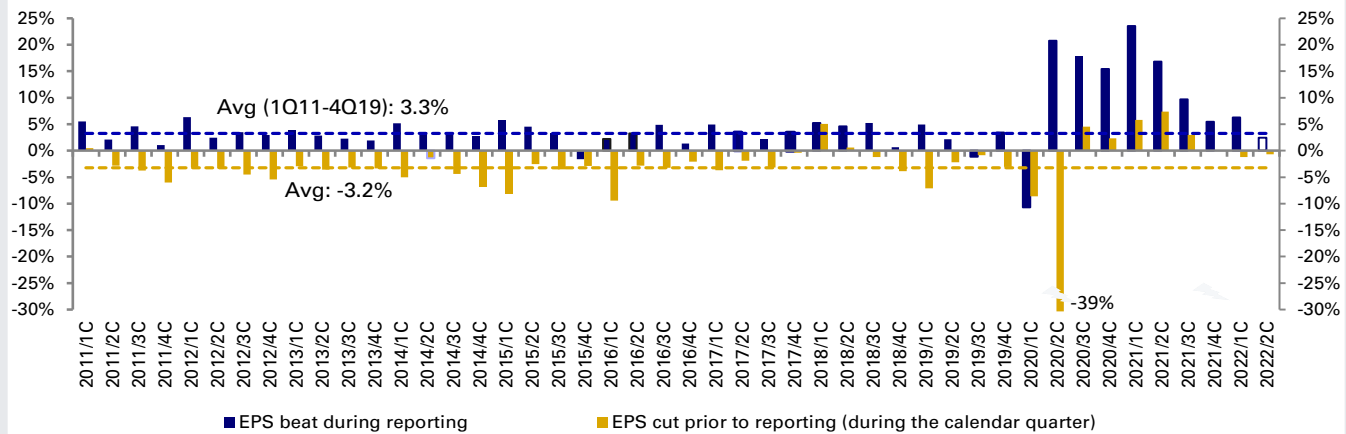
Source: Factset, IBES, DWS Investment GmbH as of 7/5/2022. Past performance may not be indicative of future results.

S&P 500 2022 EPS revision by sector



Source: Factset, IBES, DWS Investment GmbH as of 7/5/2022. Past performance may not be indicative of future results.

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



Source: Factset, DWS Investment GmbH as of 7/5/2022. Past performance may not be indicative of future results.

S&P 500: 2Q22 earnings season summary statistics

2Q22 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 (%)
S&P 500	3.5%	18	78%	22%	2.4%	15.4%	67%	28%	1.2%	11.7%
S&P 500 ex. Financials & Real Est	4.2%	17	76%	24%	2.3%	15.2%	71%	29%	1.2%	11.7%
S&P 500 ex. Energy	3.9%	18	78%	22%	2.4%	15.4%	67%	28%	1.2%	11.7%
S&P ex. Tech	1.9%	13	77%	23%	-0.4%	15.1%	62%	31%	1.3%	10.6%
S&P ex. Energy, Financials & Real Est	4.8%	17	76%	24%	2.3%	15.2%	71%	29%	1.2%	11.7%
Communication Services	0.0%	0								
Consumer Discretionary	6.8%	6	67%	33%	-5.3%	29.1%	67%	33%	0.3%	18.7%
Consumer Staples	12.7%	5	80%	20%	2.2%	-1.5%	80%	20%	2.2%	8.3%
Energy	0.0%	0								
Financials	0.2%	1	100%	0%	16.4%	38.2%	0%	0%	3.3%	22.3%
Health Care	0.0%	0								
Industrials	4.4%	1	100%	0%	0.4%	37.1%	0%	100%	-0.7%	8.1%
Information Technology	9.6%	5	80%	20%	4.8%	15.6%	80%	20%	0.7%	16.0%
Materials	0.0%	0								
Real Estate	0.0%	0								
Utilities	0.0%	0								

Source: Factset, DWS Investment GmbH as of 7/5/2022. Past performance may not be indicative of future results.

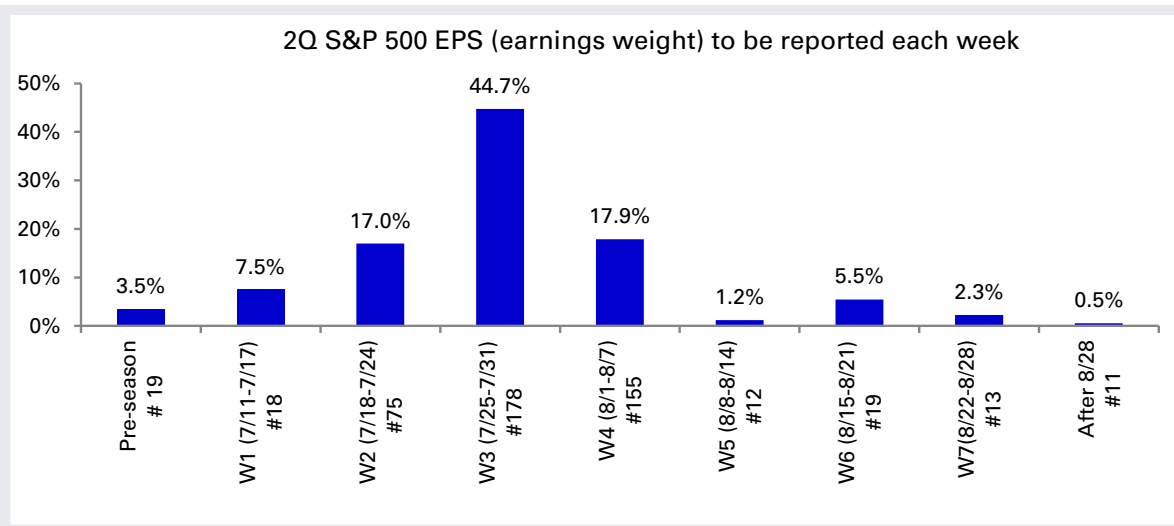
S&P 500: 2Q22 pre-season reporters (companies with May quarter end)

Ticker	Company Name	Sector	Industry	Reporting Date	2Q22 EPS		2Q22 Sales	
					Surprise (%)	y/y	Surprise (%)	y/y
AZO-US	AutoZone, Inc.	Consumer Discretionary	Specialty Retail	May 24, 2022	12.0%	1.0%	4.1%	5.9%
COST-US	Costco Wholesale Cc	Consumer Staples	Food & Staples Retailing	May 26, 2022	0.0%	10.8%	1.7%	16.2%
ORCL-US	Oracle Corporation	Information Technology	Software	Jun 13, 2022	12.4%	-4.6%	1.5%	5.5%
ADBE-US	Adobe Incorporated	Information Technology	Software	Jun 16, 2022	1.5%	9.7%	1.1%	14.4%
LEN-US	Lennar Corporation C	Consumer Discretionary	Household Durables	Jun 21, 2022	13.1%	59.5%	2.5%	30.0%
DRI-US	Darden Restaurants	Consumer Discretionary	Hotels Restaurants & Leisure	Jun 23, 2022	0.9%	5.2%	2.5%	14.2%
FDS-US	FactSet Research Sy	Financials	Capital Markets	Jun 23, 2022	16.4%	38.4%	2.5%	22.3%
FDX-US	FedEx Corporation	Industrials	Air Freight & Logistics	Jun 23, 2022	-31.7%	7.3%	-0.3%	8.0%
ACN-US	Accenture Plc Class	Information Technology	IT Services	Jun 23, 2022	-3.1%	16.0%	0.5%	21.8%
CCL-US	Carnival Corporation	Consumer Discretionary	Hotels Restaurants & Leisure	Jun 24, 2022	-	-	-11.9%	4702.0%
KMX-US	CarMax, Inc.	Consumer Discretionary	Specialty Retail	Jun 24, 2022	2.6%	-41.6%	2.5%	21.0%
NKE-US	NIKE, Inc. Class B	Consumer Discretionary	Textiles Apparel & Luxury Goods	Jun 27, 2022	8.4%	-3.7%	1.2%	-0.9%
GIS-US	General Mills, Inc.	Consumer Staples	Food Products	Jun 29, 2022	10.9%	22.1%	1.9%	8.1%
MKC-US	McCormick & Compa	Consumer Staples	Food Products	Jun 29, 2022	-25.8%	-30.1%	-3.8%	-1.3%
PAYX-US	Paychex, Inc.	Information Technology	IT Services	Jun 29, 2022	2.7%	12.9%	3.6%	11.2%
STZ-US	Constellation Brands	Consumer Staples	Beverages	Jun 30, 2022	5.1%	8.1%	9.3%	16.6%
WBA-US	Walgreens Boots Allit	Consumer Staples	Food & Staples Retailing	Jun 30, 2022	5.5%	-30.5%	2.2%	-4.2%
MU-US	Micron Technology, Ir	Information Technology	Semiconductors & Semiconductor Equipment	Jun 30, 2022	5.3%	37.2%	-0.7%	16.4%
Weighted Average					3.0%	11.0%	1.3%	11.2%

Source: Factset, DWS Investment GmbH as of 7/5/2022. Past performance may not be indicative of future results.

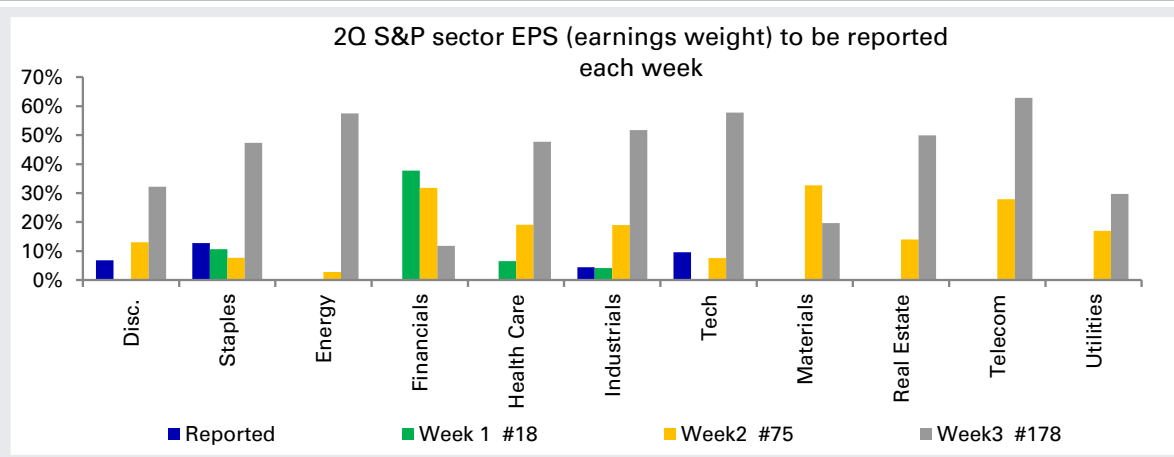
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2Q22 S&P 500 earnings to be reported each week



Source: Factset, DWS Investment GmbH as of 7/5/2022. Past performance may not be indicative of future results.

