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



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October CPI declined more than expected, but the inflation fight is far from over The holiday rally came early, sparked by lower inflation in October than expected, along with bullish narratives circulating about reliable post midterm election rallies, China reopening and Russia retreating. It's likely best to take this gift rally and leave the festivities early. As the inflation fight is far from over. And neither are the other concerns. Inflation off its highs is welcome, yet it already took longer than hoped, but the big fight will be getting it under $4 \%$. It's important that the Fed bring inflation closer to $3 \%$ by mid-2023, otherwise it risks the bond market demanding higher inflation risk premiums because of high inflation being a $2+$ year experience. October CPI showed headline and core at $7.8 \%$ and $6.3 \% \mathrm{y} / \mathrm{y}$, compared to $8.2 \%$ and $6.7 \% \mathrm{y} / \mathrm{y}$ in September. Most of the Goods categories slowed in price $\mathrm{y} / \mathrm{y}$ and $\mathrm{m} / \mathrm{m}$ increases (some with big declines unlikely to persist), however, most of the Service categories still ran $\mathrm{y} / \mathrm{y}$ and $\mathrm{m} / \mathrm{m}$ changes over $5 \%$. Thus, disinflation is narrow and yet high inflation is broader at services and thus labor. The CPI report has noise related to adjustments at health care, shelter, and is generally noisy $\mathrm{m} / \mathrm{m}$. We're focusing on unit labor costs, i.e. wages/productivity. Very poor trends here YTD suggest it will take time and more hikes for inflation to normalize.
Markets, journalists and some FOMC members making the inflation fight harder The next FOMC decision is on December $14^{\text {th }}$ and the next CPI report for Nov is Dec $13^{\text {th }}$. We doubt there is enough new information in Nov inflation or jobs reports to alter the Fed's near-term decisions and 2023 projections. Markets and financial conditions likely greater factors. If S\&P over 3800 and broad financial conditions loosen in Nov-Dec vs. Sept-Oct, we think Fed hikes 75bp in Dec. or 50bp with at least another 50bp in 1Q. Current conditions raise risk Chair Powell takes hawkish tone at Dec post FOMC press conference (like in 2018). Dots likely show 5.0-5.5\% median terminal Fed Funds rate through 2023.

Mid-term elections: A clear disappointment for Republicans and the supply-side Republicans make minor gains in House and not clear it will be a unified Rep majority. Small chance Reps take Senate with NV and then GA in the Dec $6^{\text {th }}$ runoff, which extends midterm uncertainty into a period of budget and other lame duck session risks. History's strong S\&P performance after midterms doesn't have a clear conceptual basis. Poor postelection performance in 2002 \& 2018 shows that Fed policy and geopolitical issues can supersede. Russia-Ukraine war still ongoing. Asking Ukraine to concede territory to expedite a cease fire is odd given Russian invasion, atrocities and Ukraine resistance winning. We expect bipartisan tough-on-China and Ukraine support in new Congress.
Illusions and confusion of inflation: Beware measures of wages, sales and profits Oil is in a lot of things, but labor is in everything. The best structural measure of inflation is unit labor costs (ULCs). If wages are rising $5 \%$ and productivity is rising $5 \%$, that's prosperity. If wages are rising $5 \%$ but productivity is low/ negative and CPI is over $5 \%$, that's misery for both employees and employers. If ULCs (hourly wages less hourly output) are above the Fed's target then inflation is structurally too high. ULCs are rising since 3Q21 and now $6.1 \% \mathrm{y} / \mathrm{y}$ in 3Q22. Meanwhile, productivity is weak and $-1.4 \% \mathrm{y} / \mathrm{y}$ in 3Q22. Also, there is nothing good about retail sales or corporate sales and profits lagging inflation either. S\&P real EPS growth is very negative, healthy real growth is 5\%.
How does high inflation impact equities? It weighs on the economy, lowers fair PE Although equities represent real assets and PE is driven by the real cost of equity, broadbased inflation is negative for equity performance. Broad-based inflation if lasting for multiple years have negative impact on the economy, such as lower productivity, greater uncertainty with higher inflation risk premium and thus higher real interest rates, higher effective taxation and lower earnings quality from inadequate depreciation expense, etc. All of these lower the fair PE and the real return earned on the ownership of equities.

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

S\&P is trading at about $18 x$ forward EPS on our estimates. We find this a very demanding valuation with what Treasury bills/ bonds, corporate and muni bonds are yielding. We think bonds are better for 2023. In our view the S\&P is likely to test its 2022 lows around 3600 before yearend or 1Q23 as the inflation fight lingers. There are risks around the lame duck session, budget setting and ceiling, into yearend tax loss selling and continued risks with Russia/Ukraine for Europe and the world.
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| Global Equity Index Forecasts: 12-months |  |  |  |
| :---: | :---: | :---: | :---: |
| Index | $\begin{aligned} & \text { Sep } \\ & 2023 F \end{aligned}$ | NTM EPS Growth | Target PE |
| S\&P 500 | 4,200 | 0.0\% | 18.9 |
| EuroStoxx 50 | 3,750 | 3.6\% | 12.0 |
| Stoxx 600 | 445 | 3.4\% | 12.7 |
| MSCI Japan | 1,250 | 5.5\% | 13.0 |
| MSCI Asia xJ | 660 | 3.2\% | 12.3 |
| MSCI EM | 1,030 | 1.7\% | 11.7 |
| S\&P 500 Outlook at Yearend |  |  |  |
|  | 2021 | 2022F | 2023F |
| S\&P 500 | 4766 | 3800 | 4000 |
| Dividend Yield | 1.3\% | 1.75\% | 1.75\% |
| S\&P EPS | \$210 | \$222 | \$220 |
| Trailing PE | 22.7 | 17.1 | 18.2 |
| DPS | \$61 | \$68 | \$70 |
| ( Up / Balanced Risk / Down ) |  |  |  |

Risk of near-term further $10 \%+$ correction
( Low / Moderate / High )

| Taxable U.S. Investor Asset Allocations |  |  |
| :---: | :---: | :---: |
| Asset Class | Long-term | Current |
| Fixed Income/Cash | 30-35\% | 38.0\% |
| Equities | 55-60\% | 52.5\% |
| US Equities | 40\% | 36.0\% |
| S\&P 500 | 35\% | 32.0\% |
| Small Caps | 0-10\% | 4.0\% |
| Foreign DM | 10-15\% | 10.5\% |
| Foreign EM | 0-10\% | 6.0\% |
| Alternatives | 10\% | 9.5\% |
| Key CIO Views |  |  |
| Macro signal: | Current | Sep 2023F |
| U.S. Fed Funds rate | 3.0-3.25\% | 4.75\%** |
| 10yr Treasury yield | 3.85\% | 3.75\%** |
| US IG Corp Spreads | 100bp | 150bp |
| US High Yield Spreads | 340bp | 550bp |
| Crude Oil (WTI) \$/bbl | 93 | 100 |
| EUR / USD FX rate | 0.97 | 1.05 |
| GDP Forecasts |  |  |
| Region 2021 | 2022F | 2023F |
| US 5.7\% | 1.9\% | 0.7\% |
| World 6.0\% | 3.1\% | 2.8\% |
| Euro area 5.2\% | 3.1\% | 0.7\% |
| China 8.1\% | 3.3\% | 5.3\% |
| Japan 1.7\% | 1.5\% | 0.9\% |
| * Q4/Q4 GDP growth. ** This estimate under review until next CIO day. <br> EPS = Earnings Per Share <br> GDP = Gross Domestic Product <br> FX = Foreign Exchange <br> TIPs - Treasury Inflation Protected Securities <br> Source: DWS Investment Management GmbH. All opinions and claims are based upon data on 11/11/2022 and may not come to pass. This information is subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. All foreign asset exposures are not FX hedged unless otherwise noted. For illustrative purposes only. |  |  |

