

What interest rate will bring fiscal discipline to Washington?



David Bianco Americas Chief Investment Officer

10yr Treasury bond yields are at 15yr highs. The deficit could push them higher

Provided inflation doesn't reaccelerate and the Fed doesn't cut interest rates for about a year, we think 10yr Treasury yields are unlikely to climb higher than the current 4.65%. DWS expects 10yr yields to fall to 4.2% by Sept 2024, as economic growth slows to a crawl and unemployment climbs by near half a percent. But absent such economic softening and/or monetary policy discipline, 10yr Treasury yields might be settling into a roughly 4.5% or higher mid-cycle norm. We view the firmness in 10yr yields at 4.5%+ despite the dip in stocks as an indication that the September climb in yields is secular and mostly related to a higher real interest rate seen as required to keep inflation close to a 2% long-term target.

Fixed income markets now appear to expect long-term inflation of nearly 2.5% and a 3.5% neutral nominal Fed Funds rate (r*=1%), while demanding an about 1% 10yr term premium to account for greater expected inflation and r* uncertainty. This is a big shift in expectations and risk premiums since 2007, but in-line with 1990-2007 norms. While inflation is coming down, it's still uncertain if it will be ≥3% like 1960-1990 or ≤3% like 1990-2020. The Fed has tools to achieve the latter and is sticking to that objective, but the real rate required to achieve low inflation is uncertain. The Fed will look to longer-term bond yields for guidance.

Treasury yields may be affected by fiscal conditions and thus overnight rates too In addition to heightened uncertainty about the real interest rate required to achieve a 2.0% inflation target for the rest of this decade, against today's US and global macroeconomic supply-side (productivity) and demand-side (change in savings) conditions, the US deficit and debt/GDP are well above 1990-2020 or peacetime norms. If the deficit as a % of GDP remains above the real GDP growth rate plus the 2% inflation target, thus causing debt to GDP to climb further or inflation to exceed target, then it's likely that 10yr Treasury yields will climb to about 5% in 2024, absent a recession, in our opinion.

If 10yr Treasury yields climb to 5%, we think it very unlikely the Fed cuts below 4% in 2024 or 2025 outside a recession. The Fed won't discipline fiscal policy, it takes whatever fiscal choices Congress makes. However, the longer-term bond market will discipline Congress. And if 10yr Treasury yields settle into higher new normal levels for fiscal or other reasons, then so does the neutral overnight rate, at probably roughly 100bp lower, which is a fairly normal term premium. This is because the Fed evaluates whether its overnight rate is restrictive or accommodative in part by comparing it to market set longer-term yields.

R^ or "R hat": An uncertain addition to R* that considers longer-term fiscal risks

We call the interaction between an uncertain R* and 10yr Treasury yields that are settling into a new normal mid-cycle range with consideration of longer-term fiscal risks R^. For Treasury bonds, longer-term fiscal risk is longer-term inflation risk. The US Treasury wouldn't rationally default, but the risks of emergency circumstances pressuring the Fed to monetize debt or raise its inflation target, or tolerate inflation above target, to accommodate fiscal policy from having to make politically unpalatable choices are risks around any inflation expectation and its accompanying expected R*. R^ is this fiscal uncertainty to R*. Note: In statistics, a circumflex (*), called a "hat", is used to denote an estimated value. In the context of errors and residuals, the "hat" over the letter indicates an observable estimate (the residuals) of unknown quantities or statistical errors.

What 10yr Treasury yield causes fiscal policy makers to correct course?

Saturday night, Congress passed a continuing resolution to fund the federal government for 45 days ending November 17th. While this averted a government shutdown, we think the ongoing battle to pass a full fiscal year budget will keep the bond market's attention on the fiscal challenges that lie ahead. We do not expect a budget with significant reductions to emerge over the next 45 days, however we think the negotiations will surface some of the difficult issues that are likely to become of greater policy, political and electorate importance as we enter a general election year. It might be that the bond market needs to demand the attention of these often disinterested groups with a 5% 10yr yield. At that rate, we think the high deficit and debt/GDP levels will become a key election year topic.

The S&P PE is very heavy at current Treasury yields: A fair PE is now under 20 As usual, inside we include our intrinsic valuation models for the S&P 500 and its sectors. If we assume 1.6% 10yr TIPS yield (now 2.25%) and a 400bp ERP, then the fair steadystate trailing S&P PE is near 18, which supports a fair S&P value of near 4000 at 2023 end. We find a 5-10% premium to steady-state fair value for long-term economic profit growth to be reasonable for the S&P 500, but 10% or more is difficult to justify. If we raise our 10yr TIPS yield assumption to 2.0%, the fair steady-state PE drops to a bit under 17. Moreover, such higher real yields will likely weigh on economic profit growth potential.

Contributor: Ju Wang, Portfolio Manager Equity

Global Equi	ty Index Fo	recasts: 12-mo	onths								
Index	Sep 2024F	NTM EPS Growth	Target PE								
S&P 500	4,500	4.8%	19.4								
EuroStoxx 50	4,350	3.3%	12.0								
Stoxx 600	470	3.3%	12.8								
MSCI Japan	1,500	5.1%	15.3								
MSCI Asia xJ	655	6.1%	14.7								
MSCI EM	1,010	3.3%	13.4								
S&P	S&P 500 Outlook at Yearend										

S&P 500 C	Outlook at	t Yearend	
	2021	2022	2023F
S&P 500	4766	3840	4100
Dividend Yield	1.3%	1.75%	1.7%
S&P EPS	\$210	\$222	\$220
Trailing PE	22.7	17.3	18.6
DPS	\$61	\$67	\$70

Next 5%+ Price Move

(Up / Balanced Risk / Down)

Risk of near-term 10%+ correction

(Low / Moderate / High)

Taxable U.S. In	vestor Asset All	locations
Asset Class	Long-term	Current
Fixed Income/Cash	30-35%	36%
Equities	55-60%	53.5%
US Equities	40%	33.5%
S&P 500	35%	33%
Small Caps	0-10%	1.5%
Foreign DM	10-15%	11%
Foreign EM	0-10%	8%
Alternatives	10%	10.5%

Key C	CIO Views	
Macro signal:	Oct 2023	Sep 2024F
U.S. Fed Funds rate	5.25%- 5.50%	4.75%-5.00%
10yr Treasury yield	4.60%	4.20%
US IG Corp Spreads	110bp	95bp
US High Yield Spreads	375bp	450bp
Crude Oil (WTI) \$/bbl	91	88
EUR / USD FX rate	1.07	1.12

	GDP	Forecasts	
Region	2022	2023F	2024F
US	2.1%	2.0%	0.4%
World	3.4%	2.9%	2.7%
Euro area	3.4%	0.8%	0.9%
China	3.0%	4.8%	4.5%
Japan	1.0%	2.1%	1.1%

^{*} Q4/Q4 GDP growth.