2Q22 S&P 500 earnings to be reported each week by sector



Source: Factset, DWS Investment GmbH as of 7/5/2022. Past performance may not be indicative of future results.

S&P 500 EPS & Sales growth and Net Margins by sector (2Q22 is blended with actual for reported and consensus for the rest)

	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
S&P 500	27.9%	26.8%	27.6%	15.7%	21.5%	1.1%	2.7%	1.1%	3.5%	2.1%	-11.7%	-31.2%	-7.0%	4.2%	-9.2%	49.5%	91.6%	40.6%	30.2%	47.5%	10.7%	5.6%
S&P 500 ex. Financials & Real Est	28.2%	27.4%	25.7%	15.8%	20.6%	-0.6%	1.0%	0.7%	2.4%	0.7%	-5.0%	-27.7%	-7.8%	0.9%	-7.2%	36.9%	81.8%	42.4%	36.0%	44.6%	18.4%	12.0%
S&P 500 ex. Energy	26.3%	24.4%	24.7%	13.1%	19.2%	2.2%	3.5%	3.4%	6.4%	3.9%	-11.1%	-25.0%	-3.0%	7.8%	-5.2%	50.4%	77.4%	33.0%	22.3%	40.6%	4.8%	-2.7%
S&P 500 ex. Tech	26.0%	25.1%	27.0%	18.5%	22.1%	2.6%	4.5%	1.8%	1.1%	1.7%	-17.0%	-38.7%	-9.7%	0.8%	-15.0%	53.2%	107.1%	41.3%	32.4%	53.3%	9.7%	6.8%
S&P ex. Energy, Fin & Real Est	26.2%	24.3%	22.0%	12.4%	17.5%	0.9%	1.8%	3.6%	5.9%	3.0%	-3.9%	-19.4%	-2.8%	5.4%	-1.9%	37.6%	65.3%	32.8%	25.9%	36.1%	10.9%	1.6%
S&P ex. Energy, Fin, Real Est, Healthcare	28.8%	26.0%	23.2%	12.1%	18.9%	-1.4%	-0.7%	2.5%	4.9%	1.3%	-6.3%	-25.9%	-5.5%	4.9%	-4.5%	40.5%	81.1%	34.4%	25.8%	38.6%	9.1%	1.4%
FANG (FB, AMZN, NFLX, Google)	60.1%	46.2%	49.7%	54.9%	47.7%	-19.5%	40.1%	-8.7%	16.2%	4.4%	15.6%	17.1%	64.7%	56.5%	41.2%	149.9%	112.5%	28.1%	36.0%	66.7%	-39.7%	-24.5%
FANG & AAPL	43.7%	42.8%	45.1%	24.3%	32.2%	-14.8%	15.1%	-2.7%	17.9%	3.4%	9.7%	17.6%	31.4%	44.9%	34.2%	136.1%	108.1%	42.3%	30.7%	57.6%	-19.8%	-19.3%
S&P ex FANG	26.8%	26.4%	26.8%	14.3%	20.6%	2.0%	1.6%	1.5%	2.9%	1.9%	-12.7%	-33.2%	-9.9%	1.2%	-11.4%	44.7%	90.1%	41.6%	29.7%	46.1%	14.8%	8.0%
S&P ex FANG & AAPL	26.6%	25.9%	26.2%	14.8%	20.6%	2.5%	1.9%	1.4%	1.9%	1.9%	-13.3%	-34.7%	-10.1%	-1.0%	-13.0%	41.7%	89.5%	40.4%	30.2%	46.1%	15.2%	8.9%
S&P ex. Energy & Fin & Real Est & FANG	24.5%	23.6%	20.7%	10.4%	16.1%	2.1%	0.3%	4.4%	5.2%	2.9%	-4.8%	-21.4%	-6.3%	1.6%	-4.5%	30.8%	61.3%	33.3%	24.7%	33.4%	16.7%	4.4%
Communication Services	30.7%	18.6%	27.2%	24.9%	23.1%	-10.3%	18.6%	-0.8%	8.1%	3.2%	3.1%	-15.9%	3.8%	10.3%	2.8%	53.9%	73.9%	36.5%	16.8%	39.9%	-3.7%	-11.3%
Consumer Discretionary	17.3%	21.3%	29.2%	20.4%	20.9%	11.1%	4.7%	2.4%	2.4%	1.5%	-50.1%	-62.6%	2.5%	3.2%	-19.7%	200.6%	271.7%	16.9%	47.4%	75.2%	-24.0%	-6.1%
Multiline & Specialty Retail	22.9%	30.4%	24.4%	18.8%	23.0%	9.7%	6.4%	10.8%	6.3%	9.2%	-40.6%	22.6%	39.6%	17.4%	11.6%	203.8%	36.7%	16.2%	17.0%	40.4%	0.4%	-8.0%
Consumer Staples	13.1%	14.1%	11.3%	4.8%	10.0%	0.9%	1.5%	3.4%	2.7%	1.2%	6.9%	-5.2%	5.3%	6.0%	4.7%	10.1%	18.7%	7.0%	7.2%	10.7%	8.1%	-1.7%
Energy	76.1%	109.5%	105.8%	89.7%	89.0%	-24.3%	-12.1%	-37.0%	-42.3%	-30.2%	-29.2%	-170.7%	-110.6%	-103.9%	-110.9%	16.5%	241.3%	1720%	6576%	-1411%	271.3%	234.5%
Financials	29.9%	27.6%	41.0%	16.8%	28.4%	7.2%	10.5%	2.4%	9.6%	7.7%	-39.1%	-48.3%	-3.4%	20.4%	-18.3%	137.1%	164.7%	36.1%	10.0%	67.1%	-17.4%	-20.4%
Financials ex. BAC, C & JPM	26.0%	25.4%	45.4%	13.2%	27.0%	5.2%	6.6%	0.9%	4.6%	4.9%	-32.1%	-45.0%	-2.1%	23.5%	-14.7%	104.7%	149.0%	33.7%	15.9%	60.9%	-9.9%	-17.7%
Health Care	16.8%	17.8%	17.1%	13.9%	12.1%	10.0%	12.1%	8.6%	10.1%	9.9%	4.6%	3.6%	8.2%	7.3%	7.9%	28.3%	25.5%	27.7%	26.2%	28.0%	16.9%	2.2%
Industrials	29.4%	25.5%	28.1%	33.7%	24.4%	8.0%	-8.9%	2.5%	-9.8%	-3.5%	-27.5%	-81.8%	-48.1%	-30.0%	-48.2%	-2.4%	425.1%	80.2%	40.5%	73.5%	38.9%	30.1%
Industrials ex. BA	26.6%	25.3%	27.8%	30.3%	22.6%	9.6%	5.6%	6.2%	3.2%	5.0%	-20.0%	-76.1%	-44.8%	-25.6%	-43.9%	-2.7%	263.1%	74.5%	44.9%	64.8%	40.5%	31.2%
Industrials ex. Defense	30.3%	26.0%	26.2%	25.6%	23.5%	6.4%	-10.9%	2.7%	-12.1%	-4.9%	-30.5%	-90.3%	-53.2%	-35.1%	-54.0%	-4.6%	834.3%	104.4%	48.1%	91.4%	46.7%	33.9%
Information Technology	35.5%	34.1%	29.6%	7.2%	19.6%	-6.4%	-4.1%	-1.9%	12.0%	3.4%	10.1%	1.6%	4.0%	15.1%	14.2%	37.9%	49.9%	38.1%	24.0%	29.6%	14.2%	1.0%
Materials	67.2%	63.1%	-27.7%	-22.7%	11.0%	-12.7%	-19.3%	78.4%	-11.5%	-9.3%	-7.7%	-34.8%	-13.3%	12.6%	-6.2%	47.5%	133.3%	86.4%	63.8%	83.9%	47.2%	19.1%
Real Estate	6.6%	7.0%	4.9%	7.8%	6.7%	4.3%	0.8%	4.6%	0.6%	2.2%	-1.3%	-12.5%	-6.5%	-0.9%	-4.9%	6.3%	29.3%	17.5%	9.9%	14.8%	17.6%	6.4%
Utilities	18.8%	7.4%	11.9%	-10.5%	7.5%	-0.7%	1.5%	7.3%	18.0%	6.3%	4.3%	6.9%	0.8%	-2.9%	1.2%	-1.3%	12.8%	10.3%	-1.2%	5.2%	26.4%	-11.1%