S\&P 500 Sector and Industry views


| Sector OW | 10.21\% |
| :---: | :---: |
| Sector UW | -10.21\% |
| Industry OW | 18.70\% |
| Industry UW | -18.70\% |
| Macro tilts: |  |
| Cyclicals | -2.97\% |
| Defensive | 2.95\% |
| Value | -5.93\% |
| Growth | 5.93\% |
| Consumer | -6.61\% |
| Services/experience | 0.47\% |
| Disc. Goods | -0.25\% |
| Retailing | -0.65\% |
| Durables | 0.43\% |
| Staples Goods/Retail | -1.51\% |
| Commodity | -1.30\% |
| Energy | 0.84\% |
| Metals/Chemicals | -2.14\% |
| Capex | 3.24\% |
| Capacity additions | 1.11\% |
| Productivity | 2.13\% |
| Health Care | 4.45\% |
| Innovation | 3.06\% |
| Marketers | 1.64\% |
| Insurers | -0.32\% |
| Financials | 1.22\% |
| Up rates/low spreads | 2.03\% |
| Capital Markets | -1.88\% |
| Insurance | 1.07\% |
| Bond Substitutes | 1.78\% |
| Weak FX \$ plays | 0.53\% |
| High R\&D plays | 4.78\% |
| Transports | -0.30\% |
| Geopolitical risk | 1.33\% |
| Weak oil prices | -0.53\% |
| Inflation shock | 4.81\% |
| Domestic GDP | -2.10\% |
| Global GDP | -4.62\% |
| Consumer TMT | 0.40\% |
| Trade sensitive | -1.83\% |

Note: More details on sector earnings forecast and sector intrinsic valuation can be found towards the back of this note.
rice as of 11/9/2022
Source: DWS Investment Management GmbH
All items
Food
Food at home

Cereals and bakery products
Meats, poultry, fish, and eggs
Dairy and related products
Fruits and vegetables
Nonalcoholic beverages and beverage materials
Other food at home
Food away from home
Full service meals and snacks (1)
Limited service meals and snacks (1)
Food at employee sites and schools (1)
Food from vending machines and mobile vendors (1)
Other food away from home (1)
Energy
Energy commodities
Fuel oil and other fuels
Motor fuel
Energy services
Electricity
Utility (piped) gas service
All items less food and energy
Commodities less food and energy commodities
Household furnishings and supplies (7)
Apparel
Transportation commodities less motor fuel (7)
Medical care commodities
Recreation commodities (7)
Education and communication commodities (7)
Alcoholic beverages
Other goods (7)
Services less energy services