EPS = Earnings Per Share GDP = Gross Domestic Product

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 10/2/2023 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

New		Market	Allocated	Sector	2022 PE	2023	2024	Overweight	2022	2023	2024	Equal weight	2022	2023	2024	Underweight	2022	2023	2024
System 10.5% Communication 223 18.5 16.9 Description 223 18.5 16.9 Description 234		13.4%	18.0%	Health Care	15.8	18.2	16.7					Health Care Providers & Services	15.9	15.0	14.2	Life Sciences Tools & Services	23.0	25.9	24.7
8.9% 1.0.5% Communication 22.3 13.5 15.0 Diversing Processor 50.2 20.3 51.2 20.3 20	weight																	Ì	ļ
## 4.7% 5.5% Energy 8.7 12.4 11.3 Energy Explanant & Services 30.5 23.0 23.0 23.1 ## 4.7% 5.5% Energy 8.7 12.4 11.3 Energy Explanant & Services 30.5 23.0 20.1 ## 5.83% 9.2% Industrials 21.3 18.7 17.2 Minorage & Defense 24.1 22.8 30.6 30.5 23.0 30.1 ## Flactrical Equipment 24.1 22.8 20.6 30.5 23.0 30.6 22.4 30.6 30.6 22.4 30.6 30.6 22.4 30.6 30.6 22.4 30.6 30.6 22.4 30.6 30.6 22.4 30.6 30		0.00/	40.00/	Camananinatian	22.2	10 E	16.0					Wireless Telesemmunication Convi	60.0	10.2	17.0	Modio	11.0	12.4	12.2
Internative Media & Services 3.05 23.0		8.9%			22.3	18.5	16.9					wireless relecommunication Servi	68.0	19.3	17.0	liviedia	11.8	12.4	12.2
Say 1.00 1				Services														Ì	İ
Passenger Airlines		4.7%	5.9%	Energy	8.7	12.4	11.8	Energy Equipment & Services	25.9	18.1	15.4	Oil Gas & Consumable Fuels	8.2	12.0	11.6	5			
Electrical Equipment 24.1 22.8 20.6 Commercial Services & Supplies 29.1 25.9 2 2 2 2 2 2 2 2 2		8.3%	9.2%	Industrials	21.3	18.7	17.8	Aerospace & Defense	30.4	21.9	18.4	Construction & Engineering	29.5	26.6	22.2	Air Freight & Logistics	13.2	17.1	15.7
Ground Transportation 17.9 19.6 18.2								Passenger Airlines	15.1	5.7	5.8	Industrial Conglomerates	20.6	22.1	19.3	Building Products	21.1	18.9	17.8
Professional Services 28.4 28.0 2.								Electrical Equipment	24.1	22.8	20.6					Commercial Services & Supplies	29.1	25.9	23.9
Consumer Staples Consume								Ground Transportation	17.9	19.6	18.2					Machinery	19.1	15.4	16.8
Consumer Staples 2.0 18.4 18.5 Severages 2.1 2.2 2.2 2.2 Personal Care Products 2.3 3.3 2.5 Frood Products 14.8 15.5																Professional Services	28.4	28.0	25.9
Consumer Staples Consumer Staples Distribution & Re 21.8 21.2 23.2 22.2 23.2 22.2 23.3 23.2 22.2 23.4 11.9 11.7 11.7 11.7 11.7 11.7 11.7 11.2 11.7																Trading Companies & Distributors	19.9	17.1	16.2
Consumer Staples Consumer Staples Distribution & Re 21.8 21.2 19.6 Tobacco 12.2 11.3 11.7		6.6%	7.3%	Consumer	20.0	19.4	18.5	Beverages	24.2	22.0	20.9	Personal Care Products	23.7	33.5	25.8	Food Products	14.8	15.8	15.5
Table Tabl		51.575						Consumer Staples Distribution & Ref	21.8	21.2	19.6	Tobacco	12.2	11.9	11.7	,			
Table Tabl								Household Products	25.3	23.2	22.2								ł
Insurance 17.3 14.8 12.7	Faual-	12.8%	12 0%	Financials	15.1	14.1	13.4					Financial Services	24.7	21.4	19.9	Capital Markets	16.7	17.6	16.3
2.4% 2.4% Utilities 16.5 15.5 14.7 Electric Utilities 17.5 15.9 15.1 Gas Utilities 18.6 17.4 16.4 Multi-Utilities 14.3 14.		12.070	12.570	Tillallolais							12.7					•			9.8
Independent Power & Renewable 9.1 8.2 7.6 Water Utilities 28.0 25.3 24.0		2 40/	2 40/	Litilition	16.5	15.5	1/1 7					Gae I Itilities	18.6	17./	16 /				
Under- weight 1.9% Real Estate 15.9 16.1 15.8 Specialized REITs 16.5 17.2 16.4 Hotel & Resort REITs 10.9 11.1 11.5 Residential REITs 11.5 16.3 15.4 11.5 Real Estate Mgmt. & Development 2.1 17.5 1		2.4%	2.4%	Utilities	10.5	13.3	14.7	Liectric Otilities	17.3	15.5	13.1				_		14.5	14.3	13.0
Under-weight 1.9% Real Estate 15.9 16.1 15.8 Specialized REITS 16.5 17.2 16.4 Hotel & Resort REITS 9.0 8.9 9.6 Health Care REITS 17.6 17.0 17.1 17												·						Ì	
Value Valu	Lleden	0.40/	4.00/	Deal Catata	15.0	16.1	15.0	Specialized DEITs	16.5	17.2	16.4						17.6	17.0	16.1
Retail REITS 10.9 11.1 11.5 Residential REITS 10.9 11.1 11.5 Residential REITS 16.3 15.4 17. Real Estate Mgmt. & Development 23.1 30.5 2 2.1 14.7 Construction Materials 16.5 15.7 19.5 1 Construction Materials 36.6 26.2 2 Containers & Packaging 12.1 16.3 1.1 16.7 16.9 16.5 17.0 15.9 Automobiles 26.3 28.2 30.2 Residential REITS 20.0 24.6 Automobile Components 18 16.5 13.9 Distributors 16.2 17.0 15.9 Automobiles 26.3 28.2 30.2 Residential REITS 20.0 24.6 Automobile Components 18 16.5 13.9 Distributors 16.2 17.0 15.9 Automobiles 26.3 28.2 30.2 Residential REITS 20.0 24.6 Automobile Components 18 16.5 13.9 Distributors 16.2 17.0 15.9 Automobiles 26.3 28.2 30.2 Residential REITS 20.0 24.6 Automobile Components 20.0 24.6 Automobile		2.4%	1.9%	Real Estate	15.5	10.1	13.0	Specialized KETTS	10.5	17.2	10.4								