Sales growth (y/y)	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
S&P 500	9.4%	11.2%	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%	10.9%
S&P 500 ex. Financials & Real Est	9.2%	10.2%	9.6%	1.8%	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%	15.2%	12.5%
S&P 500 ex. Energy	7.9%	8.5%	7.6%	1.6%	6.3%	3.7%	3.4%	3.5%	7.7%	4.6%	-1.6%	-6.7%	0.3%	4.1%	-1.0%	12.4%	20.6%	13.4%	11.6%	15.0%	10.2%	6.9%
S&P 500 ex. Tech	8.0%	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%	10.4%	24.8%	16.3%	15.9%	17.3%	13.6%	11.4%
S&P ex. Energy, Fin & Real Est	8.4%	8.5%	8.0%	1.0%	6.4%	3.5%	3.4%	3.3%	7.9%	4.6%	-2.0%	-7.1%	0.8%	4.9%	-1.0%	13.1%	22.1%	13.8%	11.9%	16.6%	11.6%	7.9%
S&P ex. Energy, Fin, Real Est, Healthcare	8.7%	8.8%	8.2%	-0.6%	6.3%	0.7%	0.5%	0.2%	6.6%	1.8%	-5.3%	-9.9%	-2.0%	2.7%	-4.1%	13.9%	22.9%	13.4%	11.4%	17.9%	10.6%	8.3%
FANG (FB, AMZN, NFLX, Google)	37.5%	34.9%	34.2%	21.8%	29.4%	18.2%	20.9%	23.5%	20.6%	20.8%	21.2%	22.4%	27.6%	35.6%	27.4%	40.6%	38.9%	24.8%	17.1%	27.9%	11.8%	7.5%
FANG & AAPL	27.6%	28.0%	24.2%	9.4%	21.3%	8.7%	13.7%	15.0%	15.8%	12.5%	13.8%	18.7%	18.4%	30.1%	22.4%	44.7%	38.2%	26.0%	14.9%	27.0%	10.7%	5.7%
S&P ex FANG	7.9%	9.3%	8.5%	1.5%	6.7%	3.0%	2.5%	1.7%	5.9%	3.2%	-3.2%	-11.9%	-3.7%	-0.4%	-4.8%	10.4%	23.8%	16.2%	15.6%	16.5%	13.5%	11.1%
S&P ex FANG & AAPL	7.8%	9.2%	8.3%	1.7%	6.6%	3.2%	2.5%	1.7%	5.8%	3.3%	-3.3%	-12.3%	-3.8%	-1.0%	-5.2%	9.5%	23.5%	15.9%	15.8%	16.2%	13.7%	11.4%
S&P ex. Energy & Fin & Real Est & FANG	7.5%	7.7%	7.3%	0.1%	5.5%	2.9%	2.6%	2.5%	7.3%	3.8%	-3.1%	-8.5%	-0.6%	3.0%	-2.4%	11.5%	21.0%	13.1%	11.5%	15.8%	11.6%	7.9%
Communication Services	11.8%	10.5%	13.0%	12.6%	11.4%	12.5%	15.1%	11.2%	3.2%	9.2%	3.8%	-7.2%	0.6%	5.5%	2.5%	12.4%	25.9%	16.5%	11.6%	14.6%	7.2%	2.9%
Consumer Discretionary	9.9%	9.8%	10.2%	7.6%	8.9%	4.5%	5.3%	5.7%	2.9%	3.9%	0.0%	-12.3%	6.2%	11.5%	6.8%	19.8%	35.8%	10.6%	11.2%	13.2%	10.0%	9.5%
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%	17.1%	9.1%	10.0%	0.0%	3.1%	3.1%
Consumer Staples	5.5%	5.7%	2.8%	1.7%	3.8%	2.4%	2.2%	3.6%	3.4%	2.7%	5.8%	-0.3%	3.4%	4.7%	5.1%	3.7%	12.6%	10.2%	9.6%	6.5%	9.6%	5.7%
Energy	18.0%	28.0%	25.7%	8.7%	20.2%	0.7%	-0.7%	-8.7%	-6.0%	-4.0%	-10.7%	-54.0%	-34.5%	-32.2%	-32.9%	3.2%	111.2%	73.1%	88.6%	51.5%	58.9%	60.8%
Financials	4.3%	8.2%	5.3%	4.8%	5.5%	4.7%	3.5%	4.2%	6.2%	4.6%	0.2%	-4.0%	-2.6%	-0.6%	-1.5%	9.3%	11.3%	10.7%	9.4%	5.5%	0.5%	-0.5%
Financials ex. BAC, C & JPM	3.7%	9.3%	5.6%	4.6%	5.6%	5.6%	3.6%	4.3%	6.4%	4.9%	-0.2%	-6.4%	-2.0%	0.2%	-1.8%	10.6%	16.2%	12.1%	10.3%	6.6%	1.0%	-1.6%
Health Care	7.4%	7.5%	7.2%	7.7%	6.5%	14.5%	14.7%	15.5%	13.1%	15.2%	9.2%	2.7%	10.3%	12.6%	9.9%	10.5%	20.0%	15.0%	13.4%	12.6%	14.5%	6.8%
Industrials	10.4%	9.6%	7.8%	4.8%	4.8%	5.0%	-0.3%	0.7%	2.0%	2.3%	-7.4%	-24.0%	-15.6%	-9.0%	-11.2%	-1.0%	28.8%	16.7%	13.5%	14.3%	12.8%	12.6%
Industrials ex. BA	6.4%	5.2%	3.8%	1.4%	7.6%	-2.1%	-12.1%	-20.9%	-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%	13.0%
Industrials ex. Defense	10.9%	9.5%	6.9%	3.9%	4.2%	3.6%	-1.1%	0.2%	1.4%	1.5%	-8.5%	-26.8%	-17.6%	-10.6%	-12.9%	-1.7%	32.3%	19.0%	15.5%	15.7%	14.8%	14.5%
Information Technology	14.4%	12.8%	12.2%	1.9%	9.5%	0.4%	-0.1%	2.1%	6.8%	2.7%	4.9%	6.0%	5.5%	11.7%	10.6%	22.6%	22.7%	19.3%	13.9%	15.4%	12.0%	7.4%
Materials	23.9%	27.7%	11.3%	15.2%	13.1%																	



DWS Investment GmbH S&P 500 Annual EPS Outlook

	2014A	2015A	2016A	2017A	2018A	2019A	2020A	2021A	y/y	Bottom-up Consensus (IBES)				DWS View				Normalized 2022	
										2022E	y/y	2023E	y/y	2022E	y/y	2023E	y/y	(\$)	% 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)	\$115.97	\$116.52	\$116.71	\$129.34	\$156.09	\$161.45	\$143.39	\$208.21	46.7%	\$228.67	9.8%	\$248.39	8.6%	\$225	7.5%	\$235	4.1%	\$225	100%
Sector (\$ bn)																			
Communication Services	65.7	75.5	88.1	100.4	125.8	133.4	137.7	189.4	37.6%	184.0	-2.9%	210.1	14.1%	187.0	-1.3%	203.5	8.8%	187.0	100%
Consumer Discretionary	64.5	75.3	83.9	88.1	103.8	102.0	79.6	134.9	69.3%	148.7	10.3%	180.8	21.6%	151.0	12.0%	161.5	7.0%	154.3	102%
<i>Automobiles</i>	9.6	15.4	16.0	15.5	14.1	11.5	10.3	22.1	114%	26.6	20.2%	29.3	10.3%	23.0	4.1%	25.0	8.7%		
<i>Internet & Direct Marketing Retail</i>	5.6	6.2	8.1	8.6	16.2	17.7	20.0	23.9	19.9%	21.1	-12.0%	32.9	56.0%	25.0	4.4%	27.5	10.0%		
<i>CD ex Auto & Internet Retail</i>	49.3	53.7	59.8	63.9	73.5	72.8	49.3	88.8	80.0%	101.1	13.8%	118.7	17.4%	103.0	16.0%	109.0	5.8%		
Consumer Staples	77.5	75.9	78.2	82.4	89.2	89.6	93.4	102.7	9.9%	106.7	3.9%	114.7	7.5%	105.8	3.0%	109.0	3.1%	105.8	100%
Energy	95.9	40.0	10.8	37.7	71.1	50.3	-5.7	79.2	1490%	173.0	118.4%	152.1	-12.1%	125.0	57.8%	100.0	-20.0%	101.0	81%
Financials	171.4	186.3	188.0	195.4	242.2	249.2	198.7	328.5	65.4%	288.1	-12.3%	327.8	13.8%	300.0	-8.7%	320.5	6.8%	300.0	100%
Health Care	137.9	153.1	158.1	172.3	189.4	207.5	227.4	294.3	29.4%	308.3	4.8%	308.4	0.0%	310.0	5.3%	320.7	3.5%	310.0	100%
Industrials	99.9	103.8	97.5	106.1	129.5	123.7	63.4	108.1	70.5%	145.8	34.9%	171.6	17.6%	140.5	30.0%	155.0	10.3%	150.9	107%
<i>Airlines</i>	10.9	17.6	13.3	10.9	11.5	13.2	-28.8	-14.2	50.5%	3.4	123.6%	9.3	177.8%	3.0	121.1%	6.0	100.0%		
Information Technology	177.1	184.3	193.9	228.7	266.8	265.0	297.5	380.7	28.0%	418.8	10.0%	471.7	12.6%	425.0	11.6%	452.5	6.5%	425.0	100%
Materials	24.6	23.7	22.5	28.3	35.2	33.6	31.9	58.2	82.3%	68.9	18.3%	64.5	-6.3%	63.0	8.2%	57.5	-8.7%	55.0	87%
Real Estate	23.1	26.3	29.2	31.6	34.6	36.2	35.6	42.2	18.4%	44.9	6.3%	47.8	6.5%	42.5	0.7%	44.0	3.5%	42.5	100%
Utilities	31.3	31.6	33.8	35.3	38.9	42.9	44.2	47.2	6.8%	48.2	2.1%	51.8	7.4%	48.5	2.7%	51.5	6.1%	48.5	100%
S&P 500 (\$ bn)	969.0	975.6	983.9	1106.4	1326.5	1333.4	1203.8	1765.5	46.7%	1935.4	9.6%	2101.2	8.6%	1898.3	7.5%	1975.6	4.1%	1879.9	99%
S&P ex. Energy (\$bn)	873.0	935.7	973.1	1068.7	1255.4	1283.1	1209.5	1686.3	39.4%	1762.4	4.5%	1949.2	10.6%	1773.3	5.2%	1875.6	5.8%	1778.9	100%
S&P ex. Tech (\$bn)	791.9	791.4	790.0	877.6	1059.7	1068.4	906.3	1384.8	52.8%	1516.7	9.5%	1629.6	7.4%	1473.3	6.4%	1523.1	3.4%	1454.9	99%
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
2021E	210	49	53	54	54
2022E	225	55	55	56	59
2023E	235	57	58	59	61

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 3/31/2022.

Source: Factset, DWS Investment GmbH as of 7/15/2022. Past performance may not be indicative of future results.

S&P 500 2022 and 2023 EPS outlook scenarios

<u>Current S&P EPS outlook</u>					<u>Increasing likelihood</u>					<u>Material possibility</u>						
Stalled growth or slight recession					Small recession 4Q22/1Q23					Medium US & EU recessions 2023						
4% CPI 2023, oil \$110/bbl, euro \$1.10					3-4% CPI 2023, oil \$100/bbl, euro \$1.05					<3% CPI, oil \$80/bbl, euro \$1.00						
	EPS year	qtrly	annualized	x18		EPS year	qtrly	annualized	x18		EPS year	qtrly	annualized	x18		
2022	225	55	220	3960	220	55	220	3960	217	55	220	3960	217	55	220	3960
		55	220	3960		56	224	4032		56	224	4032		56	224	4032
		56	224	4032		54	216	3888		53	212	3816		53	212	3816
		59	236	4248		55	220	3960		53	212	3816		53	212	3816
2023	235	57	228	4104	220	52	208	3744	213	50	200	3600	213	50	200	3600
		58	232	4176		54	216	3888		52	208	3744		52	208	3744
		59	236	4248		56	224	4032		54	216	3888		54	216	3888
		61	244	4392		58	232	4176		57	228	4104		57	228	4104

Source: DWS Investment GmbH as of 7/18/2022. Past performance may not be indicative of future results.