| 7.8 | 8.2 | 8.2 | 8.5 | 9.0 | 8.5 | 8.2 | 8.6 | 7.9 | 7.5 | 7.1 | 6.8 | 6.2 | 5.4 | 5.2 | 5.3 | 5.3 | 4.9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10.9 | 11.2 | 11.4 | 10.9 | 10.4 | 10.1 | 9.4 | 8.8 | 7.9 | 7.0 | 6.3 | 6.1 | 5.3 | 4.6 | 3.7 | 3.4 | 2.4 | 2.1 |
| 12.4 | 13.0 | 13.5 | 13.1 | 12.2 | 11.9 | 10.8 | 10.0 | 8.7 | 7.4 | 6.5 | 6.4 | 5.4 | 4.5 | 2.9 | 2.5 | 0.9 | 0.7 |
| 15.9 | 16.2 | 16.4 | 15.0 | 13.8 | 11.6 | 10.3 | 9.4 | 7.8 | 6.8 | 4.7 | 4.6 | 3.5 | 2.7 | 1.6 | 1.5 | 0.2 | 0.6 |
| 8.0 | 9.0 | 10.6 | 10.9 | 11.8 | 14.2 | 14.4 | 13.7 | 13.0 | 12.3 | 12.6 | 12.8 | 11.9 | 10.5 | 8.0 | 5.8 | 0.6 | 0.1 |
| 15.5 | 15.9 | 16.2 | 14.9 | 13.5 | 11.8 | 9.1 | 7.0 | 5.2 | 3.1 | 1.6 | 1.6 | 1.8 | 0.6 | -0.5 | 1.8 | 0.7 | 0.1 |
| 9.4 | 10.4 | 9.4 | 9.2 | 8.0 | 8.1 | 7.7 | 8.5 | 7.7 | 5.7 | 5.0 | 4.0 | 3.0 | 3.1 | 2.3 | 2.2 | 3.2 | 2.8 |
| 12.7 | 12.9 | 13.4 | 13.8 | 11.9 | 12.0 | 9.8 | 8.0 | 6.7 | 5.0 | 5.1 | 5.3 | 4.5 | 3.7 | 2.0 | 1.1 | 0.2 | -0.2 |
| 15.4 | 15.7 | 16.6 | 15.8 | 14.4 | 12.6 | 11.0 | 10.3 | 8.2 | 7.4 | 5.6 | 5.7 | 4.1 | 3.1 | 1.4 | 1.3 | 0.4 | 0.4 |
| 8.6 | 8.5 | 8.0 | 7.6 | 7.7 | 7.4 | 7.2 | 6.9 | 6.8 | 6.4 | 6.0 | 5.8 | 5.3 | 4.7 | 4.7 | 4.6 | 4.2 | 4.0 |
| 9.0 | 8.8 | 9.0 | 8.9 | 8.9 | 9.0 | 8.7 | 8.0 | 7.5 | 7.1 | 6.6 | 6.0 | 5.9 | 5.2 | 4.9 | 4.3 | 4.1 | 4.1 |
| 7.1 | 7.1 | 7.2 | 7.2 | 7.4 | 7.3 | 7.0 | 7.2 | 8.0 | 8.0 | 8.0 | 7.9 | 7.1 | 6.7 | 6.9 | 6.6 | 6.2 | 6.1 |
| 95.2 | 91.4 | 23.7 | -13.9 | -14.1 | -30.5 | -30.0 | -30.5 | -40.7 | -46.9 | -49.3 | -44.9 | -45.4 | -46.3 | -42.5 - |  | -29.9 | -34.4 |
| 11.2 | 7.2 | 6.9 | 7.3 | 7.6 | 8.0 | 7.1 | 5.5 | 5.9 | 5.6 | 4.8 | 6.4 | 6.1 | 6.0 | 6.7 | 6.1 | 5.7 | 3.6 |
| 5.4 | 5.4 | 6.5 | 6.7 | 6.8 | 5.0 | 5.5 | 5.5 | 5.5 | 4.9 | 4.9 | 4.4 | 4.5 | 3.5 | 2.6 | 3.1 | 1.6 | 2.6 |
| 17.6 | 19.9 | 23.9 | 32.9 | 41.5 | 34.4 | 30.2 | 32.2 | 25.7 | 27.0 | 29.4 | 33.1 | 29.8 | 24.9 | 25.1 | 23.8 | 24.5 | 28.0 |
| 19.3 | 19.7 | 27.2 | 44.9 | 60.7 | 50.4 | 44.7 | 48.3 | 37.8 | 39.8 | 48.7 | 57.2 | 49.4 | 41.7 | 42.0 | 41.3 | 44.5 | 54.8 |
| 44.2 | 39.9 | 48.8 | 54.6 | 70.4 | 75.9 | 58.8 | 51.7 | 33.4 | 36.4 | 37.7 | 48.4 | 48.4 | 36.5 | 28.8 | 30.8 | 32.3 | 35.2 |
| 18.1 | 18.8 | 26.2 | 44.5 | 60.2 | 49.1 | 44.0 | 48.2 | 38.1 | 40.0 | 49.2 | 57.6 | 49.5 | 41.9 | 42.6 | 41.8 | 45.1 | 55.8 |
| 15.6 | 19.9 | 19.9 | 18.9 | 19.6 | 16.2 | 13.7 | 13.4 | 12.2 | 13.5 | 10.1 | 10.4 | 11.1 | 8.7 | 8.8 | 7.4 | 6.5 | 6.2 |
| 14.1 | 15.5 | 15.8 | 15.2 | 13.7 | 12.0 | 11.0 | 11.1 | 9.0 | 10.7 | 6.2 | 6.3 | 6.4 | 5.4 | 5.4 | 4.2 | 4.0 | 4.2 |
| 20.0 | 33.1 | 33.0 | 30.5 | 38.4 | 30.2 | 22.7 | 21.6 | 23.8 | 23.9 | 24.0 | 25.0 | 28.1 | 20.7 | 21.2 | 19.1 | 15.7 | 13.5 |
| 6.3 | 6.7 | 6.3 | 5.9 | 5.9 | 6.0 | 6.1 | 6.4 | 6.4 | 6.0 | 5.5 | 5.0 | 4.6 | 4.0 | 4.0 | 4.2 | 4.4 | 3.8 |
| 5.1 | 6.7 | 7.0 | 6.9 | 7.1 | 8.5 | 9.7 | 11.7 | 12.4 | 11.7 | 10.7 | 9.4 | 8.5 | 7.3 | 7.6 | 8.4 | 8.6 | 6.5 |
| 8.8 | 9.9 | 10.6 | 10.8 | 10.2 | 9.7 | 10.6 | 10.8 | 10.3 | 9.3 | 7.3 | 6.0 | 6.1 | 4.7 | 3.2 | 3.0 | 3.3 | 3.7 |
| 4.1 | 5.5 | 5.0 | 5.1 | 5.2 | 5.0 | 5.4 | 6.8 | 6.6 | 5.3 | 5.7 | 5.0 | 4.5 | 3.4 | 4.1 | 4.1 | 4.9 | 5.7 |
| 5.5 | 8.5 | 9.0 | 8.7 | 9.5 | 14.1 | 17.1 | 21.6 | 24.0 | 23.6 | 21.9 | 19.2 | 16.5 | 15.0 | 17.1 | 19.7 | 20.2 | 13.3 |
| 3.1 | 3.7 | 4.1 | 3.7 | 3.2 | 2.4 | 2.1 | 2.7 | 2.5 | 1.4 | 0.4 | 0.2 | -0.4 | -1.6 | -2.5 | -2.1 | -2.2 | -1.9 |
| 4.3 | 4.0 | 3.8 | 4.1 | 4.4 | 3.8 | 4.1 | 4.7 | 4.6 | 4.2 | 3.3 | 3.9 | 4.0 | 3.5 | 3.3 | 3.2 | 3.2 | 3.5 |
| -9.0 | -8.7 | -7.7 | -7.1 | -5.6 | -6.0 | -4.0 | 1.5 | 0.4 | 0.9 | 0.2 | 0.9 | 2.5 | 2.6 | -0.4 | -0.2 | -1.1 | -1.4 |
| 5.0 | 4.1 | 4.3 | 4.2 | 4.0 | 4.0 | 3.9 | 3.7 | 3.5 | 2.7 | 2.3 | 1.9 | 2.3 | 2.8 | 2.6 | 2.4 | 1.9 | 1.6 |
| 7.2 | 7.9 | 7.6 | 6.7 | 6.6 | 6.2 | 5.2 | 5.3 | 4.9 | 4.3 | 4.6 | 4.3 | 4.5 | 3.4 | 3.4 | 2.7 | 2.5 | 2.5 |
| 6.8 | 6.7 | 6.1 | 5.6 | 5.5 | 5.2 | 4.9 | 4.7 | 4.4 | 4.1 | 3.7 | 3.4 | 3.3 | 2.9 | 2.7 | 2.8 | 3.0 | 2.9 |
| 6.9 | 6.6 | 6.3 | 5.7 | 5.6 | 5.4 | 5.1 | 5.0 | 4.8 | 4.4 | 4.2 | 3.9 | 3.5 | 3.2 | 2.8 | 2.8 | 2.6 | 2.2 |
| 7.0 | 6.7 | 6.3 | 5.8 | 5.7 | 5.5 | 5.2 | 5.1 | 4.8 | 4.4 | 4.2 | 3.9 | 3.5 | 3.2 | 2.9 | 2.9 | 2.6 | 2.2 |
| 4.8 | 4.9 | 4.6 | 4.4 | 4.4 | 4.4 | 4.2 | 4.0 | 4.2 | 4.0 | 3.5 | 3.5 | 3.7 | 3.7 | 3.5 | 3.7 | 3.6 | 3.5 |
| 6.5654 - |  | 6.6 - |  | 6.5 | 5.3 | 6.4 - | - | - | - |  | 8.4 | 6.9 | 6.6 | 7.3 | 7.0 | 7.2 | 8.3 |
| 5.4 | 6.5 | 5.6 | 5.1 | 4.8 | 4.0 | 3.5 | 2.9 | 2.4 | 2.7 | 2.5 | 2.1 | 1.7 | 0.9 | 1.0 | 0.8 | 1.0 | 1.5 |
| 15.3 | 14.6 | 11.4 | 9.5 | 9.0 | 8.0 | 8.4 | 7.5 | 6.4 | 5.4 | 4.1 | 3.8 | 4.6 | 4.4 | 4.4 | 6.0 | 10.4 | 11.3 |
| 3.9 | 4.1 | 4.2 | 4.5 | 4.7 | 4.9 | 4.4 | 4.8 | 5.1 | 5.1 | 3.3 | 2.8 | 3.8 | 3.5 | 3.5 | 3.7 | 1.9 | 0.6 |
| 1.3 | 1.4 | 1.5 | 1.5 | 1.7 | 1.7 | 1.7 | 1.6 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.3 | 1.2 | 2.4 | 2.2 |
| 5.8 | 5.9 | 5.8 | 5.9 | 6.7 | 6.5 | 6.2 | 5.7 | 6.2 | 5.4 | 4.3 | 4.5 | 4.0 | 3.4 | 3.6 | 3.1 | 2.5 | 2.8 |