2.4% 1.8% Materials 14.0 17.9 17.1 Metals & Mining 8.6 12.8 14.7 Chemicals Construction Materials 36.6 26.2 2 2 2 2 2 2 2 2 2	weight																		
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10.7% 6.9% Consumer 34.4 26.0 24.6 Automobile Components 18 16.5 13.9 Distributors Hotels Restaurants & Leisure 59 23.2 21.2 Household Durables 8.2 9.7 14.9 17.2 14.3 Broadline Retail -1523.2 52.5 42.8 CD ex Auto & Broadline Retail -1523.2 52.5 42.8 -1523.2 52.5 42.8 CD ex Auto & Broadline Retail -1523.2 52.5 42.8 CD ex Auto & Broadline Retail -1523.2 52.5 42.8 CD ex Auto & Broadline Retail -1523.2 52.5 42.8 -1523.2 52.5 42.8 -1523.2 52.5 42.8 CD ex Auto & Broadline Retail -1523.2 52.5 42.8 -1523.2 52.5 42.8 -1523.2 52.5 42.8 -1523.2 52.5 42.8 -1523.2 52.5 42.8 -1523.2 52.5 42.8 -1523.2 52.5 42.8 -1523.2		2.4%	1.8%	Materials	14.0	17.9	17.1	Metals & Mining	8.6	12.8	14.7								
10.7% 6.9% Consumer Discretionary 34.4 26.0 24.6 Automobile Components 18 16.5 13.9 Distributors 16.2 17.0 15.9 Automobiles 26.3 28.2 30.2		,	,					-								Construction Materials	36.6	26.2	25.0
Discretionary																Containers & Packaging	12.1	16.3	15.1
Leisure Products 14.9 17.2 14.3 Broadline Retail -1523.2 52.5 42.8 Leisure Products 14.9 17.2 14.3 Broadline Retail -1523.2 52.5 42.8 Leisure Products 14.9 17.2 14.3 Broadline Retail -1523.2 52.5 42.8 Leisure Products 14.9 17.2 14.3 Broadline Retail -1523.2 52.5 42.8 Leisure Products 14.9 17.2 14.3 Broadline Retail -1523.2 52.5 42.8 Leisure Products 14.9 17.2 14.3 Broadline Retail -1523.2 52.5 42.8 Leisure Products 18.7 19.6 17.2 18.7 Leisure Products 18.7 19.6 17.2 18.7 Leisure Products 18.7 19.6 17.2 18.7 Leisure Products 18.7 18.7 L		10.7%	6.9%	Consumer	34.4	26.0	24.6	Automobile Components	18	16.5	13.9	Distributors							
Automobiles 26.3 28.2 30.2 Broadline Retail -1523.2 52.5 42.8 CD ex Auto & Broadline 22.9 19.5 18.5 27.5% 22.7% Information 28.1 28.0 24.9 Communications Equipment IT Services 20.7 19.9 18.7 Aggregate PE: DWS View Overweight 17.4 16.9 15.7 Equalweight 19.0 19.5 19.3 Underweight 22.4 23.7 29.8 Electronic Equipment 22.4 23.0 2 Bayes and the communications of the communications and the communications are communications are communications are communications and the communications are communications and the communications are communications are communications and the communications are communications and the communications are communications are communications are communications and the communications are communications are communications and communications are communications are communications and communications are communications and communications are communications are communications and communications are comm				Discretionary															1
Broadline Retail -1523.2 52.5 42.8 Specialty Retail 18.7 19.6 1.7												Leisure Products	14.9	17.2	14.3		-1523.2	52.5	42.8
CD ex Auto & Broadline 22.9 19.5 18.5																		Ì	
Broadline 22.9 19.5 18.5					-1523.2	52.5	42.8									' '			
Technology					22.9	19.5	18.5									Textiles Apparel & Luxury Goods	22.0	22.5	20.5
Technology Hardware Storage & Per 26.5 26.9 2		27.5%	22.7%	Information	28.1	28.0	24.9	Communications Equipment	17.8	15.9	15.0	Software	34.8	30.6	27.9	Electronic Equipment	19.3	20.9	19.2
Aggregate PE: DWS View Overweight 17.4 16.9 15.7 Equalweight 19.0 19.5 18.3 Underweight 22.4 23.0 2 S&P 500 4288 2022, 2023& 2024 EPS 220.01 220.00 235.00 2022, 2023 & 2024 PE 19.5				Technology				IT Services	20.7	19.9	18.7					Semiconductors	27.4	31.6	25.1
S&P 500 4288 2022, 2023& 2024 EPS 220.01 220.00 235.00 2022, 2023 & 2024 PE 19.5 19.5 19.5 19.5 19.5 19.2 1 Bottom-up Consensus EPS 220.01 223.71 249.81 Bottom-up Cons. PE 19.5 19.2 1 2022, 2023 & 2024 Ex Energy PE 20.1 20.1 20.1 20.1 20.1 20.1 20.1 20.1																			
Bottom-up Consensus EPS 220.01 223.71 249.81 Bottom-up Cons. PE 19.5 19.2 1 20.01 20.01 20.01 20.02 20.02 & 20			View					Overweight		16.9	15.7	•				3			
2022, 2023 & 2024 Ex Energy PE 20.1 20.1 1:		S&P 500							4288										
												Bottom-up Consensus EPS	220.01	223.71	249.81				17.2
I ISIM-ID CODS EX ENGROV PE I ZURI 19 RI I																Btm-up Cons. Ex Energy PE	20.1	19.8	