DWS Investment GmbH View: S&P 500 fair value by sector: Assuming a ~5.50% 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	2,900	15.5	187.0	100%	187.0	-8%	172.0	16%	5.50%	3,128	-5%	2,972	1.5%	3,180	17.0	10%
Consumer Disc.	3,602	23.9	151.0	102%	154.3	-8%	141.9	14%	5.50%	2,580	24%	3,200	1.0%	3,440	22.3	-4%
Automobiles	693	30.1	23.0	105%	24.2	-10%	21.7	23%	6.00%	362	50%	543	0.2%	591	24.5	-15%
Internet & Direct Marketing Retail	1,114	44.5	25.0	100%	25.0	-5%	23.8	1%	5.50%	432	125%	972	0.1%	1,054	42.1	-5%
CD ex Auto & Internet Retail	1,795	17.4	103.0	100%	103.0	-10%	92.7	18%	5.50%	1,685	0%	1,685	1.8%	1,798	17.5	0%
Consumer Staples	2,235	21.1	105.8	100%	105.8	-5%	100.5	14%	4.75%	2,115	-3%	2,052	2.5%	2,159	20.4	-3%
Energy	1,323	10.6	125.0	81%	101.0	-10%	90.9	18%	6.00%	1,515	-15%	1,288	4.2%	1,350	13.4	2%
Financials	3,568	11.9	300.0	100%	300.0	-8%	276.0		6.50%	4,246	-5%	4,034	2.1%	4,332	14.4	21%
Banks	1,232	9.5	130.0	100%	130.0	-8%	119.6		7.00%	1,709	-5%	1,623	3.4%	1,730	13.3	40%
Health Care	4,944	15.9	310.0	100%	310.0	-10%	279.0	10%	5.25%	5,314	0%	5,314	1.5%	5,670	18.3	15%
Industrials	2,554	18.2	140.5	107%	150.9	-8%	138.9	21%	5.50%	2,525	0%	2,525	1.5%	2,702	17.9	6%
Technology	8,887	20.9	425.0	100%	425.0	-5%	403.8	3%	5.50%	7,341	10%	8,075	1.0%	8,678	20.4	-2%
Materials	825	13.1	63.0	87%	55.0	-10%	49.5	18%	5.75%	860	-5%	817	2.1%	871	15.9	6%
Real Estate	871	20.5	42.5	100%	42.5	-7%	39.5	32%	4.50%	878	0%	878	3.1%	917	21.6	5%
Utilities	978	20.2	48.5	100%	48.5	-10%	43.7	65%	4.50%	970	0%	970	3.1%	1,013	20.9	4%
S&P 500 (\$ bn)	32,688		1898.3	99%	1879.9	-7.7%	1735.6		5.49%	31472.9	2.1%	32124.8	1.7%	34312.1		5%
S&P 500 Index (\$/sh)	3863	17.2	225.0	100%	225.0	-8.0%	207.0	12%	5.50%	3764	0.0%	3764	1.7%	4021	17.9	4%

	>5%
	between -5% and 5%
	<-5%

Source: IBES, DWS Investment GmbH as of 7/15/2022. 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 3/31/2022.

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 Model		S&P 500 Long-term EPS & DPS Growth		S&P 500 Cost of Equity & Fair Book Multiple	
DWS 2022E S&P 500 EPS	\$225.00	DWS 2022E S&P 500 DPS	\$68.00	DWS 2022E S&P 500 aggregate ROE	21.4%	Fair long-term nominal return on S&P 500 index	8.50%
		2022E dividend payout ratio	30%	2021E end S&P 500 book value per share	\$1,050	Components of estimated fair S&P 500 return:	
DWS "normal 2022E" S&P 500 EPS	\$225.00	DWS "normal 2022E" S&P 500 DPS	\$68.00	DWS "normal 2022E" S&P 500 aggregate ROE	19.7%	+ Long-term real risk free interest rate	0.50%
"Normal 2022E" EPS / 2022E EPS	100%	Normal dividend payout ratio	33%			+ Long-term fair S&P 500 equity risk premium*	5.00%
Accounting quality adjustment to pro forma EPS	-\$18.00	EPS directed to net share repurchases	\$39.00	S&P EPS retained for true reinvestment	48%	= Long-term real S&P 500 cost of equity	5.50%
		Normal share repurchase payout ratio	19%	Estimated ROE on reinvested S&P EPS	8.50%	+ Long-term inflation forecast	3.00%
Normal 2022E S&P 500 EPS fair to capitalize	\$207	Total payout of S&P 500 EPS	\$107.00	Economic margin (EM) or ROE-CoE	0.00%	= S&P 500 nominal cost of equity	8.50%
Key principle: steady-state value = normal EPS / real CoE		Total payout ratio of normal and quality adj. EPS	52%	Sources of long-term earnings growth:		* S&P 500 ERP usually 300-400bps, w/ real CoE @ 5% - 6.5%	
				+ Long-term inflation forecast	3.00%	Fair S&P 500 Market Value and Book Value Multiple	
S&P 500 EPS Capitalization Valuation		S&P 500 DPS Discount Model		+ Fair return on true reinvestment	2.66%	2021E end S&P 500 book value per share	\$1,050
Normal EPS / (real CoE - (EM/payout) - EM):		Normal DPS / (nominal CoE - DPS growth):		+ Value added return on true reinvestment	0.00%	Fair PB = Fair PE * normal aggregate ROE	3.58
S&P 500 intrinsic value at 2022 start	3764	S&P 500 intrinsic value at 2022 start	3764	= Long-term earnings growth	5.66%	Fair PE =(inc ROE-g)/(inc real ROE*(real CoE-real g))	18.2
S&P 500 intrinsic value at 2022 end	4016	S&P 500 intrinsic value at 2022 end	4016	+ Growth from net share repurchases	1.04%	Implied S&P 500 fair value of book at 2022 start	3764
Implied fair fwd PE in early 2022 on 2022E \$225 EPS	16.7	Implied fair forward yield on 2022E DPS of \$68.0	1.81%	= Long-term S&P 500 EPS/DPS growth	6.69%	Steady-state PB = normal agg. ROE / real CoE	3.58
Implied fair trailing PE at 2022 end on 2022E \$225 EPS	17.8	Implied fair trailing yield on 2022E DPS of \$68.0	1.69%	= Total long-term return at constant PE	8.50%	Confirmed by fair steady-state PE = 1 / real CoE	18.2
Normal EPS / (real CoE-value added EPS growth)	3764	DPS discount model using true DPS (all payout)	3764	Value added growth premium in fair value est.	0%	Normal 2022E economic profit per share	\$149.25

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

		Normal 2022E S&P 500 EPS				
		\$215	\$220	\$225	\$230	\$235
Real cost of equity	5.00%	4578	4720	4864	5009	5156
	5.25%	4163	4281	4399	4518	4637
	5.50%	3818	3917	4016	4114	4213
	5.75%	3526	3610	3694	3777	3861
	6.00%	3276	3349	3421	3492	3563

Source: DWS Investment Management GmbH

S&P 500 companies with 20%+ revenue exposure in Europe (table 1 of 2)