| 7.8 | 8.2 | 8.2 | 8.5 | 9.0 | 8.5 | 8.2 | 8.6 | 7.9 | 7.5 | 7.1 | 6.8 | 6.2 | 5.4 | 5.2 | 5.3 | 5.3 | 4.9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10.9 | 11.2 | 11.4 | 10.9 | 10.4 | 10.1 | 9.4 | 8.8 | 7.9 | 7.0 | 6.3 | 6.1 | 5.3 | 4.6 | 3.7 | 3.4 | 2.4 | 2.1 |
| 12.4 | 13.0 | 13.5 | 13.1 | 12.2 | 11.9 | 10.8 | 10.0 | 8.7 | 7.4 | 6.5 | 6.4 | 5.4 | 4.5 | 2.9 | 2.5 | 0.9 | 0.7 |
| 15.9 | 16.2 | 16.4 | 15.0 | 13.8 | 11.6 | 10.3 | 9.4 | 7.8 | 6.8 | 4.7 | 4.6 | 3.5 | 2.7 | 1.6 | 1.5 | 0.2 | 0.6 |
| 8.0 | 9.0 | 10.6 | 10.9 | 11.8 | 14.2 | 14.4 | 13.7 | 13.0 | 12.3 | 12.6 | 12.8 | 11.9 | 10.5 | 8.0 | 5.8 | 0.6 | 0.1 |
| 15.5 | 15.9 | 16.2 | 14.9 | 13.5 | 11.8 | 9.1 | 7.0 | 5.2 | 3.1 | 1.6 | 1.6 | 1.8 | 0.6 | -0.5 | 1.8 | 0.7 | 0.1 |
| 9.4 | 10.4 | 9.4 | 9.2 | 8.0 | 8.1 | 7.7 | 8.5 | 7.7 | 5.7 | 5.0 | 4.0 | 3.0 | 3.1 | 2.3 | 2.2 | 3.2 | 2.8 |
| 12.7 | 12.9 | 13.4 | 13.8 | 11.9 | 12.0 | 9.8 | 8.0 | 6.7 | 5.0 | 5.1 | 5.3 | 4.5 | 3.7 | 2.0 | 1.1 | 0.2 | -0.2 |
| 15.4 | 15.7 | 16.6 | 15.8 | 14.4 | 12.6 | 11.0 | 10.3 | 8.2 | 7.4 | 5.6 | 5.7 | 4.1 | 3.1 | 1.4 | 1.3 | 0.4 | 0.4 |
| 8.6 | 8.5 | 8.0 | 7.6 | 7.7 | 7.4 | 7.2 | 6.9 | 6.8 | 6.4 | 6.0 | 5.8 | 5.3 | 4.7 | 4.7 | 4.6 | 4.2 | 4.0 |
| 9.0 | 8.8 | 9.0 | 8.9 | 8.9 | 9.0 | 8.7 | 8.0 | 7.5 | 7.1 | 6.6 | 6.0 | 5.9 | 5.2 | 4.9 | 4.3 | 4.1 | 4.1 |
| 7.1 | 7.1 | 7.2 | 7.2 | 7.4 | 7.3 | 7.0 | 7.2 | 8.0 | 8.0 | 8.0 | 7.9 | 7.1 | 6.7 | 6.9 | 6.6 | 6.2 | 6.1 |
| 95.2 | 91.4 | 23.7 | -13.9 | -14.1 | -30.5 | -30.0 | -30.5 | -40.7 | -46.9 | -49.3 | -44.9 | -45.4 | -46.3 | -42.5- |  | -29.9 | -34.4 |
| 11.2 | 7.2 | 6.9 | 7.3 | 7.6 | 8.0 | 7.1 | 5.5 | 5.9 | 5.6 | 4.8 | 6.4 | 6.1 | 6.0 | 6.7 | 6.1 | 5.7 | 3.6 |
| 5.4 | 5.4 | 6.5 | 6.7 | 6.8 | 5.0 | 5.5 | 5.5 | 5.5 | 4.9 | 4.9 | 4.4 | 4.5 | 3.5 | 2.6 | 3.1 | 1.6 | 2.6 |
| 17.6 | 19.9 | 23.9 | 32.9 | 41.5 | 34.4 | 30.2 | 32.2 | 25.7 | 27.0 | 29.4 | 33.1 | 29.8 | 24.9 | 25.1 | 23.8 | 24.5 | 28.0 |
| 19.3 | 19.7 | 27.2 | 44.9 | 60.7 | 50.4 | 44.7 | 48.3 | 37.8 | 39.8 | 48.7 | 57.2 | 49.4 | 41.7 | 42.0 | 41.3 | 44.5 | 54.8 |
| 44.2 | 39.9 | 48.8 | 54.6 | 70.4 | 75.9 | 58.8 | 51.7 | 33.4 | 36.4 | 37.7 | 48.4 | 48.4 | 36.5 | 28.8 | 30.8 | 32.3 | 35.2 |
| 18.1 | 18.8 | 26.2 | 44.5 | 60.2 | 49.1 | 44.0 | 48.2 | 38.1 | 40.0 | 49.2 | 57.6 | 49.5 | 41.9 | 42.6 | 41.8 | 45.1 | 55.8 |
| 15.6 | 19.9 | 19.9 | 18.9 | 19.6 | 16.2 | 13.7 | 13.4 | 12.2 | 13.5 | 10.1 | 10.4 | 11.1 | 8.7 | 8.8 | 7.4 | 6.5 | 6.2 |
| 14.1 | 15.5 | 15.8 | 15.2 | 13.7 | 12.0 | 11.0 | 11.1 | 9.0 | 10.7 | 6.2 | 6.3 | 6.4 | 5.4 | 5.4 | 4.2 | 4.0 | 4.2 |
| 20.0 | 33.1 | 33.0 | 30.5 | 38.4 | 30.2 | 22.7 | 21.6 | 23.8 | 23.9 | 24.0 | 25.0 | 28.1 | 20.7 | 21.2 | 19.1 | 15.7 | 13.5 |
| 6.3 | 6.7 | 6.3 | 5.9 | 5.9 | 6.0 | 6.1 | 6.4 | 6.4 | 6.0 | 5.5 | 5.0 | 4.6 | 4.0 | 4.0 | 4.2 | 4.4 | 3.8 |
| 5.1 | 6.7 | 7.0 | 6.9 | 7.1 | 8.5 | 9.7 | 11.7 | 12.4 | 11.7 | 10.7 | 9.4 | 8.5 | 7.3 | 7.6 | 8.4 | 8.6 | 6.5 |
| 8.8 | 9.9 | 10.6 | 10.8 | 10.2 | 9.7 | 10.6 | 10.8 | 10.3 | 9.3 | 7.3 | 6.0 | 6.1 | 4.7 | 3.2 | 3.0 | 3.3 | 3.7 |
| 4.1 | 5.5 | 5.0 | 5.1 | 5.2 | 5.0 | 5.4 | 6.8 | 6.6 | 5.3 | 5.7 | 5.0 | 4.5 | 3.4 | 4.1 | 4.1 | 4.9 | 5.7 |
| 5.5 | 8.5 | 9.0 | 8.7 | 9.5 | 14.1 | 17.1 | 21.6 | 24.0 | 23.6 | 21.9 | 19.2 | 16.5 | 15.0 | 17.1 | 19.7 | 20.2 | 13.3 |
| 3.1 | 3.7 | 4.1 | 3.7 | 3.2 | 2.4 | 2.1 | 2.7 | 2.5 | 1.4 | 0.4 | 0.2 | -0.4 | -1.6 | -2.5 | -2.1 | -2.2 | -1.9 |
| 4.3 | 4.0 | 3.8 | 4.1 | 4.4 | 3.8 | 4.1 | 4.7 | 4.6 | 4.2 | 3.3 | 3.9 | 4.0 | 3.5 | 3.3 | 3.2 | 3.2 | 3.5 |
| -9.0 | -8.7 | -7.7 | -7.1 | -5.6 | -6.0 | -4.0 | 1.5 | 0.4 | 0.9 | 0.2 | 0.9 | 2.5 | 2.6 | -0.4 | -0.2 | -1.1 | -1.4 |
| 5.0 | 4.1 | 4.3 | 4.2 | 4.0 | 4.0 | 3.9 | 3.7 | 3.5 | 2.7 | 2.3 | 1.9 | 2.3 | 2.8 | 2.6 | 2.4 | 1.9 | 1.6 |
| 7.2 | 7.9 | 7.6 | 6.7 | 6.6 | 6.2 | 5.2 | 5.3 | 4.9 | 4.3 | 4.6 | 4.3 | 4.5 | 3.4 | 3.4 | 2.7 | 2.5 | 2.5 |
| 6.8 | 6.7 | 6.1 | 5.6 | 5.5 | 5.2 | 4.9 | 4.7 | 4.4 | 4.1 | 3.7 | 3.4 | 3.3 | 2.9 | 2.7 | 2.8 | 3.0 | 2.9 |
| 6.9 | 6.6 | 6.3 | 5.7 | 5.6 | 5.4 | 5.1 | 5.0 | 4.8 | 4.4 | 4.2 | 3.9 | 3.5 | 3.2 | 2.8 | 2.8 | 2.6 | 2.2 |
| 7.0 | 6.7 | 6.3 | 5.8 | 5.7 | 5.5 | 5.2 | 5.1 | 4.8 | 4.4 | 4.2 | 3.9 | 3.5 | 3.2 | 2.9 | 2.9 | 2.6 | 2.2 |
| 4.8 | 4.9 | 4.6 | 4.4 | 4.4 | 4.4 | 4.2 | 4.0 | 4.2 | 4.0 | 3.5 | 3.5 | 3.7 | 3.7 | 3.5 | 3.7 | 3.6 | 3.5 |
| 6.5654 - |  | 6.6 - |  | 6.5 | 5.3 | 6.4 - | - | - | - |  | 8.4 | 6.9 | 6.6 | 7.3 | 7.0 | 7.2 | 8.3 |
| 5.4 | 6.5 | 5.6 | 5.1 | 4.8 | 4.0 | 3.5 | 2.9 | 2.4 | 2.7 | 2.5 | 2.1 | 1.7 | 0.9 | 1.0 | 0.8 | 1.0 | 1.5 |
| 15.3 | 14.6 | 11.4 | 9.5 | 9.0 | 8.0 | 8.4 | 7.5 | 6.4 | 5.4 | 4.1 | 3.8 | 4.6 | 4.4 | 4.4 | 6.0 | 10.4 | 11.3 |
| 3.9 | 4.1 | 4.2 | 4.5 | 4.7 | 4.9 | 4.4 | 4.8 | 5.1 | 5.1 | 3.3 | 2.8 | 3.8 | 3.5 | 3.5 | 3.7 | 1.9 | 0.6 |
| 1.3 | 1.4 | 1.5 | 1.5 | 1.7 | 1.7 | 1.7 | 1.6 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.3 | 1.2 | 2.4 | 2.2 |
| 5.8 | 5.9 | 5.8 | 5.9 | 6.7 | 6.5 | 6.2 | 5.7 | 6.2 | 5.4 | 4.3 | 4.5 | 4.0 | 3.4 | 3.6 | 3.1 | 2.5 | 2.8 |