Sector OW	9.59%
Sector UW	-9.59%
Industry OW	21.16%
Industry UW	-21.16%

Macro tilts:	
Cyclicals	-5.07%
Defensive	4.90%
Value (Financial+Energy)	1.26%
Growth	0.29%
Growth ex Health Care	-4.39%
Consumer	-3.02%
Services/experience	0.19%
Disc. Goods	-3.92%
Retailing	-1.75%
Durables	-2.17%
Staples Goods/Retail	0.71%
Commodity	0.91%
Energy	1.18%
Metals/Chemicals	-0.27%
Сарех	6.43%
Capacity additions	3.38%
Productivity	3.05%
Health Care	4.68%
Innovation	3.35%
Marketers	2.31%
Insurers	0.00%
Financials	0.08%
Up rates/low spreads	1.45%
Capital Markets	-2.84%
Insurance	1.47%
Bond Substitutes	0.00%
Weak FX \$ plays	1.12%
High R&D plays	2.30%
Transports	0.28%
Geopolitical risk	1.54%
Weak oil prices	0.34%
Inflation shock	0.04%
Stagflation Protection	4.28%
Domestic GDP	-2.17%
Global GDP	-4.58%
Consumer TMT	0.43%
Trade sensitive	-1.51%

More details on sector earnings forecast and sector intrinsic valuation can be found towards the back of this note. Price as of 9/29/2023

Source: DWS Investment Management GmbH

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

	Market Value (\$bn)	Current 2023 PE	2023E Earnings (\$bn)	Normal Ratio	Normal 2023E Earnings	Accounting Quality Adjustment	Fully Adjusted Earnings	Net Debt / Market Cap	FCF / EPS	Real CoE	Steady State Value	Growth Premium	2023 Start Fair Value (\$bn)	2023E Dividend Yield	2023 End Fair Value (\$bn)	PE on Normal 2023E EPS	2023 End Upside %	2023 End Upside vs. S&P 500
Communication Services	3,304	18.5	178.5	97%	173.7	-8%	159.8	14%	0.83	5.60%	2,854	10%	3,139	1.0%	3,378	19.4	2%	8%
Consumer Discretionary	3,816	26.0	146.5	101%	148.1	-8%	136.3	12%	0.74	5.50%	2,478	19%	2,957	1.1%	3,176	21.4	-17%	-11%
Automobiles	769	28.2	27.3	95%	25.9	-10%	23.3	21%	0.99	6.50%	359	40%	503	0.4%	549	21.2	-29%	-23%
Broadline (Internet) Retail	1,155	52.5	22.0	125%	27.5	-7%	25.6	1%	0.18	5.50%	465	50%	698	0.0%	756	27.5	-35%	-28%
ex. Auto & Broadline (Internet) Retail	1,891	19.5	97.2	97%	94.7	-8%	87.3	15%	0.75	5.28%	1,653	6%	1,757	1.6%	1,874	19.8	-1%	5%
Consumer Staples	2,338	19.4	120.5	99%	119.4	-7%	111.1	15%	0.84	5.10%	2,178	0%	2,178	3.0%	2,288	19.2	-2%	4%
Energy	1,776	12.4	143.5	86%	124.1	-15%	105.5	13%	0.91	6.00%	1,758	-20%	1,406	2.4%	1,500	12.1	-16%	-9%
Financials	4,624	14.1	328.5	99%	324.0	-9%	294.8		1.10	6.40%	4,607	-8%	4,238	2.2%	4,545	14.0	-2%	4%
Banks	1,087	8.5	128.0	95%	121.6	-10%	109.4		1.11	7.50%	1,459	-15%	1,240	3.8%	1,323	10.9	22%	28%
Health Care	4,894	18.2	268.5	103%	276.6	-8%	254.4	10%	1.14	5.40%	4,712	3%	4,853	1.6%	5,186	18.7	6%	12%
Industrials	2,994	18.7	160.0	100%	159.5	-8%	146.7	17%	0.88	5.60%	2,620	3%	2,698	2.0%	2,877	18.0	-4%	2%
Information Technology	9,942	28.0	355.0	105%	371.6	-5%	353.0	2%	0.95	5.40%	6,537	20%	7,844	1.0%	8,427	22.7	-15%	-9%
Materials	897	17.9	50.0	97%	48.3	-10%	43.5	18%	0.89	5.80%	750	0%	750	1.8%	803	16.6	-11%	-4%
Real Estate	804	16.1	50.0	95%	47.6	-8%	43.8	37%	1.80	5.50%	795	0%	795	4.0%	831	17.5	3%	10%
Utilities	827	15.5	53.5	103%	55.2	-8%	50.8	92%	-0.64	5.50%	924	0%	924	4.0%	965	17.5	17%	23%
S&P 500 (\$ bn)	36,218	19.5	1854.5	100%	1848.0	-8.0%	1699.6			5.60%	30,211	5.2%	31783	1.7%	33,976	18.4	-6%	0%
S&P 500 Index (\$/sh)	4288	19.5	220.0	100%	220.0	-8.2%	202.0	11%	0.93	5.60%	3607	4.9%	3784	1.7%	4039	18.4	-6%	0%



Source: IBES, DWS Investment GmbH as of 9/29/2023. 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 3/31/2023.

The estimated 2023 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 2023E S&P 500 EPS	\$220.00	DWS 2023E S&P 500 DPS	\$70.00	DWS 2023E S&P 500 aggregate ROE	21.8%	Fair long-term nominal return on S&P 500 index	8.60%
		2023E dividend payout ratio	32%	2022E end S&P 500 book value per share	\$1,007	Components of estimated fair S&P 500 return:	
DWS "normal 2023E" S&P 500 EPS	\$220.00	DWS "normal 2023E" S&P 500 DPS	\$70.00	DWS "normal 2023E" S&P 500 aggregate ROE	20.1%	+ Long-term real risk free interest rate	1.60%
"Normal 2023E" EPS / 2023E EPS	100%	Normal dividend payout ratio	35%			+ Long-term fair S&P 500 equity risk premium*	4.00%
				S&P EPS retained for true reinvestment	47%	= Long-term real S&P 500 cost of equity	5.60%
Accounting quality adjustment to pro forma EPS	-\$18.00	EPS directed to net share repurchases	\$38.00	Estimated ROE on reinvested S&P EPS	8.90%	+ Long-term inflation forecast	3.00%
		Normal share repurchase payout ratio	19%	Economic margin (EM) or ROE-CoE	0.30%	= S&P 500 nominal cost of equity	8.60%
Normal 2023E S&P 500 EPS fair to capitalize	\$202	Total payout of S&P 500 EPS	\$108.00	Sources of long-term earnings growth:		* S&P 500 ERP history 300-400bps, w/ real CoE @ 5% -	6.5%
Key principle: steady-state value = normal EPS / real CoE		Total payout ratio of normal and quality adj. EPS	53%	+ Long-term inflation forecast	3.00%		
				+ Fair return on true reinvestment	2.61%	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	0.14%	2022E end S&P 500 book value per share	\$1,007
Normal EPS / (real CoE - (EM/payout) - EM):		Normal DPS / (nominal CoE - DPS growth):		= Long-term earnings growth	5.75%	Fair PB = Fair PE * normal aggregate ROE	3.95
S&P 500 intrinsic value at 2023 start	3784	S&P 500 intrinsic value at 2023 start	3784	+ Growth from net share repurchases	1.00%	Fair PE =(inc ROE-g)/(inc real ROE*(real CoE-real g))	19.7
S&P 500 intrinsic value at 2023 end	4039	S&P 500 intrinsic value at 2023 end	4039	= Long-term S&P 500 EPS/DPS growth	6.75%	Implied S&P 500 fair value of book at 2023 start	3979
Implied fair fwd PE in early 2023 on 2023E \$220 EPS	17.2	Implied fair forward yield on 2023E DPS of \$70.0	1.85%	+ Fair normal dividend yield	1.85%	Steady-state PB = normal agg. ROE / real CoE	3.58
Implied fair trailing PE at 2023 end on 2023E \$220 EPS	18.4	Implied fair trailing yield on 2023E DPS of \$70.0	1.73%	= Total long-term return at constant PE	8.60%	Confirmed by fair steady-state PE = 1 / real CoE	17.9
Normal EPS / (real CoE-value added EPS growth)	3699	DPS discount model using true DPS (all payout)	3784	Value added growth premium in fair value est.	5%	Normal 2023E economic profit per share	\$145.61