Ticker	Company Name	Sector	Industry	US	Foreign	Europe	UK	Asia	China	Japan	LatAm
BKNG	Booking Holdings, Inc.	Consumer Discretionary	Hotels Restaurants & Leisure	13.1%	86.9%	81.7%	0.3%	3.7%	1.9%	0.6%	0.5%
NEM	Newmont Corp.	Materials	Metals & Mining	0.5%	99.5%	73.9%	68.8%	19.9%	0.6%	3.2%	5.3%
PVH	PVH Corp.	Consumer Discretionary	Textiles Apparel & Luxury Goods	31.6%	68.4%	48.0%	3.0%	15.9%	3.6%	2.0%	0.4%
PM	Philip Morris International, Inc.	Consumer Staples	Tobacco	0.3%	99.7%	47.6%	5.7%	33.0%	2.7%	14.6%	4.2%
DXC	DXC Technology Co.	Information Technology	IT Services	29.4%	70.6%	45.6%	14.1%	20.4%	5.7%	1.8%	1.6%
SEDG	SolarEdge Technologies, Inc.	Information Technology	Semiconductors & Semiconductor	40.0%	60.0%	45.4%	4.7%	10.3%	5.2%	1.6%	1.4%
WST	West Pharmaceutical Service	Health Care	Life Sciences Tools & Services	42.3%	57.7%	45.1%	2.4%	8.9%	4.5%	1.4%	1.2%
MCD	McDonald's Corp.	Consumer Discretionary	Hotels Restaurants & Leisure	38.2%	61.8%	44.7%	8.1%	10.0%	3.1%	1.0%	0.8%
LKQ	LKQ Corp.	Consumer Discretionary	Distributors	50.6%	49.4%	43.3%	12.6%	3.4%	0.0%	0.0%	1.1%
CCL	Carnival Corp.	Consumer Discretionary	Hotels Restaurants & Leisure	47.7%	52.3%	42.5%	4.9%	0.9%	0.2%	0.2%	0.2%
ALGN	Align Technology, Inc.	Health Care	Health Care Equipment & Supplies	43.6%	56.4%	40.7%	0.9%	11.7%	7.0%	1.5%	1.3%
PTC	PTC, Inc.	Information Technology	Software	41.0%	59.0%	40.0%	3.9%	17.6%	4.1%	3.4%	0.9%
MDLZ	Mondelez International, Inc.	Consumer Staples	Food Products	24.9%	75.1%	38.8%	3.6%	14.7%	3.9%	2.0%	9.7%
MRNA	Moderna, Inc.	Health Care	Biotechnology	33.4%	66.6%	37.1%	4.3%	20.9%	10.5%	3.3%	3.0%
CE	Celanese Corp.	Materials	Chemicals	23.5%	76.5%	37.0%	0.2%	33.9%	19.0%	0.3%	4.0%
EBAY	eBay, Inc.	Consumer Discretionary	Internet & Direct Marketing Retail	48.4%	51.6%	35.7%	18.4%	11.2%	5.6%	1.8%	1.6%
VRTX	Vertex, Inc.	Health Care	Pharmaceuticals	23.4%	76.6%	35.4%	5.0%	30.1%	11.6%	8.5%	1.4%
BWA	BorgWarner, Inc.	Consumer Discretionary	Auto Components	16.8%	83.2%	35.1%	5.5%	34.0%	23.7%	1.0%	12.4%
BIIB	Biogen, Inc.	Health Care	Biotechnology	53.1%	46.9%	34.6%	3.9%	6.6%	1.5%	1.3%	1.9%
TEL	TE Connectivity Ltd.	Information Technology	Electronic Equipment Instruments	24.2%	75.8%	34.0%	1.2%	36.0%	22.5%	2.5%	2.2%
EPAM	EPAM Systems, Inc.	Information Technology	IT Services	56.6%	43.4%	33.5%	12.6%	5.0%	1.8%	1.0%	0.9%
MSCI	MSCI, Inc.	Financials	Capital Markets	41.0%	59.0%	33.4%	16.9%	15.7%	4.1%	4.5%	3.0%
ACN	Accenture Plc	Information Technology	IT Services	45.0%	55.0%	33.1%	1.6%	9.1%	1.7%	1.1%	3.8%
CTLT	Catalent, Inc.	Health Care	Pharmaceuticals	60.2%	39.8%	32.8%	3.8%	5.0%	2.5%	0.8%	0.6%
COO	The Cooper Cos., Inc.	Health Care	Health Care Equipment & Supplies	45.8%	54.2%	32.8%	3.8%	15.1%	7.6%	2.4%	2.1%
NCLH	Norwegian Cruise Line Holdings Ltd.	Consumer Discretionary	Hotels Restaurants & Leisure	57.0%	43.0%	32.7%	3.8%	1.0%	0.2%	0.2%	0.3%
BIO	Bio-Rad Laboratories, Inc.	Health Care	Life Sciences Tools & Services	38.7%	61.3%	32.4%	3.7%	23.6%	5.5%	4.5%	3.8%
MMC	Marsh & McLennan Cos., Inc.	Financials	Insurance	47.0%	53.0%	31.9%	15.7%	13.2%	2.1%	1.2%	2.7%
MHK	Mohawk Industries, Inc.	Consumer Discretionary	Household Durables	55.2%	44.8%	31.9%	3.6%	8.6%	3.5%	1.7%	1.5%
ADM	Archer-Daniels-Midland Co.	Consumer Staples	Food Products	41.5%	58.5%	31.7%	2.2%	8.5%	2.2%	1.6%	14.5%
ETSY	Etsy, Inc.	Consumer Discretionary	Internet & Direct Marketing Retail	59.8%	40.2%	31.7%	14.1%	3.9%	0.0%	0.0%	0.0%
BLK	BlackRock, Inc.	Financials	Capital Markets	49.3%	50.7%	31.5%	13.8%	4.5%	0.2%	3.1%	10.6%
TRMB	Trimble, Inc.	Information Technology	Electronic Equipment Instruments	50.3%	49.7%	30.7%	3.2%	12.2%	4.8%	1.8%	2.4%
WTW	Willis Towers Watson Plc	Financials	Insurance	51.4%	48.6%	30.7%	18.1%	9.6%	1.9%	1.4%	2.9%
FCX	Freeport-McMoRan, Inc.	Materials	Metals & Mining	31.4%	68.6%	30.4%	2.9%	32.9%	4.6%	10.4%	2.4%
AON	Aon Plc	Financials	Insurance	44.8%	55.2%	30.3%	13.8%	10.9%	2.5%	2.1%	6.0%
AVY	Avery Dennison Corp.	Materials	Containers & Packaging	24.6%	75.4%	30.2%	3.5%	34.7%	26.2%	2.1%	6.3%
ZBRA	Zebra Technologies Corp.	Information Technology	Electronic Equipment Instruments	49.5%	50.5%	29.9%	2.2%	9.6%	2.2%	1.8%	5.1%
AMGN	Amgen, Inc.	Health Care	Biotechnology	70.0%	30.0%	29.5%	3.4%	0.0%	0.0%	0.0%	0.0%
OMC	Omnicom Group, Inc.	Communication Services	Media	50.7%	49.3%	29.5%	10.6%	12.6%	7.3%	2.3%	2.2%
CRL	Charles River Laboratories International, Inc.	Health Care	Life Sciences Tools & Services	54.6%	45.4%	29.3%	3.4%	6.3%	3.7%	1.2%	0.2%
EL	The Estée Lauder Companies Inc.	Consumer Staples	Personal Products	20.2%	79.8%	29.0%	2.8%	35.2%	35.2%	0.0%	1.9%
XYL	Xylem, Inc.	Industrials	Machinery	43.9%	56.1%	29.0%	4.3%	21.3%	8.3%	6.2%	2.3%
LIN	Linde Plc	Materials	Chemicals	29.6%	70.4%	28.8%	6.7%	25.4%	8.3%	4.6%	8.6%
DHR	Danaher Corp.	Health Care	Life Sciences Tools & Services	39.5%	60.5%	28.7%	4.6%	19.2%	13.5%	0.6%	3.9%
MTD	Mettler-Toledo International Inc.	Health Care	Life Sciences Tools & Services	32.7%	67.3%	28.6%	2.4%	28.6%	20.3%	1.5%	3.9%
ICE	Intercontinental Exchange, Inc.	Financials	Capital Markets	67.6%	32.4%	28.6%	4.4%	0.5%	0.0%	0.0%	0.0%
TMO	Thermo Fisher Scientific, Inc.	Health Care	Life Sciences Tools & Services	48.2%	51.8%	28.4%	1.7%	18.4%	8.8%	1.7%	1.2%
IQV	IQVIA Holdings, Inc.	Health Care	Life Sciences Tools & Services	34.0%	66.0%	28.4%	0.0%	19.2%	4.5%	3.7%	11.0%
AMCR	Amcor Plc	Materials	Containers & Packaging	43.3%	56.7%	28.4%	4.2%	12.3%	7.6%	0.0%	11.0%
WAT	Waters Corp.	Health Care	Life Sciences Tools & Services	27.8%	72.2%	28.2%	3.3%	38.6%	18.7%	6.6%	3.9%
CARR	Carrier Global Corp.	Industrials	Building Products	50.9%	49.1%	28.0%	3.2%	16.8%	3.9%	3.2%	1.4%
XRAY	Dentsply Sirona, Inc.	Health Care	Health Care Equipment & Supplies	35.1%	64.9%	27.9%	2.6%	25.4%	11.4%	4.5%	4.0%
MTCH	Match Group, Inc.	Communication Services	Interactive Media & Services	45.7%	54.3%	27.5%	3.2%	16.3%	8.3%	2.6%	3.6%
OGN	Organon & Co.	Health Care	Pharmaceuticals	21.9%	78.1%	27.2%	3.4%	33.4%	24.2%	3.0%	4.7%
PCAR	PACCAR, Inc.	Industrials	Machinery	52.7%	47.3%	26.9%	3.1%	14.5%	7.3%	2.3%	2.0%
ADSK	Autodesk, Inc.	Information Technology	Software	33.2%	66.8%	26.8%	2.6%	21.0%	4.9%	4.0%	5.0%
LYB	LyondellBasell Industries NV	Materials	Chemicals	48.8%	51.2%	26.8%	1.7%	14.2%	5.0%	3.1%	5.3%
A	Agilent Technologies, Inc.	Health Care	Life Sciences Tools & Services	34.2%	65.8%	26.7%	3.1%	35.2%	20.1%	4.8%	2.7%
XOM	Exxon Mobil Corp.	Energy	Oil Gas & Consumable Fuels	37.7%	62.3%	26.6%	5.3%	19.2%	2.5%	2.0%	3.4%
FTNT	Fortinet, Inc.	Information Technology	Software	30.1%	69.9%	26.4%	2.5%	21.2%	4.9%	4.0%	7.5%
ATVI	Activision Blizzard, Inc.	Communication Services	Entertainment	49.0%	51.0%	26.4%	11.0%	12.2%	2.8%	2.3%	5.0%
ABT	Abbott Laboratories	Health Care	Health Care Equipment & Supplies	38.6%	61.4%	26.2%	2.9%	20.8%	5.6%	3.9%	4.5%
NDSN	Nordson Corp.	Industrials	Machinery	33.4%	66.6%	26.1%	2.9%	32.8%	5.3%	4.6%	5.3%

Source: Factset, DWS Investment GmbH as of 7/7/2022. Past performance may not be indicative of future results.

S&P 500 companies with 20%+ revenue exposure in Europe (table 2 of 2)