| 7.8 | 8.2 | 8.2 | 8.5 | 9.0 | 8.5 | 8.2 | 8.6 | 7.9 | 7.5 | 7.1 | 6.8 | 6.2 | 5.4 | 5.2 | 5.3 | 5.3 | 4.9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10.9 | 11.2 | 11.4 | 10.9 | 10.4 | 10.1 | 9.4 | 8.8 | 7.9 | 7.0 | 6.3 | 6.1 | 5.3 | 4.6 | 3.7 | 3.4 | 2.4 | 2.1 |
| 12.4 | 13.0 | 13.5 | 13.1 | 12.2 | 11.9 | 10.8 | 10.0 | 8.7 | 7.4 | 6.5 | 6.4 | 5.4 | 4.5 | 2.9 | 2.5 | 0.9 | 0.7 |
| 15.9 | 16.2 | 16.4 | 15.0 | 13.8 | 11.6 | 10.3 | 9.4 | 7.8 | 6.8 | 4.7 | 4.6 | 3.5 | 2.7 | 1.6 | 1.5 | 0.2 | 0.6 |
| 8.0 | 9.0 | 10.6 | 10.9 | 11.8 | 14.2 | 14.4 | 13.7 | 13.0 | 12.3 | 12.6 | 12.8 | 11.9 | 10.5 | 8.0 | 5.8 | 0.6 | 0.1 |
| 15.5 | 15.9 | 16.2 | 14.9 | 13.5 | 11.8 | 9.1 | 7.0 | 5.2 | 3.1 | 1.6 | 1.6 | 1.8 | 0.6 | -0.5 | 1.8 | 0.7 | 0.1 |
| 9.4 | 10.4 | 9.4 | 9.2 | 8.0 | 8.1 | 7.7 | 8.5 | 7.7 | 5.7 | 5.0 | 4.0 | 3.0 | 3.1 | 2.3 | 2.2 | 3.2 | 2.8 |
| 12.7 | 12.9 | 13.4 | 13.8 | 11.9 | 12.0 | 9.8 | 8.0 | 6.7 | 5.0 | 5.1 | 5.3 | 4.5 | 3.7 | 2.0 | 1.1 | 0.2 | -0.2 |
| 15.4 | 15.7 | 16.6 | 15.8 | 14.4 | 12.6 | 11.0 | 10.3 | 8.2 | 7.4 | 5.6 | 5.7 | 4.1 | 3.1 | 1.4 | 1.3 | 0.4 | 0.4 |
| 8.6 | 8.5 | 8.0 | 7.6 | 7.7 | 7.4 | 7.2 | 6.9 | 6.8 | 6.4 | 6.0 | 5.8 | 5.3 | 4.7 | 4.7 | 4.6 | 4.2 | 4.0 |
| 9.0 | 8.8 | 9.0 | 8.9 | 8.9 | 9.0 | 8.7 | 8.0 | 7.5 | 7.1 | 6.6 | 6.0 | 5.9 | 5.2 | 4.9 | 4.3 | 4.1 | 4.1 |
| 7.1 | 7.1 | 7.2 | 7.2 | 7.4 | 7.3 | 7.0 | 7.2 | 8.0 | 8.0 | 8.0 | 7.9 | 7.1 | 6.7 | 6.9 | 6.6 | 6.2 | 6.1 |
| 95.2 | 91.4 | 23.7 | -13.9 | -14.1 | -30.5 | -30.0 | -30.5 | -40.7 | -46.9 | -49.3 | -44.9 | -45.4 | -46.3 | -42.5- |  | -29.9 | -34.4 |
| 11.2 | 7.2 | 6.9 | 7.3 | 7.6 | 8.0 | 7.1 | 5.5 | 5.9 | 5.6 | 4.8 | 6.4 | 6.1 | 6.0 | 6.7 | 6.1 | 5.7 | 3.6 |
| 5.4 | 5.4 | 6.5 | 6.7 | 6.8 | 5.0 | 5.5 | 5.5 | 5.5 | 4.9 | 4.9 | 4.4 | 4.5 | 3.5 | 2.6 | 3.1 | 1.6 | 2.6 |
| 17.6 | 19.9 | 23.9 | 32.9 | 41.5 | 34.4 | 30.2 | 32.2 | 25.7 | 27.0 | 29.4 | 33.1 | 29.8 | 24.9 | 25.1 | 23.8 | 24.5 | 28.0 |
| 19.3 | 19.7 | 27.2 | 44.9 | 60.7 | 50.4 | 44.7 | 48.3 | 37.8 | 39.8 | 48.7 | 57.2 | 49.4 | 41.7 | 42.0 | 41.3 | 44.5 | 54.8 |
| 44.2 | 39.9 | 48.8 | 54.6 | 70.4 | 75.9 | 58.8 | 51.7 | 33.4 | 36.4 | 37.7 | 48.4 | 48.4 | 36.5 | 28.8 | 30.8 | 32.3 | 35.2 |
| 18.1 | 18.8 | 26.2 | 44.5 | 60.2 | 49.1 | 44.0 | 48.2 | 38.1 | 40.0 | 49.2 | 57.6 | 49.5 | 41.9 | 42.6 | 41.8 | 45.1 | 55.8 |
| 15.6 | 19.9 | 19.9 | 18.9 | 19.6 | 16.2 | 13.7 | 13.4 | 12.2 | 13.5 | 10.1 | 10.4 | 11.1 | 8.7 | 8.8 | 7.4 | 6.5 | 6.2 |
| 14.1 | 15.5 | 15.8 | 15.2 | 13.7 | 12.0 | 11.0 | 11.1 | 9.0 | 10.7 | 6.2 | 6.3 | 6.4 | 5.4 | 5.4 | 4.2 | 4.0 | 4.2 |
| 20.0 | 33.1 | 33.0 | 30.5 | 38.4 | 30.2 | 22.7 | 21.6 | 23.8 | 23.9 | 24.0 | 25.0 | 28.1 | 20.7 | 21.2 | 19.1 | 15.7 | 13.5 |
| 6.3 | 6.7 | 6.3 | 5.9 | 5.9 | 6.0 | 6.1 | 6.4 | 6.4 | 6.0 | 5.5 | 5.0 | 4.6 | 4.0 | 4.0 | 4.2 | 4.4 | 3.8 |
| 5.1 | 6.7 | 7.0 | 6.9 | 7.1 | 8.5 | 9.7 | 11.7 | 12.4 | 11.7 | 10.7 | 9.4 | 8.5 | 7.3 | 7.6 | 8.4 | 8.6 | 6.5 |
| 8.8 | 9.9 | 10.6 | 10.8 | 10.2 | 9.7 | 10.6 | 10.8 | 10.3 | 9.3 | 7.3 | 6.0 | 6.1 | 4.7 | 3.2 | 3.0 | 3.3 | 3.7 |
| 4.1 | 5.5 | 5.0 | 5.1 | 5.2 | 5.0 | 5.4 | 6.8 | 6.6 | 5.3 | 5.7 | 5.0 | 4.5 | 3.4 | 4.1 | 4.1 | 4.9 | 5.7 |
| 5.5 | 8.5 | 9.0 | 8.7 | 9.5 | 14.1 | 17.1 | 21.6 | 24.0 | 23.6 | 21.9 | 19.2 | 16.5 | 15.0 | 17.1 | 19.7 | 20.2 | 13.3 |
| 3.1 | 3.7 | 4.1 | 3.7 | 3.2 | 2.4 | 2.1 | 2.7 | 2.5 | 1.4 | 0.4 | 0.2 | -0.4 | -1.6 | -2.5 | -2.1 | -2.2 | -1.9 |
| 4.3 | 4.0 | 3.8 | 4.1 | 4.4 | 3.8 | 4.1 | 4.7 | 4.6 | 4.2 | 3.3 | 3.9 | 4.0 | 3.5 | 3.3 | 3.2 | 3.2 | 3.5 |
| -9.0 | -8.7 | -7.7 | -7.1 | -5.6 | -6.0 | -4.0 | 1.5 | 0.4 | 0.9 | 0.2 | 0.9 | 2.5 | 2.6 | -0.4 | -0.2 | -1.1 | -1.4 |
| 5.0 | 4.1 | 4.3 | 4.2 | 4.0 | 4.0 | 3.9 | 3.7 | 3.5 | 2.7 | 2.3 | 1.9 | 2.3 | 2.8 | 2.6 | 2.4 | 1.9 | 1.6 |
| 7.2 | 7.9 | 7.6 | 6.7 | 6.6 | 6.2 | 5.2 | 5.3 | 4.9 | 4.3 | 4.6 | 4.3 | 4.5 | 3.4 | 3.4 | 2.7 | 2.5 | 2.5 |
| 6.8 | 6.7 | 6.1 | 5.6 | 5.5 | 5.2 | 4.9 | 4.7 | 4.4 | 4.1 | 3.7 | 3.4 | 3.3 | 2.9 | 2.7 | 2.8 | 3.0 | 2.9 |
| 6.9 | 6.6 | 6.3 | 5.7 | 5.6 | 5.4 | 5.1 | 5.0 | 4.8 | 4.4 | 4.2 | 3.9 | 3.5 | 3.2 | 2.8 | 2.8 | 2.6 | 2.2 |
| 7.0 | 6.7 | 6.3 | 5.8 | 5.7 | 5.5 | 5.2 | 5.1 | 4.8 | 4.4 | 4.2 | 3.9 | 3.5 | 3.2 | 2.9 | 2.9 | 2.6 | 2.2 |
| 4.8 | 4.9 | 4.6 | 4.4 | 4.4 | 4.4 | 4.2 | 4.0 | 4.2 | 4.0 | 3.5 | 3.5 | 3.7 | 3.7 | 3.5 | 3.7 | 3.6 | 3.5 |
| 6.5654 - |  | 6.6 - |  | 6.5 | 5.3 | 6.4 - | - | - | - |  | 8.4 | 6.9 | 6.6 | 7.3 | 7.0 | 7.2 | 8.3 |
| 5.4 | 6.5 | 5.6 | 5.1 | 4.8 | 4.0 | 3.5 | 2.9 | 2.4 | 2.7 | 2.5 | 2.1 | 1.7 | 0.9 | 1.0 | 0.8 | 1.0 | 1.5 |
| 15.3 | 14.6 | 11.4 | 9.5 | 9.0 | 8.0 | 8.4 | 7.5 | 6.4 | 5.4 | 4.1 | 3.8 | 4.6 | 4.4 | 4.4 | 6.0 | 10.4 | 11.3 |
| 3.9 | 4.1 | 4.2 | 4.5 | 4.7 | 4.9 | 4.4 | 4.8 | 5.1 | 5.1 | 3.3 | 2.8 | 3.8 | 3.5 | 3.5 | 3.7 | 1.9 | 0.6 |
| 1.3 | 1.4 | 1.5 | 1.5 | 1.7 | 1.7 | 1.7 | 1.6 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | 1.3 | 1.2 | 2.4 | 2.2 |
| 5.8 | 5.9 | 5.8 | 5.9 | 6.7 | 6.5 | 6.2 | 5.7 | 6.2 | 5.4 | 4.3 | 4.5 | 4.0 | 3.4 | 3.6 | 3.1 | 2.5 | 2.8 |