<u>S&P 500 EPS discount model 5 steps to value:</u>

- 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 2023E S&P 500 EPS										
		\$210	\$215	\$220	\$225	\$230						
	5.10%	4565	4726	4889	5054	5223						
Real	5.35%	4156	4289	4423	4558	4695						
cost of	5.60%	3815	3927	4039	4152	4265						
equity	5.85%	3526	3622	3717	3812	3907						
	6.10%	3279	3361	3443	3524	3606						

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%

DWS September 2024 equity index targets

Index	3M relative View	Current Level	Previous Target CIO Day May	Target Sep 24	Chg in Target	Expected Total Return Sep 24		thereof			Assumptions		
		08/09/2023									EPS NTM* (e)	DW S vs. Cons.	Target LTM P/E in Sep 24
S&P 500		4,451	4,200	4,500	7%	2.7%	USD	4.8%	-4%	1.6%	231	-4.5%	19.4x
Stoxx 600		451	480	470	-2%	7.9%	EUR	3.3%	0%	3.7%	36.6	-3.4%	12.8x
Euro Stox x 50		4,184	4,450	4,350	-2%	7.8%	EUR	3.3%	0%	3.8%	363	-3.6%	12.0x
DAX40		15,595	17,000	16,700	-2%	7.1%	EUR	3.7%	0%	3.7%	1446	-3.1%	11.2x
SMI		10,916	11,500	11,300	-2%	6.8%	CHF	9.3%	-5%	3.3%	695	-2.4%	16.2x
FTSE 100		7,419	7,700	7,400	-4%	4.1%	GBP	1.4%	-2%	4.4%		-2.3%	10.4x
MSCI EM		974	1,040	1,010	-3%	6.5%	USD	3.3%	0%	2.8%	75.3	-7.8%	13.4x
MSCI AC Asia xJ		620	680	655	-4%	8.2%	USD	6.1%	0%	2.5%	44.7	-8.6%	14.7x
MSCI Japan		1,441	1,400	1,500	7%	6.4%	YEN	5.1%	-2%	2.3%	96.5	-2.1%	15.3x
MSCI Australia		1,425	1,450	1,350	-7%	-1.0%	AUD	-2.5%	-4%	4.3%	92.0	-1.8%	14.5x

DWS Investment GmbH S&P 500 Annual EPS Outlook

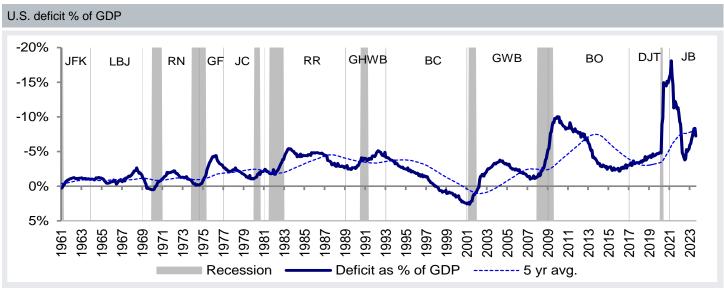
											Bottom-up Consensus (IBES)				DWS View				Normalized 2023	
	2014A	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022A	y/y	2023E	y/y	2024E	y/y	2023E	y/y	2024E	y/y	(\$)	% of 2023
S&P 500 EPS (historical index)	\$118.82	\$117.46	\$118.10	\$132.00	\$161.93	\$162.93	\$139.72	\$208.12	\$218.09	4.8%										
S&P 500 EPS (current constituents)	\$116.71	\$117.28	\$117.33	\$129.29	\$155.73	\$161.44	\$143.88	\$207.88	\$220.01	4.7%	\$224	1.7%	\$250	11.7%	\$220	0.0%	\$235	6.8%	\$220	100%
Sector (\$ bn)																				
Communication Services	67.6	78.1	91.0	99.2	124.0	130.4	135.8	188.9	148.4	-21.4%	179.0	20.6%	210.2	17.4%	178.5	20.3%	195.0	9.2%	173.7	97%
Consumer Discretionary	60.1	70.5	79.0	83.1	98.2	95.7	71.0	115.3	111.0	-3.8%	151.5	36.5%	172.8	14.1%	146.5	32.0%	155.0	5.8%	148.1	101%
Consumer Staples	83.7	82.5	85.2	89.5	96.6	97.6	105.0	117.3	117.2	-0.1%	120.2	2.6%	129.3	7.6%	120.5	2.8%	126.5	5.0%	119.4	99%
Energy	95.5	40.1	10.7	37.5	70.6	49.7	-6.9	79.7	203.6	155.6%	151.0	-25.9%	153.7	1.8%	143.5	-29.5%	150.0	4.5%	124.1	86%
Financials	185.3	201.4	203.9	213.3	263.6	277.5	225.6	363.9	306.2	-15.8%	335.8	9.7%	363.4	8.2%	328.5	7.3%	345.0	5.0%	324.0	99%
Health Care	138.2	153.2	158.2	172.5	189.5	207.6	227.9	295.4	310.0	5.0%	267.9	-13.6%	302.4	12.9%	268.5	-13.4%	293.0	9.1%	276.6	103%
Industrials	101.0	104.7	98.7	107.5	130.8	125.4	65.7	111.4	140.6	26.2%	159.9	13.8%	180.9	13.1%	160.0	13.8%	168.5	5.3%	159.5	100%
Information Technology	162.8	168.4	176.6	208.2	239.9	233.6	265.0	346.2	353.5	2.1%	368.1	4.1%	430.5	16.9%	355.0	0.4%	400.0	12.7%	371.6	105%
Materials	24.8	23.8	22.8	28.8	36.4	34.3	32.5	61.6	64.3	4.4%	51.0	-20.7%	54.2	6.2%	50.0	-22.3%	52.5	5.0%	48.3	97%
Real Estate	22.3	25.4	28.0	31.5	35.2	36.6	36.5	43.6	50.7	16.1%	50.5	-0.4%	53.2	5.4%	50.0	-1.3%	51.0	2.0%	47.6	95%
Utilities	31.8	31.9	34.4	35.8	39.4	43.3	44.7	48.7	50.0	2.8%	51.9	3.7%	56.4	8.7%	53.5	6.9%	56.5	5.6%	55.2	103%
S&P 500	972.9	980.0	988.5	1106.9	1324.2	1331.7	1202.8	1771.9	1855.6	4.7%	1886.8	1.7%	2106.9	11.7%	1854.5	-0.1%	1992.9	7.5%	1848.0	100%
S&P ex. Energy (\$bn)	877.4	939.8	977.8	1069.4	1253.6	1282.0	1209.8	1692.2	1651.9	-2.4%	1735.8	5.1%	1953.2	12.5%	1711.0	3.6%	1842.9	7.7%	1723.9	101%
S&P ex. Tech (\$bn)	810.2	811.5	811.8	898.8	1084.3	1098.1	937.9	1425.7	1502.0	5.4%	1518.6	1.1%	1676.4	10.4%	1499.5	-0.2%	1592.9	6.2%	1476.5	98%
S&P 500 Sales/Share (historical index)	\$1,163	\$1,127	\$1,151	\$1,232	\$1,339	\$1,415	\$1,362	\$1,567	\$1,753	11.9%										
S&P 500 Non-GAAP Net Margin	10.2%	10.4%	10.3%	10.7%	12.1%	11.5%	10.3%	13.3%	12.4%											