Ticker	Company Name	Sector	Industry	US	Foreign	Europe	UK	Asia	China	Japan	LatAm
FDS	FactSet Research Systems, Inc.	Financials	Capital Markets	59.8%	40.2%	26.1%	11.9%	9.8%	2.3%	1.9%	2.4%
VRTX	Vertex Pharmaceuticals, Inc.	Health Care	Biotechnology	69.8%	30.2%	26.1%	3.0%	2.9%	1.5%	0.5%	0.3%
BKR	Baker Hughes Co.	Energy	Energy Equipment & Services	21.9%	78.1%	25.9%	3.4%	36.9%	18.6%	5.9%	5.3%
GRMN	Garmin Ltd.	Consumer Discretionary	Household Durables	14.9%	85.1%	25.8%	2.5%	15.5%	3.6%	3.0%	24.7%
HPE	Hewlett Packard Enterprise	Information Technology	Technology Hardware Storage & F	31.9%	68.1%	25.7%	2.5%	24.4%	5.7%	4.7%	4.7%
HWM	Howmet Aerospace, Inc.	Industrials	Aerospace & Defense	51.1%	48.9%	25.4%	4.3%	12.2%	1.4%	6.4%	5.9%
PFE	Pfizer Inc.	Health Care	Pharmaceuticals	36.6%	63.4%	25.3%	3.6%	26.7%	9.1%	9.0%	3.7%
IEX	IDEX Corp.	Industrials	Machinery	48.4%	51.6%	25.3%	2.6%	18.5%	4.5%	3.8%	1.1%
WAB	Westinghouse Air Brake Technol	Industrials	Machinery	42.5%	57.5%	25.3%	3.8%	16.2%	2.9%	0.8%	6.7%
JNJ	Johnson & Johnson	Health Care	Pharmaceuticals	50.3%	49.7%	25.2%	2.9%	16.3%	3.5%	3.0%	4.3%
CTXS	Citrix Systems, Inc.	Information Technology	Software	50.3%	49.7%	24.3%	2.3%	9.7%	2.3%	1.9%	3.5%
NFLX	Netflix, Inc.	Communication Services	Entertainment	40.7%	59.3%	24.3%	2.9%	11.0%	0.3%	3.4%	12.0%
HPQ	HP, Inc.	Information Technology	Technology Hardware Storage & F	35.4%	64.6%	24.2%	2.3%	21.7%	5.0%	4.1%	5.7%
DOW	Dow, Inc.	Materials	Chemicals	32.9%	67.1%	24.2%	2.4%	20.7%	3.3%	2.4%	10.1%
APTIV	Aptiv Plc	Consumer Discretionary	Auto Components	33.3%	66.7%	24.1%	0.0%	30.9%	30.9%	0.0%	1.8%
SPGI	S&P Global, Inc.	Financials	Capital Markets	60.4%	39.6%	24.0%	2.8%	10.5%	2.5%	2.0%	1.7%
TFX	Teleflex, Inc.	Health Care	Health Care Equipment & Supplie	63.0%	37.0%	23.7%	2.7%	9.4%	2.2%	1.8%	1.3%
META	Meta Platforms, Inc.	Communication Services	Interactive Media & Services	41.0%	59.0%	23.6%	2.4%	22.7%	3.6%	2.4%	3.5%
PKI	PerkinElmer, Inc. (United Sta	Health Care	Life Sciences Tools & Services	40.4%	59.6%	23.5%	8.2%	25.7%	13.2%	4.0%	3.6%
OTIS	Otis Worldwide Corp.	Industrials	Machinery	25.9%	74.1%	23.5%	3.1%	36.8%	20.1%	5.3%	4.8%
IR	Ingersoll Rand, Inc.	Industrials	Machinery	38.6%	61.4%	23.3%	2.2%	22.3%	5.2%	4.3%	3.9%
BK	The Bank of New York Mello	Financials	Capital Markets	62.3%	37.7%	23.1%	15.1%	7.2%	1.7%	1.4%	3.3%
BMJ	Bristol Myers Squibb Co.	Health Care	Pharmaceuticals	63.0%	37.0%	23.0%	2.7%	8.6%	4.3%	1.4%	1.2%
EW	Edwards Lifesciences Corp.	Health Care	Health Care Equipment & Supplie	56.6%	43.4%	22.7%	2.6%	17.2%	4.2%	10.1%	1.2%
DOV	Dover Corp.	Industrials	Machinery	58.8%	41.2%	22.7%	2.6%	12.7%	3.7%	2.9%	2.4%
CRM	Salesforce, Inc.	Information Technology	Software	63.8%	36.2%	22.7%	3.8%	9.4%	5.5%	1.7%	2.5%
IFF	International Flavors & Fragr	Materials	Chemicals	27.5%	72.5%	22.7%	1.9%	23.4%	3.6%	2.2%	11.4%
ORCL	Oracle Corp.	Information Technology	Software	47.7%	52.3%	22.6%	5.5%	15.9%	3.0%	4.4%	4.9%
MA	Mastercard, Inc.	Information Technology	IT Services	32.0%	68.0%	22.5%	3.0%	32.2%	16.2%	5.1%	4.6%
EQIX	Equinix, Inc.	Real Estate	Equity Real Estate Investment Tru	39.2%	60.8%	22.5%	2.1%	22.0%	5.1%	4.2%	4.5%
PPG	PPG Industries, Inc.	Materials	Chemicals	36.7%	63.3%	22.4%	2.1%	17.7%	4.1%	3.4%	10.1%
RL	Ralph Lauren Corp.	Consumer Discretionary	Textiles Apparel & Luxury Goods	48.9%	51.1%	22.4%	2.4%	20.7%	4.8%	4.0%	1.4%
ANSS	ANSYS, Inc.	Information Technology	Software	45.5%	54.5%	22.3%	0.9%	23.6%	5.1%	10.1%	1.4%
ECL	Ecolab, Inc.	Materials	Chemicals	51.7%	48.3%	22.3%	2.4%	14.8%	3.3%	2.1%	5.9%
J	Jacobs Engineering Group, Inc.	Industrials	Professional Services	68.6%	31.4%	22.3%	2.6%	5.9%	0.5%	0.2%	0.0%
BF.B	Brown-Forman Corp.	Consumer Staples	Beverages	51.2%	48.8%	22.2%	6.0%	12.4%	4.2%	0.0%	8.6%
CBRE	CBRE Group, Inc.	Real Estate	Real Estate Management & Devel	56.6%	43.4%	22.2%	13.0%	15.0%	7.6%	2.4%	2.1%
APD	Air Products & Chemicals, Inc.	Materials	Chemicals	37.7%	62.3%	22.1%	5.7%	29.0%	17.7%	0.0%	5.5%
ETN	Eaton Corp. Plc	Industrials	Electrical Equipment	55.4%	44.6%	21.8%	2.5%	12.9%	3.6%	2.3%	5.9%
ADI	Analog Devices, Inc.	Information Technology	Semiconductors & Semiconductor	32.7%	67.3%	21.8%	0.0%	45.0%	22.1%	10.8%	0.2%
NTAP	NetApp, Inc.	Information Technology	Technology Hardware Storage & F	48.1%	51.9%	21.7%	2.1%	13.9%	3.2%	2.7%	4.7%
TDY	Teledyne Technologies, Inc.	Information Technology	Electronic Equipment Instruments	63.5%	36.5%	21.6%	6.2%	3.6%	1.8%	0.6%	0.5%
MDT	Medtronic Plc	Health Care	Health Care Equipment & Supplie	50.9%	49.1%	21.5%	3.5%	20.8%	8.1%	6.0%	2.3%
SWK	Stanley Black & Decker, Inc.	Industrials	Machinery	60.0%	40.0%	21.4%	2.5%	8.6%	3.0%	1.4%	5.3%
SLB	Schlumberger NV	Energy	Energy Equipment & Services	14.8%	85.2%	21.4%	2.2%	27.2%	5.0%	4.1%	19.4%
HOLX	Hologic, Inc.	Health Care	Health Care Equipment & Supplie	69.3%	30.7%	21.3%	6.4%	6.5%	4.6%	1.5%	1.1%
GOOGL	Alphabet, Inc.	Communication Services	Interactive Media & Services	45.7%	54.3%	21.3%	2.0%	17.9%	4.2%	3.4%	4.0%
GOOG	Alphabet, Inc.	Communication Services	Interactive Media & Services	45.7%	54.3%	21.3%	2.0%	17.9%	4.2%	3.4%	4.0%
AME	AMETEK, Inc.	Industrials	Electrical Equipment	50.5%	49.5%	21.2%	3.9%	22.8%	4.8%	3.6%	1.9%
KO	The Coca-Cola Co.	Consumer Staples	Beverages	35.2%	64.8%	21.2%	2.0%	19.9%	4.2%	3.8%	13.1%
PSX	Phillips 66	Energy	Oil Gas & Consumable Fuels	78.9%	21.1%	21.1%	10.0%	0.0%	0.0%	0.0%	0.0%
IBM	International Business Mach	Information Technology	IT Services	39.9%	60.1%	21.1%	2.0%	20.2%	6.2%	9.8%	6.8%
MAS	Masco Corp.	Industrials	Building Products	76.3%	23.7%	20.9%	2.3%	0.0%	0.0%	0.0%	0.0%
MCO	Moody's Corp.	Financials	Capital Markets	54.9%	45.1%	20.8%	2.0%	9.6%	2.2%	1.8%	3.9%
TECH	Bio-Techne Corp.	Health Care	Life Sciences Tools & Services	53.9%	46.1%	20.7%	4.4%	16.8%	9.4%	2.4%	2.0%
SEE	Sealed Air Corp.	Materials	Containers & Packaging	52.9%	47.1%	20.6%	2.9%	14.7%	7.9%	2.5%	6.6%
MCHP	Microchip Technology, Inc.	Information Technology	Semiconductors & Semiconductor	5.4%	94.6%	20.4%	2.4%	55.3%	12.2%	5.1%	14.4%
PH	Parker-Hannifin Corp.	Industrials	Machinery	55.5%	44.5%	20.3%	2.4%	15.4%	3.6%	2.9%	4.0%
PYPL	PayPal Holdings, Inc.	Information Technology	IT Services	54.0%	46.0%	20.3%	9.2%	18.2%	9.2%	2.9%	2.6%
GE	General Electric Co.	Industrials	Industrial Conglomerates	44.3%	55.7%	20.1%	2.3%	20.0%	9.1%	4.6%	4.3%
DE	Deere & Co.	Industrials	Machinery	51.8%	48.2%	20.1%	2.3%	8.5%	4.6%	1.4%	10.2%
ON	ON Semiconductor Corp.	Information Technology	Semiconductors & Semiconductor	13.8%	86.2%	20.1%	16.7%	63.8%	29.9%	0.9%	0.7%
S&P 500				59.8%	40.2%	14.1%	2.4%	17.5%	7.3%	3.0%	3.3%

Source: Factset, DWS Investment GmbH as of 7/7/2022. Past performance may not be indicative of future results.