Special aggregate indexes
All items less food
All items less shelter
All items less food and shelter
All items less food, shelter, and energy
All items less food, shelter, energy, and used cars and trucks
All items less medical care
All items less energy
Commodities
Commodities less food, energy, and used cars and trucks
Commodities less food
Commodities less food and beverages Services
Services less rent of shelter (11)
Services less medical care services
Durables
Nondurables
Nondurables less food
Nondurables less food and beverages
Nondurables less food, beverages, and appare
Nondurables less food and apparel
Housing
Education and communication (1)
Education (1)
Communication (1)
Information and information processing (1)
Information technology, hardware and services (13)
Recreation (1)
Video and audio (1)
Pets, pet products and services (1)
Photography (1)
Food and beverages
Domestically produced farm food
Other services
Apparel less footwear
Fuels and utilities
Household energy
Medical care
Transportation
Private transportation
New and used motor vehicles (1)
Utilities and public transportation
Household furnishings and operations
Other goods and services
Personal care

Source: Haver, DWS Investment GmbH as of October 2022. Past performance may not be indicative of future results.
For institutional client and registered representative use only. Not for public viewing or distribution.
U.S. 10-year Treasury yields: nominal and real


Source: Haver, DWS Investment GmbH as of 11/8/2022. Past performance may not be indicative of future results.
U.S. 10-year breakeven


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

## Productivity vs. Unit Labor Costs



Source: Haver, DWS Investment GmbH as of 3Q2022. Past performance may not be indicative of future results.
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## U.S. bank loan growth vs. GDP growth



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

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



Source: Factset, DWS Investment GmbH as of 3Q2022. Past performance may not be indicative of future results.
S\&P 500 Banks loan reserves\% total net loans


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

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


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

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

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

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

Bottom-up blended 3Q EPS is $\$ 55.90,+3.6 \% \mathrm{y} / \mathrm{y}$. Blended sales growth is $+11.1 \% \mathrm{y} / \mathrm{y}$. Blended pro-forma net margin is $12.6 \%$, vs. $13.1 \%$ in 2Q22 and $13.6 \%$ a year ago. Bottom-up consensus 2022 EPS is $\$ 223.13$. Our estimate is $\$ 222$ ( $55+58+55+54=\$ 222$ ). Bottom-up consensus 2023 S\&P EPS has been cut to \$232.54, our estimate is $\$ 220(52+55+56+57=\$ 220)$.
We model trough quarterly S\&P EPS of $\$ 52$ in 1Q23, down $5-10 \%$ from the 1Q22 peak ex. Energy and down 10\% from the 2Q22 peak of $\$ 58$ with Energy for 4 main reasons: 1) small recession expected for US and Europe over the next couple of quarters followed by slow growth, causing a $5 \%$ dip or near $\$ 3$ hit to 1Q23 EPS from \$55 in 1Q22, 2) dollar strength that hits S\&P EPS from 1 Q22 levels by $\$ 1-\$ 1.50$ quarterly through 2023, 3) minimum book profit and buyback taxes of near $\$ 3$ annually in 2023, 4) energy profits $\$ 2-3$ above 1 Q22 levels quarterly in 1H23.
By sector, 3Q blended EPS y/y growth is strongest at Energy ( $+144 \%$ y/y), Industrials (19\%), Consumer Discretionary (11\%) and Real Estate (5.9\%). EPS y/y growth is weakest at Communication Services (-22\%), Financials ( $-17 \%$ ), Utilities ( $-9.4 \%$ ) and Materials ( $-8.8 \%$ ).

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

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

S\&P 500 quarterly EPS revision


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

## S\&P 500 annual EPS revision



Source: Factset, IBES, DWS Investment GmbH as of 11/9/2022. Past performance may not be indicative of future results.
S\&P 5002022 EPS revision (ex. Energy)


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

## S\&P 5002022 EPS revision by sector



Source: Factset, IBES, DWS Investment GmbH as of 11/9/2022. 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 11/9/2022. Past performance may not be indicative of future results.
S\&P 500: 3Q22 earnings season summary statistics

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

[^0]EPS is considered beat or miss when the difference between actual and estimate as of $9 / 30 / 2022$ is more than $\$ 0.01$ ( $9 / 1 / 2022$ for pre-season reporters)
Sales is considered beat or miss when the difference between actual and estimate as of $9 / 30 / 2022$ is more than $\$ 20$ million ( $9 / 1 / 2022$ for pre-season reporters)
Source: Factset, DWS Investment GmbH as of 11/9/2022. Past performance may not be indicative of future results.