S&P 500 EPS	Year	1Q	2Q	3Q	4Q
2019A	163	39	41	41	42
2020A	140	33	28	38	42
2021A	210	49	53	54	54
2022A	222	55	58	56	53
2023E	220	53	55	55	57

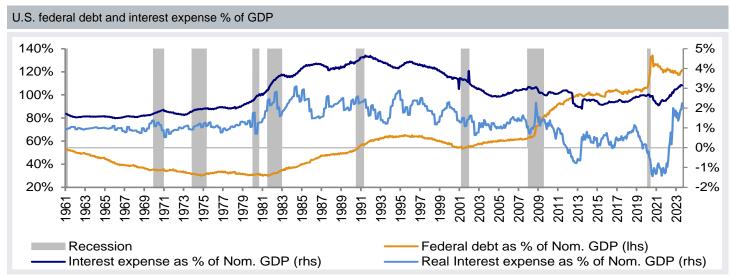
S&P 500 EPS historical constituents represents the earnings per share (EPS) of S&P 500 index constituents at the time, while S&P 500 EPS current constituents represents the earnings per share of index constituents as of the date the data was compiled 3/31/2023.

Source: Factset, DWS Investment GmbH as of 9/29/2023. Past performance may not be indicative of future results.

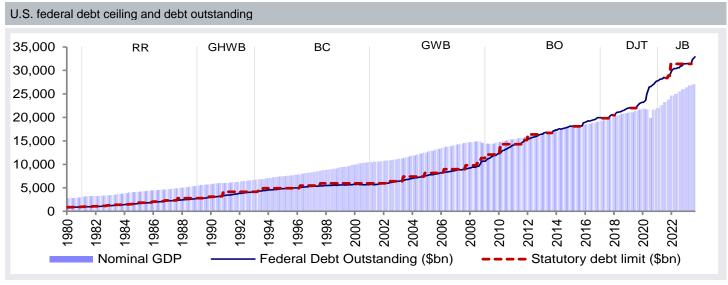




Source: Haver, DWS Investment GmbH as of 10/2/2023. Past performance may not be indicative of future results.

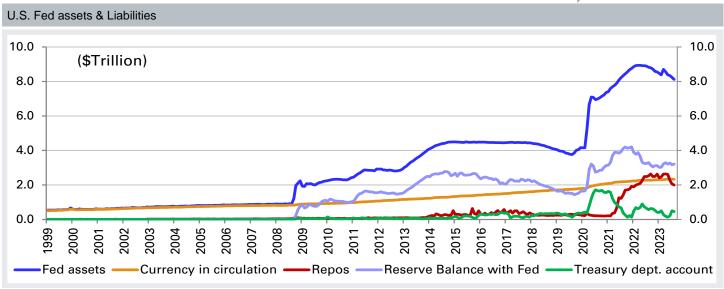


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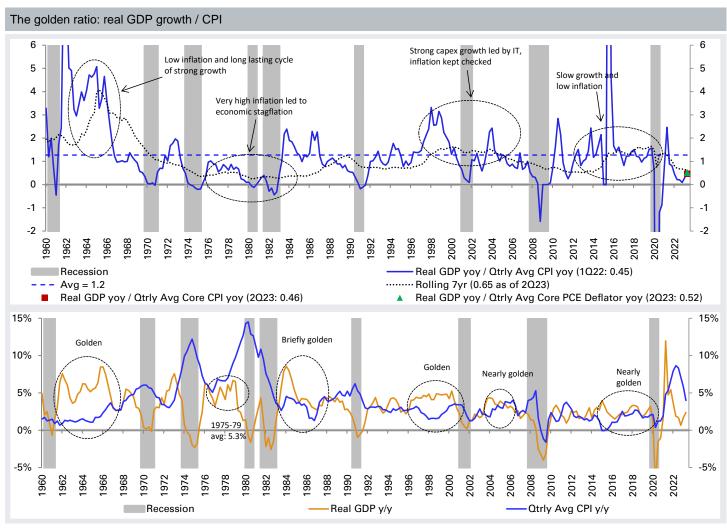