Top 50 S&P 500 companies with the highest revenue exposure in China

Ticker	Company Name	Sector	Industry	US	Foreign	Europe	Asia	China	Japan	LatAm
LVS	Las Vegas Sands Corp.	Consumer Discretionary	Hotels Restaurants & Leisure	0.0%	100.0%	0.0%	100.0%	67.9%	0.0%	0.0%
QCOM	QUALCOMM, Inc.	Information Technology	Semiconductors & Semiconductor	4.2%	95.8%	11.6%	78.0%	67.1%	1.9%	1.6%
MPWR	Monolithic Power Systems, Inc.	Information Technology	Semiconductors & Semiconductor	3.0%	97.0%	7.1%	87.4%	58.0%	5.7%	0.0%
TXN	Texas Instruments Incorporated	Information Technology	Semiconductors & Semiconductor	10.4%	89.6%	10.6%	67.9%	54.5%	5.2%	1.8%
WDC	Western Digital Corp.	Information Technology	Technology Hardware Storage & F	22.4%	77.6%	12.5%	53.8%	47.1%	2.8%	2.6%
NXPI	NXP Semiconductors NV	Information Technology	Semiconductors & Semiconductor	8.7%	91.3%	14.9%	67.0%	42.6%	7.3%	2.6%
WYNN	Wynn Resorts Ltd.	Consumer Discretionary	Hotels Restaurants & Leisure	59.7%	40.3%	0.2%	40.1%	40.1%	0.0%	0.0%
AVGO	Broadcom, Inc.	Information Technology	Semiconductors & Semiconductor	19.3%	80.7%	8.5%	60.8%	35.5%	6.5%	2.1%
EL	The Estée Lauder Companies	Consumer Staples	Personal Products	20.2%	79.8%	29.0%	35.2%	35.2%	0.0%	1.9%
LRCX	Lam Research Corp.	Information Technology	Semiconductors & Semiconductor	4.6%	95.4%	3.2%	88.6%	35.1%	9.3%	0.0%
AMAT	Applied Materials, Inc.	Information Technology	Semiconductors & Semiconductor	8.8%	91.2%	4.8%	84.7%	32.7%	8.5%	0.0%
QRVO	Qorvo, Inc.	Information Technology	Semiconductors & Semiconductor	41.5%	58.5%	5.4%	53.1%	32.3%	4.8%	0.0%
GLW	Corning, Inc.	Information Technology	Electronic Equipment Instruments	32.1%	67.9%	9.8%	50.7%	31.8%	5.5%	1.2%
APTIV	Aptiv Plc	Consumer Discretionary	Auto Components	33.3%	66.7%	24.1%	30.9%	30.9%	0.0%	1.8%
ON	ON Semiconductor Corp.	Information Technology	Semiconductors & Semiconductor	13.8%	86.2%	20.1%	63.1%	29.9%	0.9%	0.7%
DPZ	Domino's Pizza, Inc.	Consumer Discretionary	Hotels Restaurants & Leisure	34.4%	65.6%	10.2%	46.1%	28.8%	9.1%	2.0%
CVX	Chevron Corp.	Energy	Oil Gas & Consumable Fuels	44.4%	55.6%	5.2%	33.4%	28.2%	0.0%	5.7%
APH	Amphenol Corp.	Information Technology	Electronic Equipment Instruments	29.0%	71.0%	18.7%	38.2%	28.0%	4.2%	3.8%
INTC	Intel Corp.	Information Technology	Semiconductors & Semiconductor	17.9%	82.1%	9.0%	66.3%	26.8%	2.1%	1.8%
KLAC	KLA Corp.	Information Technology	Semiconductors & Semiconductor	11.1%	88.9%	5.6%	81.6%	26.5%	9.2%	0.0%
NVDA	NVIDIA Corp.	Information Technology	Semiconductors & Semiconductor	16.2%	83.8%	11.3%	63.9%	26.4%	2.6%	2.3%
EXPD	Expeditors International of Virginia	Industrials	Air Freight & Logistics	26.3%	73.7%	13.7%	46.9%	26.3%	8.3%	1.2%
AVY	Avery Dennison Corp.	Materials	Containers & Packaging	24.6%	75.4%	30.2%	32.3%	26.2%	2.1%	6.3%
AOS	A. O. Smith Corp.	Industrials	Building Products	63.3%	36.7%	3.0%	26.2%	25.8%	0.0%	0.0%
TSLA	Tesla, Inc.	Consumer Discretionary	Automobiles	44.5%	55.5%	13.0%	32.8%	25.7%	2.9%	2.6%
AMD	Advanced Micro Devices, Inc.	Information Technology	Semiconductors & Semiconductor	28.3%	71.7%	7.6%	61.5%	24.9%	14.5%	0.6%
DD	DuPont de Nemours, Inc.	Materials	Chemicals	25.9%	74.1%	13.5%	40.5%	24.7%	1.8%	3.6%
OGN	Organon & Co.	Health Care	Pharmaceuticals	21.9%	78.1%	27.2%	31.3%	24.2%	3.0%	4.7%
BWA	BorgWarner, Inc.	Consumer Discretionary	Auto Components	16.8%	83.2%	35.1%	33.2%	23.7%	1.0%	12.4%
TEL	TE Connectivity Ltd.	Information Technology	Electronic Equipment Instruments	24.2%	75.8%	34.0%	32.0%	22.5%	2.5%	2.2%
ADI	Analog Devices, Inc.	Information Technology	Semiconductors & Semiconductor	32.7%	67.3%	21.8%	43.6%	22.1%	10.8%	0.2%
MTD	Mettler-Toledo International Inc.	Health Care	Life Sciences Tools & Services	32.7%	67.3%	28.6%	26.1%	20.3%	1.5%	3.9%
A	Agilent Technologies, Inc.	Health Care	Life Sciences Tools & Services	34.2%	65.8%	26.7%	31.7%	20.1%	4.8%	2.7%
OTIS	Otis Worldwide Corp.	Industrials	Machinery	25.9%	74.1%	23.5%	32.9%	20.1%	5.3%	4.8%
SWKS	Skyworks Solutions, Inc.	Information Technology	Semiconductors & Semiconductor	63.2%	36.8%	2.4%	33.1%	19.5%	0.3%	0.0%
CE	Celanese Corp.	Materials	Chemicals	23.5%	76.5%	37.0%	33.7%	19.0%	0.3%	4.0%
KEYS	Keysight Technologies, Inc.	Information Technology	Electronic Equipment Instruments	36.5%	63.5%	16.1%	37.8%	18.8%	7.9%	2.8%
WAT	Waters Corp.	Health Care	Life Sciences Tools & Services	27.8%	72.2%	28.2%	34.1%	18.7%	6.6%	3.9%
BKR	Baker Hughes Co.	Energy	Energy Equipment & Services	21.9%	78.1%	25.9%	32.7%	18.6%	5.9%	5.3%
TPR	Tapestry, Inc.	Consumer Discretionary	Textiles Apparel & Luxury Goods	58.6%	41.4%	4.2%	31.2%	18.2%	10.4%	0.0%
MU	Micron Technology, Inc.	Information Technology	Semiconductors & Semiconductor	43.9%	56.1%	1.9%	51.2%	18.2%	6.0%	0.3%
ALB	Albemarle Corp.	Materials	Chemicals	22.0%	78.0%	17.6%	47.2%	18.0%	14.0%	3.6%
AAPL	Apple, Inc.	Information Technology	Technology Hardware Storage & F	36.6%	63.4%	17.0%	32.2%	17.9%	7.8%	3.8%
NKE	NIKE, Inc.	Consumer Discretionary	Textiles Apparel & Luxury Goods	33.2%	66.8%	17.7%	25.6%	17.8%	3.2%	2.8%
APD	Air Products & Chemicals, Inc.	Materials	Chemicals	37.7%	62.3%	22.1%	29.0%	17.7%	0.0%	5.5%
TER	Teradyne, Inc.	Information Technology	Semiconductors & Semiconductor	10.6%	89.4%	7.0%	72.7%	17.1%	4.5%	0.3%
MA	Mastercard, Inc.	Information Technology	IT Services	32.0%	68.0%	22.5%	28.5%	16.2%	5.1%	4.6%
DHR	Danaher Corp.	Health Care	Life Sciences Tools & Services	39.5%	60.5%	28.7%	19.0%	13.5%	0.6%	3.9%
EA	Electronic Arts, Inc.	Communication Services	Entertainment	43.5%	56.5%	18.7%	23.7%	13.5%	4.3%	3.8%
SNPS	Synopsys, Inc.	Information Technology	Software	46.4%	53.6%	10.5%	31.0%	13.4%	3.6%	3.2%
S&P 500				59.8%	40.2%	14.1%	17.5%	7.3%	3.0%	3.3%

Source: Factset, DWS Investment GmbH as of 7/7/2022. Past performance may not be indicative of future results.

S&P 500 trailing PE by sector (table 1 of 2)

Date	S&P 500	Communication Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Information Technology	Materials	Real Estate	Utilities
Mar-95	14.9	13.5	13.8	16.9	19.7	10.1	17.0	15.3	18.3	17.2	N/A	11.6
Jun-95	15.6	13.9	14.1	17.9	18.4	10.8	18.1	15.6	20.1	15.5	N/A	12.4
Sep-95	16.0	16.2	15.1	18.5	17.2	12.2	19.8	15.8	18.6	13.2	N/A	12.7
Dec-95	16.3	16.4	16.3	19.6	17.6	12.3	21.8	16.5	16.4	11.7	N/A	13.3
Mar-96	16.5	15.1	17.1	20.0	18.1	12.7	21.8	17.1	17.3	13.5	N/A	12.6
Jun-96	16.9	15.4	17.6	21.1	18.0	12.2	21.8	17.2	19.2	13.8	N/A	12.9
Sep-96	17.1	13.5	16.9	21.1	17.1	12.6	22.3	18.1	21.0	16.1	N/A	12.2
Dec-96	18.2	15.1	17.3	22.0	17.8	13.8	22.5	18.8	23.7	18.2	N/A	12.7
Mar-97	17.9	15.0	17.3	22.3	17.5	13.8	22.6	18.1	22.1	18.1	N/A	12.1
Jun-97	20.4	17.0	18.7	25.6	19.4	15.9	27.5	21.0	25.5	20.3	N/A	12.5
Sep-97	21.4	18.3	20.0	24.7	21.0	17.3	26.7	21.5	28.7	20.8	N/A	13.0
Dec-97	21.5	22.1	20.9	26.2	19.2	18.2	28.7	20.9	24.3	19.4	N/A	15.3
Mar-98	23.6	25.0	23.6	27.7	20.0	19.4	32.7	23.2	29.0	21.1	N/A	16.1
Jun-98	24.2	24.8	24.6	27.9	20.8	19.4	33.7	22.0	32.2	20.5	N/A	16.2
Sep-98	21.8	24.8	21.1	22.9	22.4	15.0	32.3	19.0	31.5	18.5	N/A	16.8
Dec-98	27.5	33.5	28.9	28.7	28.9	18.9	35.9	22.7	42.1	20.3	N/A	17.4
Mar-99	27.7	32.2	30.5	25.4	29.6	19.2	36.1	22.5	44.6	20.8	N/A	15.2
Jun-99	28.4	34.8	29.8	25.3	33.1	19.1	33.1	24.7	46.6	24.8	N/A	16.6
Sep-99	25.7	29.7	26.0	21.8	31.3	15.3	28.6	23.1	46.8	22.2	N/A	15.5
Dec-99	29.0	32.8	29.7	22.8	30.4	16.0	28.1	25.3	62.6	23.8	N/A	14.3
Mar-00	28.3	30.4	27.7	18.3	27.2	15.8	27.4	24.1	65.3	19.0	N/A	14.6
Jun-00	26.7	26.2	24.6	20.3	23.8	14.8	33.5	22.5	55.8	13.8	N/A	15.0
Sep-00	25.7	26.1	22.3	20.3	20.5	17.9	32.4	24.1	46.3	12.4	N/A	19.2
Dec-00	23.4	21.9	22.7	23.9	16.6	18.2	35.2	24.1	30.3	15.9	N/A	19.6
Mar-01	20.7	22.1	25.4	21.1	14.9	16.2	28.8	21.1	24.3	16.0	N/A	17.4
Jun-01	22.8	23.6	30.2	20.7	16.1	17.4	27.9	23.9	33.5	19.9	N/A	15.5
Sep-01	20.8	27.2	25.4	21.0	13.2	15.6	28.2	20.3	31.2	22.0	N/A	12.3
Dec-01	24.7	24.6	34.2	20.9	14.1	18.0	27.6	25.3	57.1	33.4	N/A	12.1
Mar-02	24.3	21.0	32.4	22.1	17.4	18.1	26.7	24.0	50.7	35.6	11.4	12.2
Jun-02	20.6	17.9	25.7	21.0	17.6	15.7	21.9	20.0	41.0	31.9	11.3	10.2
Sep-02	17.0	13.2	19.8	17.6	16.3	12.8	19.9	17.2	29.8	22.0	9.5	8.5
Dec-02	18.3	15.7	20.0	17.6	19.2	13.2	20.6	18.5	37.7	25.5	9.4	10.0
Mar-03	17.6	13.5	23.6	16.0	17.6	12.6	20.1	16.6	33.1	22.9	9.4	9.9
Jun-03	19.6	16.4	24.8	19.4	16.7	14.3	21.6	19.0	34.9	25.8	10.3	12.5
Sep-03	19.1	14.4	23.1	19.3	14.7	13.9	20.0	20.0	35.6	27.1	11.4	13.0
Dec-03	20.4	16.5	23.9	20.5	14.8	14.5	21.3	22.9	37.0	31.6	12.4	14.4
Mar-04	19.7	17.5	22.6	21.1	15.2	14.6	20.4	21.6	31.9	26.8	13.3	14.8
Jun-04	18.9	17.0	20.9	20.5	14.8	13.4	20.3	22.1	29.2	22.9	12.6	14.1
Sep-04	17.5	18.8	19.5	18.8	14.0	12.9	18.7	20.9	24.5	20.0	13.8	14.9
Dec-04	18.2	18.1	21.5	19.8	12.6	13.7	19.3	21.9	25.5	18.8	16.3	16.7
Mar-05	17.2	16.2	19.8	19.3	14.1	12.6	18.7	20.7	22.5	17.6	14.0	16.9
Jun-05	16.9	16.3	19.7	18.7	13.4	12.7	19.2	19.0	22.2	14.9	15.5	17.7
Sep-05	16.6	15.6	19.4	18.9	13.1	12.4	18.9	17.9	22.5	14.7	16.7	18.3
Dec-05	16.4	15.3	19.8	18.5	10.9	13.6	18.8	18.3	21.9	15.7	17.1	16.2
Mar-06	16.5	16.3	19.1	18.6	11.2	13.8	18.6	18.7	22.5	16.3	18.9	15.0
Jun-06	15.7	15.4	18.2	18.8	11.0	13.0	17.2	17.8	20.6	14.7	18.4	15.5
Sep-06	15.9	15.9	18.7	19.3	10.0	13.3	18.5	17.3	21.9	13.4	19.6	16.1
Dec-06	16.2	16.3	20.6	19.5	10.7	13.2	18.5	17.6	22.6	14.1	21.5	17.1
Mar-07	15.9	16.3	20.4	19.2	11.1	12.6	18.0	17.1	21.5	15.0	21.0	17.3
Jun-07	16.5	17.2	20.9	18.7	12.4	12.6	18.0	18.2	23.2	16.4	18.3	16.8
Sep-07	16.4	17.1	19.7	19.2	13.2	12.0	17.4	18.6	23.7	16.9	17.7	16.9
Dec-07	16.5	16.3	18.7	19.5	13.5	12.8	16.7	17.2	22.6	16.7	13.6	17.9
Mar-08	15.2	13.7	18.0	18.4	12.0	13.6	14.3	15.9	18.3	15.7	13.8	15.6
Jun-08	14.6	13.1	16.9	16.7	12.7	12.7	13.9	14.0	18.0	15.7	12.8	16.4
Sep-08	13.9	11.1	19.8	16.8	8.7	20.0	13.6	12.5	15.4	11.7	13.3	13.2
Dec-08	12.3	11.3	23.4	13.8	7.1	46.6	11.7	10.1	11.9	9.5	8.3	11.8

Source: Factset, DWS Investment GmbH as of 6/30/2022. Past performance may not be indicative of future results.