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

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


|  | 2018 |  |  |  |  | 2019 |  |  |  |  | 2020 |  |  |  |  | 2021 |  |  |  |  | 2022 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sales growth ( $\mathrm{y} / \mathrm{y}$ ) | 1Q18 | 2Q18 | 3Q18 | 4Q18 | 2018 | 1Q19 | 2Q19 | 3Q19 | 4Q19 | 2019 | 1Q20 | 2Q20 | Q20 | 4Q20 | 2020 | 1Q21 | 2Q21 | 3Q21 | 4Q21 | 2021 | 1Q22 | 2Q22 | 3Q22 |
| 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\% | 12.2\% | 11.1\% |
| S\&P 500 ex. Financials \& Real Est | 9.2\% | 10.2\% | 9.6\% | 1.7\% | 7.6\% | 3.3\% | 2.9\% | 2.1\% | 6.5\% | 3.7\% | -2.8\% | -11.7\% | -2.5\% | 1.5\% | -3.9\% | 12.2\% | 26.7\% | 17.5\% | 16.5\% | 18.8\% | 15.3\% | 13.1 | 12.0\% |
| S\&P 500 ex. Energy | 7.9\% | 8.5\% | 7.7\% | 1.6\% | 6.3\% | 3.7\% | 3.4\% | 3.4\% | 7.6\% | 4.5\% | -1.7\% | -6.8\% | 0.2\% | 4.0\% | -1.1\% | 12.4\% | 20.7\% | 13.5\% | 11.8\% | 15.1\% | 10.4\% | 6.9\% | 7.6\% |
| S\&P 500 ex. Tech | 8.0\% | 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\% | 10.5\% | 24.8\% | 16.3\% | 15.9\% | 17.3\% | 13.7\% | 12.5\% | 11.9\% |
| S\&P ex. Energy, Fin \& Real Est | 8.4\% | 8.6\% | 8.0\% | 1.0\% | 6.4\% | 3.5\% | 3.3\% | 3.3\% | 7.9\% | 4.5\% | -2.0\% | -7.2\% | 0.7\% | 4.7\% | -1.0\% | 13.0\% | 22.3\% | 13.9\% | 12.0\% | 16.6\% | 11.8\% | 7.5\% | 8.0\% |
| S\&P ex. Energy, Fin, Real Est, Healthcare | 8.7\% | 8.8\% | 8.2\% | -0.6\% | 6.4\% | 0.8\% | 0.5\% | 0.2\% | 6.5\% | 1.9\% | -5.3\% | -10.1\% | -2.1\% | 2.5\% | -4.2\% | 13.8\% | 23.0\% | 13.6\% | 11.6\% | 17.9\% | 10.9\% | 6.7\% | 8.9\% |
| FANG (FB, AMZN, NFLX, Google) | 37.6\% | 35.0\% | 27.4\% | 21.7\% | 29.4\% | 18.2\% | 20.9\% | 23.5\% | 20.6\% | 20.8\% | 21.3\% | 22.6\% | 27.7\% | 35.7\% | 27.5\% | 40.6\% | 38.8\% | 24.6\% | 16.9\% | 28.6\% | 11.7\% | 7.8\% | 10.4\% |
| FANG \& AAPL | 27.8\% | 28.1\% | 24.3\% | 9.5\% | 21.5\% | 8.8\% | 13.8\% | 15.2\% | 15.9\% | 12.6\% | 14.0\% | 18.9\% | 18.6\% | 30.2\% | 22.5\% | 44.6\% | 38.1\% | 25.9\% | 14.9\% | 27.5\% | 10.7\% | 6.0\% | 9.6\% |
| S\&P ex FANG | 7.9\% | 9.3\% | 8.5\% | 1.5\% | 6.7\% | 3.0\% | 2.4\% | 1.7\% | 5.9\% | 3.2\% | -3.2\% | -11.9\% | -3.7\% | -0.4\% | -4.8\% | 10.4\% | 23.8\% | 16.2\% | 15.6\% | 16.4\% | 13.6\% | 12.1\% | 11.2\% |
| S\&P ex FANG \& AAPL | 7.7\% | 9.2\% | 8.3\% | 1.7\% | 6.6\% | 3.2\% | 2.5\% | 1.7\% | 5.8\% | 3.3\% | -3.3\% | -12.4\% | -3.8\% | -1.1\% | -5.2\% | 9.5\% | 23.5\% | 15.9\% | 15.8\% | 16.2\% | 13.8\% | 12.4\% | 11.2\% |
| S\&P ex. Energy \& Fin \& Real Est \& FANG | 7.5\% | 7.7\% | 7.3\% | 0.1\% | 5.6\% | 2.9\% | 2.6\% | 2.4\% | 7.2\% | 3.8\% | -3.1\% | -8.7\% | -0.7\% | 2.9\% | -2.5\% | 11.4\% | 21.2\% | 13.2\% | 11.6\% | 15.8\% | 11.8\% | 7.4\% | 7.9\% |
| Communication Services | 12.1\% | 10.8\% | 13.2\% | 12.9\% | 11.7\% | 12.3\% | 14.9\% | 11.2\% | 3.9\% | 9.2\% | 4.0\% | -7.1\% | 0.8\% | 5.7\% | 2.7\% | 12.5\% | 26.1\% | 16.8\% | 11.7\% | 15.3\% | 7.5\% | 3.9\% | -1.9\% |
| Consumer Discretionary | 10.0\% | 9.9\% | 10.3\% | 7.7\% | 9.0\% | 4.4\% | 5.3\% | 5.6\% | 2.9\% | 4.2\% | 0.5\% | -11.8\% | 6.5\% | 11.9\% | 6.9\% | 19.7\% | 35.3\% | 10.6\% | 11.2\% | 13.2\% | 9.1\% | 11.0\% | 13.4\% |