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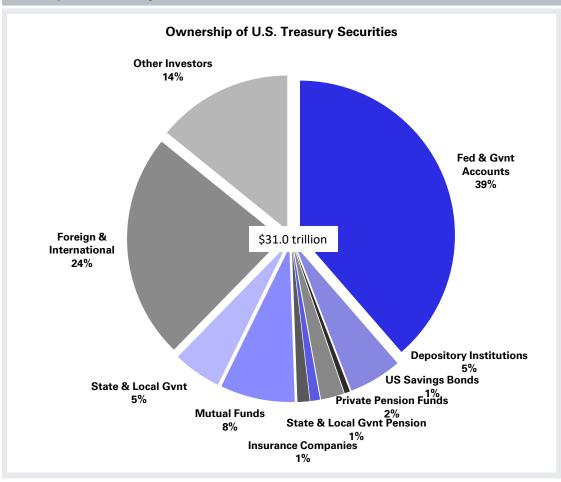
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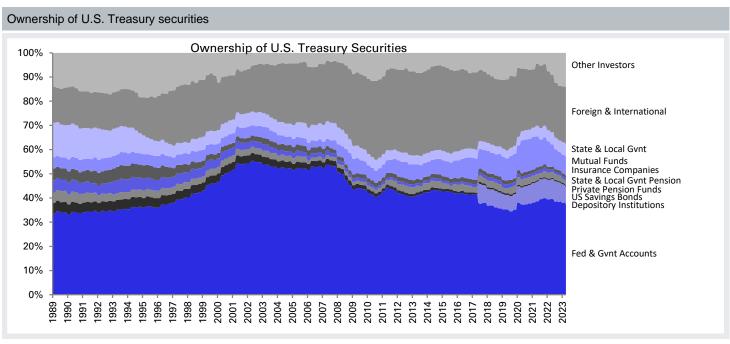
Source: Haver, DWS Investment GmbH as of 10/2/2023. Past performance may not be indicative of future results.



Ownership of U.S. Treasury securities



Source: Haver, DWS Investment GmbH as of 10/2/2023. Past performance may not be indicative of future results.



 $Source: Haver, \, DWS \,\, Investment \,\, GmbH \,\, as \,\, of \,\, 10/2/2023. \,\, Past \,\, performance \,\, may \,\, not \,\, be \,\, indicative \,\, of \,\, future \,\, results.$



S&P 500 industry monitor (1 of 2)

						2000 500		2023 End	
		PE on 2022	PE on 2023	2023	2024	2023 EPS 3m	3m Total Return	Upside	Combined
Sector	Industry	EPS	Consensus EPS	Consensus EPS Growth	Consensus EPS Growth	Revision	Momentum	(Intrinsic Valuation)	Signa
Consumer Discretionary	uucu.y	34.4	22.6	32.8%	14.4%	9.4%	-4.7%	-16.8%	0.8
consumer Discretionary	Automobile Components	20.8	13.4	25.2%	23.8%	-6.5%	-4.2%	12.5%	
	Automobiles	30.1	26.6	8.5%	4.5%	9.0%	-6.0%	-28.7%	
	Household Durables	8.1	8.6	-11.0%	6.0%	17.4%	-8.0%	20.1%	-
	Leisure Products	15.2	13.1	-6.9%	24.5%	-8.8%	3.2%	-7.8%	
	Textiles Apparel & Luxury Goods	21.3	18.7	-0.4%	14.2%	-3.2%	-13.7%	-12.1%	
	Hotels Restaurants & Leisure	81.7	19.9	248.3%	17.7%	8.2%	-5.2%	-1.7%	
	Distributors	16.1	15.0	-1.8%	9.6%	-1.8%	-11.6%	0.6%	
	Broadline Retail	111.1	37.8	111.5%	38.8%	33.7%	-2.6%	-34.5%	
	Specialty Retail	19.3	17.8	1.1%	7.5%	1.8%	-3.0%	-2.2%	
Consumer Staples		20.4	18.0	5.3%	7.5%	-0.2%	-6.1%	-2.2%	
	Consumer Staples Distribution & Retail	22.2	20.1	1.9%	8.5%	-3.1%	-3.5%	-0.9%	
	Food Products	14.7	14.8	-5.0%	4.9%	1.1%	-8.2%	7.3%	
	Beverages	24.3	20.3	10.8%	8.2%	1.9%	-6.2%	0.6%	
	Tobacco	12.4	11.1	4.6%	6.5%	-0.6%	-4.2%	4.4%	
	Household Products	25.5	21.4	9.6%	8.6%	1.1%	-5.3%	-8.3%	
	Personal Care Products	43.9	20.6	95.9%	8.5%	-3.9%	-24.6%	-12.6%	
nergy		9.7	11.6	-18.7%	2.7%	-0.8%	12.2%	-15.6%	
	Energy Equipment & Services	30.6	15.0	68.4%	21.3%	-0.5%	18.5%	3.0%	
	Oil Gas & Consumable Fuels	9.1	11.4	-21.3%	1.5%	-0.8%	11.6%	-17.3%	
inancials		14.9	12.8	7.6%	8.2%	-0.1%	-0.8%	-1.7%	
	Banks	9.1	8.8	9.8%	-5.0%	1.4%	-1.6%	21.6%	
	Financial Services	25.0	19.1	17.8%	10.9%	3.7%	-0.3%	-8.7%	
	Consumer Finance	7.9	8.9	-18.7%	9.5%	-1.0%	-14.7%	4.6%	
	Capital Markets	16.5	14.4	-3.8%	19.0%	-5.0%	-1.4%	-24.2%	
	Insurance	17.2	12.0	14.9%	24.7%	-2.7%	3.4%	9.8%	
lealth Care		15.7	16.2	-14.1%	13.0%	-4.6%	-2.7%	6.0%	
	Health Care Providers & Services	16.0	13.6	7.6%	9.7%	-0.1%	1.2%	12.8%	
	Health Care Equipment & Supplies	24.3	21.8	1.8%	9.4%	0.4%	-13.6%	-2.6%	
	Life Sciences Tools & Services	22.6	22.9	-11.0%	11.1%	-5.2%	-4.3%	-23.5%	
	Biotechnology	12.1	15.5	-24.3%	3.4%	-0.3%	7.2%	16.2%	
	Pharmaceuticals	13.2	14.7	-27.6%	23.7%	-12.4%	-1.7%	12.0%	
ndustrials		22.9	16.7	21.3%	13.3%	0.2%	-5.1%	-3.9%	
	Aerospace & Defense	40.9	17.8	77.0%	29.9%	-3.8%	-10.6%	-1.6%	
	Building Products	21.7	16.8	17.4%	10.1%	2.3%	-3.4%	-17.3%	
	Trading Companies & Distributors	21.0	15.8	24.1%	7.1%	0.5%	-6.5%	4.3%	
	Electrical Equipment	24.2	20.6	5.7%	11.0%	3.3%	-0.7%	-5.1%	
	Construction & Engineering	30.1	22.3	14.7%	17.6%	0.7%	-4.7%	-17.7%	
	Industrial Conglomerates	21.0	17.6	-3.6%	23.5%	3.6%	-5.2%	-7.1%	

Combined signal rules: Green – at least 2 of the following 3 must be green: EPS growth, EPS revision, price momentum Red – at least 2 of the following 3 must be red: EPS growth, EPS revision, price momentum Source: Factset, DWS Investment GmbH as of 9/29/2023. Past performance may not be indicative of future results.