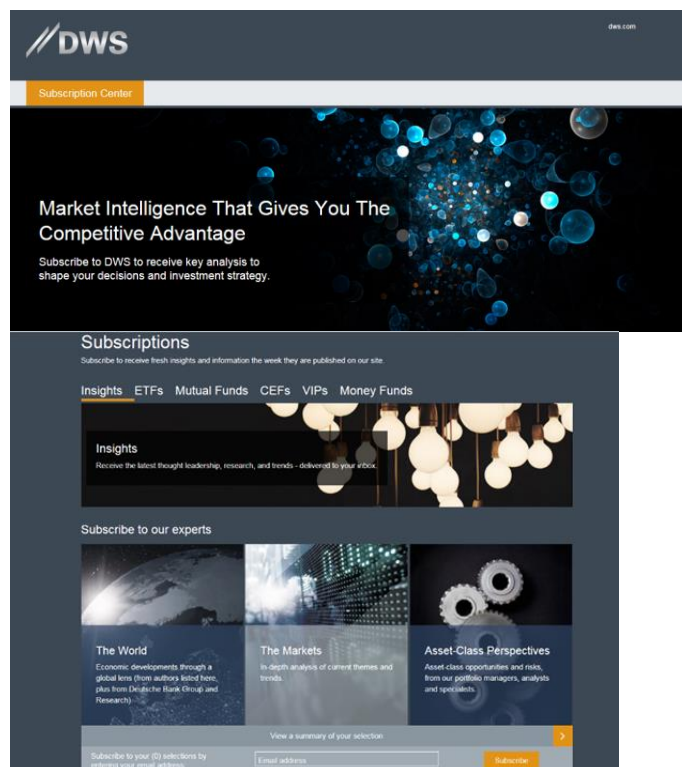
S&P 500 trailing PE by sector (table 2 of 2)

Date	S&P 500	Communication Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Information Technology	Materials	Real Estate	Utilities
Mar-09	12.6	11.0	28.3	12.2	7.4	-69.7	10.5	8.6	13.5	11.3	6.6	10.5
Jun-09	14.8	11.7	19.6	13.3	10.0	191.6	11.4	11.4	16.8	16.2	9.0	11.6
Sep-09	17.6	13.1	21.8	14.6	13.8	64.8	12.4	15.6	19.4	23.9	12.7	12.3
Dec-09	18.4	15.8	20.6	15.0	18.7	30.7	12.8	17.9	20.4	29.8	15.2	13.2
Mar-10	18.0	15.2	20.1	15.4	16.9	31.1	12.9	19.0	18.3	24.9	17.5	12.2
Jun-10	14.5	14.1	16.0	13.8	13.1	19.8	11.2	15.6	14.3	17.7	16.4	11.6
Sep-10	14.7	16.8	16.5	14.9	13.2	15.9	11.8	16.6	14.5	18.5	18.4	12.6
Dec-10	14.9	18.1	16.9	15.4	14.7	14.5	11.8	17.5	14.8	19.0	20.2	12.4
Mar-11	15.1	18.4	17.0	15.4	15.6	14.6	12.1	17.7	14.5	17.6	24.3	12.6
Jun-11	14.4	18.1	17.0	15.7	13.2	13.4	12.7	16.8	13.6	15.6	22.5	13.3
Sep-11	11.9	16.8	14.1	14.6	9.6	10.9	11.1	12.4	11.9	10.8	17.5	13.4
Dec-11	12.9	18.0	15.3	15.7	10.4	11.8	11.9	13.9	12.6	12.4	18.5	14.3
Mar-12	14.3	18.4	17.5	16.4	11.0	14.4	12.8	14.7	14.7	13.9	20.1	13.7
Jun-12	13.6	20.8	16.5	16.7	10.4	12.7	13.0	13.7	13.1	13.3	20.2	14.9
Sep-12	14.2	22.6	17.2	17.1	12.0	12.8	13.6	13.8	13.6	14.5	19.8	14.8
Dec-12	13.9	20.5	17.0	16.4	11.6	13.1	13.4	14.2	12.7	15.8	19.8	14.4
Mar-13	14.9	22.0	18.4	18.1	12.5	14.1	14.7	15.3	13.2	15.7	20.3	16.0
Jun-13	15.1	21.2	18.9	17.7	12.3	14.3	15.4	15.5	13.5	15.3	19.2	15.4
Sep-13	15.6	15.9	20.0	17.6	13.2	13.8	16.4	16.4	14.4	17.6	18.2	15.4
Dec-13	16.9	16.2	20.7	18.8	14.7	14.8	18.0	18.3	16.0	19.1	17.6	15.4
Mar-14	16.8	15.0	19.7	18.5	14.6	14.8	18.6	17.8	16.3	18.6	18.5	16.7
Jun-14	17.3	14.8	20.1	19.0	15.8	14.9	18.6	18.0	16.8	19.3	19.4	17.4
Sep-14	17.1	14.7	19.9	19.1	14.3	15.5	18.5	17.2	17.1	19.0	18.6	16.3
Dec-14	17.7	14.1	21.5	20.3	13.2	16.7	19.0	17.8	17.5	18.3	20.3	17.8
Mar-15	17.7	14.2	21.4	20.4	15.1	15.8	19.2	17.2	17.2	18.0	20.5	16.7
Jun-15	17.6	13.8	21.2	19.9	17.5	15.6	19.3	16.6	17.0	17.8	18.2	15.5
Sep-15	16.3	12.3	20.1	19.7	18.6	13.9	16.5	15.1	15.9	14.7	18.2	16.0
Dec-15	17.5	12.6	20.7	21.1	25.5	14.4	17.4	16.1	17.3	17.2	19.2	16.0
Mar-16	17.6	14.3	20.2	22.1	31.7	13.9	16.1	16.7	17.5	17.7	20.0	18.4
Jun-16	18.0	15.1	19.2	22.7	46.7	14.2	16.7	16.9	17.1	17.9	20.7	19.3
Sep-16	18.5	14.1	19.9	21.6	70.5	13.2	16.5	17.6	18.9	18.5	19.7	17.7
Dec-16	19.1	14.6	19.8	20.6	146.0	15.6	15.5	18.6	18.3	20.0	18.5	17.2
Mar-17	19.6	13.9	21.0	21.6	77.0	15.3	16.7	19.1	19.8	20.5	18.5	18.1
Jun-17	19.6	12.7	21.1	21.5	50.0	15.5	17.6	19.5	20.0	20.4	18.8	18.3
Sep-17	19.9	13.4	21.2	20.6	45.4	15.8	17.9	19.9	20.7	22.9	18.7	18.5
Dec-17	20.6	13.5	23.0	21.4	35.6	17.4	17.7	21.3	21.1	22.4	19.1	18.2
Mar-18	19.2	11.7	22.5	19.1	28.2	16.0	16.7	19.8	20.4	19.0	17.8	17.1
Jun-18	18.7	11.0	23.2	18.6	25.5	14.4	16.6	18.1	20.5	17.9	18.5	17.3
Sep-18	19.0	11.3	24.5	19.0	22.3	13.9	18.3	18.8	21.2	16.6	18.2	17.2
Dec-18	15.7	16.6	20.0	17.6	14.6	11.4	15.9	15.0	16.1	14.5	17.1	17.0
Mar-19	17.6	18.5	22.5	19.4	17.2	12.2	16.7	16.9	19.4	15.8	19.8	19.5
Jun-19	18.2	19.0	23.2	20.0	17.0	12.9	16.5	17.4	20.5	17.5	20.0	19.7
Sep-19	18.4	19.3	23.3	21.0	17.3	12.8	15.7	18.0	21.0	18.5	21.3	21.2
Dec-19	20.1	20.9	25.0	21.5	21.3	14.0	17.5	19.2	23.8	20.8	21.0	20.9
Mar-20	15.9	16.8	19.9	18.4	11.5	9.4	14.8	14.2	20.4	15.2	16.8	17.5
Jun-20	21.9	22.4	37.9	20.3	30.7	13.1	17.5	21.4	27.1	21.4	19.7	17.8
Sep-20	24.7	24.8	46.1	22.0	54.8	14.8	17.8	29.7	29.4	24.7	20.5	18.9
Dec-20	27.4	26.5	48.8	22.4	-174.6	18.1	18.2	42.7	31.6	27.4	21.5	19.7
Mar-21	26.9	26.2	49.2	21.9	166.5	18.1	18.1	40.2	29.8	25.9	22.6	19.9
Jun-21	26.2	26.4	46.1	22.1	44.8	16.8	18.7	35.6	30.1	22.4	24.6	19.8
Sep-21	23.3	24.0	39.6	21.2	22.1	14.7	17.9	28.8	27.7	17.6	23.6	19.7
Dec-21	23.4	22.0	40.8	23.2	14.0	13.4	18.5	28.2	30.9	17.7	26.2	21.4
Mar-22	21.5	18.9	34.5	22.5	16.1	13.5	17.3	25.7	27.2	16.9	23.8	22.0
Jun-22	17.5	15.2	25.9	21.2	10.9	11.3	16.1	19.9	21.0	13.2	19.4	20.6
Average	18.7	18.1	22.7	19.7	16.8	14.9	19.5	19.3	24.5	18.7	17.5	15.6

Source: Factset, DWS Investment GmbH as of 6/17/2022. Past performance may not be indicative of future results.

Contact Information

David Bianco 212 454-8527, david.bianco@dws.com
Ju Wang 212 454-8572, ju.wang@dws.com



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