S&P 500 industry monitor (2 of 2)

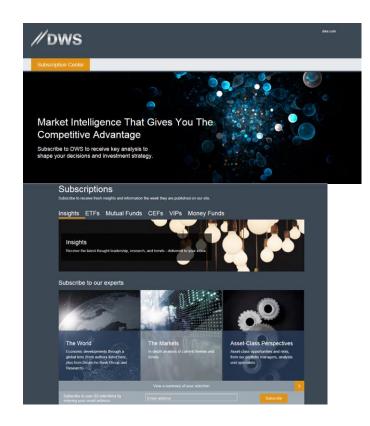
Sector	Industry	PE on 2022 EPS	PE on 2023 Consensus EPS	2023 Consensus EPS Growth	2024 Consensus EPS Growth	2023 EPS 3m Revision	3m Total Return Momentum	2023 End Upside (Intrinsic Valuation)	Combined Signal
	Machinery	20.1	14.9	31.1%	3.2%	5.3%	-2.2%	2.1%	1
	Commercial Services & Supplies	33.4	26.6	12.5%	11.7%	0.2%	-7.6%	-14.0%	0
	Professional Services	28.8	23.3	9.0%	13.0%	0.2%	2.7%	-24.2%	0
	Air Freight & Logistics	12.6	14.8	-24.9%	13.9%	-8.1%	-6.2%	-18.7%	-1
	Passenger Airlines	23.9	5.3	297.2%	12.8%	1.0%	-24.3%	84.6%	0
	Ground Transportation	18.2	17.5	-6.5%	11.4%	-5.9%	-2.9%	-5.0%	-1
Information Technology		27.7	23.2	2.2%	17.0%	2.8%	-5.6%	-15.2%	C
	IT Services	20.9	18.6	5.3%	6.8%	0.6%	2.1%	-6.4%	0
	Software	35.6	26.8	16.9%	14.0%	1.5%	-5.2%	-10.9%	0
	Communications Equipment	18.6	14.9	18.9%	5.4%	1.1%	3.7%	12.9%	1
	Technology Hardware Storage & Peripherals	26.0	24.4	-3.4%	10.3%	0.6%	-11.3%	-16.8%	0
	Electronic Equipment Instruments & Components	19.4	18.4	-5.2%	11.5%	-3.1%	-6.9%	-18.4%	0
	Semiconductors & Semiconductor Equipment	25.4	21.0	-9.4%	33.2%	8.4%	-2.4%	-21.6%	1
Materials		13.4	16.6	-24.1%	6.7%	-4.3%	-4.7%	-10.6%	-1
	Chemicals	15.4	17.1	-19.7%	12.5%	-5.0%	-4.6%	-12.0%	-1
	Construction Materials	35.5	22.5	36.3%	15.6%	8.3%	-10.6%	-35.5%	1
	Metals & Minina	7.9	14.3	-37.8%	-11.3%	-4.2%	-6.6%	5.7%	-1
	Containers & Packaging	11.7	15.1	-26.8%	5.7%	-4.7%	1.9%	-8.7%	-1
Real Estate		26.4	31.5	-19.3%	3.9%	1.5%	-8.8%	3.4%	-1
	Industrial REITs	25.8	40.3	-32.5%	-5.3%	2.7%	-7.8%	-10.4%	0
	Hotel & Resort REITs	14.2	16.2	-4.2%	-8.5%	4.0%	-3.4%	62.7%	0
	Office REITs	17.9	26.6	-42.1%	16.1%	-11.6%	-5.8%	22.7%	-1
	Health Care REITs	96.7	83.5	1.8%	13.8%	10.7%	-2.6%	7.0%	0
	Residential REITs	26.7	36.7	-15.9%	-13.5%	20.5%	-10.5%	12.4%	-1
	Retail REITs	26.3	24.8	7.4%	-1.4%	-0.5%	-9.1%	27.8%	0
	Specialized REITs	25.1	29.6	-22.2%	9.4%	-0.6%	-9.5%	-0.2%	-1
	Real Estate Management & Development	22.5	24.3	-24.9%	23.1%	-9.4%	-11.5%	-37.5%	-1
Communication Services		19.7	15.8	5.9%	17.8%	4.1%	3.1%	2,2%	1
communication services	Diversified Telecommunication Services	5.7	6.5	-13.5%	1.1%	0.2%	-8.1%	20.7%	-1
	Wireless Telecommunication Services	80.5	14.2	319.9%	35.2%	2.5%	0.8%	17.0%	1
	Media Media	12.5	10.9	1.3%	13.2%	1.7%	3.8%	5.1%	1
	Entertainment	28.1	20.5	-5.9%	45.9%	-5.3%	-8.5%	-14.2%	-1
	Interactive Media & Services	26.7	19.1	-5.9% 16.5%	43.9% 20.2%	-5.5% 8.4%	7.6%	2.7%	- <u>1</u> 1
Utilities	inco. delive inicula & services	16.8	14.6	5.5%	8.6%	0.4%	-9.2%	16.6%	0
Othities	Multi-Utilities	15.9	15.0	0.6%	5.7%	-1.7%	- 7. 9%	15.7%	-1
	Water Utilities	28.9	24.1	12.0%	6.9%	0.7%	-12.8%	-7.2%	0
	Gas Utilities	18.7	16.1	8.7%	6.9%	0.3%	-8.3%	6.3%	
	Electric Utilities Independent Power and Renewable Electricity Producers	17.1 9.3	14.4 8.1	7.6% 2.9%	9.8% 12.6%	1.5% -2.5%	-9.3% -25.9%	17.9% 46.6%	0
	independent Power and Kenewabie Electricity Producers	9.3	8.1	0.9%	11.9%	-2.5% 0.8%	-25.9% - 3.3 %	40.0%	-1

Source: Factset, DWS Investment GmbH as of 9/29/2023. Past performance may not be indicative of future results.



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