| Multiline \& Specialty Retail | 5.3\% | 7.6\% | 5.9\% | 3.1\% | 0.0\% | 4.6\% | 3.2\% | 4.2\% | 2.7\% | 0.0\% | 0.8\% | 11.4\% | 16.5\% | 15.5\% | 0.0\% | 28.5\% | 17.2\% | 9.2\% | 10.0\% | 0.0\% | 3.1\% | 2.4\% | 2.8\% |
| Consumer Staples | 5.3\% | 5.5\% | 3.0\% | 1.9\% | 4.0\% | 2.7\% | 2.5\% | 3.6\% | 3.4\% | 2.7\% | 5.8\% | -0.3\% | 3.4\% | 4.7\% | 5.1\% | 3.8\% | 12.5\% | 10.1\% | 9.5\% | 6.5\% | 9.5\% | 8.5\% | 7.4\% |
| Energy | 18.1\% | 28.1\% | 25.7\% | 8.6\% | 20.2\% | 0.6\% | -0.7\% | -8.6\% | -6.1\% | -4.0\% | -10.8\% | -54.0\% | -34.4\% | -32.1\% | -32.9\% | 3.3\% | 110.8\% | 73.0\% | 88.6\% | 51.5\% | 58.7\% | 75.7\% | 49.9\% |
| Financials | 4.3\% | 8.2\% | 5.3\% | 4.7\% | 5.4\% | 4.7\% | 3.4\% | 4.1\% | 6.2\% | 4.6\% | 0.1\% | -4.0\% | -2.7\% | -0.6\% | -1.6\% | 9.3\% | 11.3\% | 10.7\% | 9.5\% | 5.5\% | 0.5\% | 2.4\% | 4.4\% |
| Financials ex. BAC, C \& JPM | 3.7\% | 9.3\% | 5.6\% | 4.6\% | 5.6\% | 5.6\% | 3.6\% | 4.3\% | 6.4\% | 5.0\% | -0.3\% | -6.5\% | -2.1\% | 0.2\% | -1.8\% | 10.6\% | 16.2\% | 12.1\% | 10.4\% | 6.6\% | 1.0\% | 1.9\% | 3.2\% |
| Health Care | 7.4\% | 7.5\% | 7.2\% | 7.7\% | 6.5\% | 14.4\% | 14.6\% | 15.4\% | 13.0\% | 15.1\% | 9.2\% | 2.7\% | 10.3\% | 12.6\% | 9.9\% | 10.6\% | 20.0\% | 15.0\% | 13.4\% | 12.7\% | 14.6\% | 9.8\% | 5.5\% |
| Industrials | 10.4\% | 9.7\% | 7.9\% | 4.8\% | 4.9\% | 5.0\% | -0.3\% | 0.7\% | 2.0\% | 2.3\% | -7.4\% | -23.7\% | -15.4\% | -8.7\% | -11.0\% | -0.8\% | 28.5\% | 16.5\% | 13.3\% | 14.2\% | 12.6\% | 13.0\% | 11.9\% |
| Industrials ex. BA | 6.4\% | 5.2\% | 3.8\% | 14.5\% | 7.6\% | -2.1\% | -12.1\% | -20.8\% | -27.8\% | -16.4\% | -26.5\% | -45.1\% | -29.5\% | -23.4\% | -31.2\% | -10.2\% | 44.3\% | 7.9\% | -6.8\% | 24.2\% | -8.5\% | -2.2\% | 12.3\% |
| Industrials ex. Defense | 11.0\% | 9.6\% | 7.0\% | 3.9\% | 4.2\% | 3.6\% | -1.1\% | 0.2\% | 1.4\% | 1.5\% | -8.4\% | -26.5\% | -17.3\% | -10.4\% | -12.6\% | -1.5\% | 31.9\% | 18.8\% | 15.2\% | 15.6\% | 14.6\% | 15.0\% | 13.0\% |
| Information Technology | 14.3\% | 12.8\% | 12.2\% | 2.0\% | 9.5\% | 0.5\% | -0.1\% | 2.1\% | 6.8\% | 2.7\% | 5.0\% | 6.0\% | 5.4\% | 11.5\% | 10.6\% | 22.4\% | 22.7\% | 19.2\% | 13.9\% | 15.4\% | 11.9\% | 6.9\% | 5.2\% |
| Materials | 24.0\% | 27.7\% | 11.3\% | 15.2\% | 13.1\% | 0.0\% | -16.4\% | -13.6\% | -14.9\% | -7.5\% | -16.5\% | -14.7\% | -5.3\% | 3.0\% | -5.0\% | 11.9\% | 37.1\% | 31.4\% | 27.0\% | 23.5\% | 23.7\% | 16.4\% | 5.7\% |
| Real Estate | 12.5\% | 11.3\% | 10.6\% | .7\% | 10.2\% | 5.1\% | 5.0\% | 5.8\% | 4.4\% | 9\% | 5.2\% | -5.9\% | -3.2\% | -2.2\% | -1.2\% | 1.9\% | 18.1\% | 15.7\% | 18.8\% | 9.6\% | 20.5\% | 17.2\% | 13.6\% |
| Utilities | 6.3\% | 3.2\% | 5.3\% | 4.0\% | 3.5\% | 1.1\% | 1.1\% | 0.5\% | -0.7\% | 7.6\% | -6.3\% | -6.2\% | -3.1\% | -3.1\% | -4.4\% | 16.2\% | 10.6\% | 9.4\% | 27.3\% | 7.7\% | 8.5\% | 23.1\% | 22.9\% |


|  | 2018 |  |  |  |  | 2019 |  |  |  |  | 2020 |  |  |  |  | 2021 |  |  |  |  | 2022 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net margins | 1 Q18 | 2 Q18 | 3Q18 | 4Q18 | 2018 | 1 Q19 | 2Q19 | 3 Q19 | 4Q19 | 2019 | 1Q20 | 2Q20 | 3Q20 | 4Q20 | 2020 | 1 Q21 | 2Q21 | 3Q21 | 4Q21 | 2021 | 1 Q22 | 2 Q 22 | 3 Q 22 |
| S\&P 500 | 11.7\% | 12.0\% | 12.2\% | 11.9\% | 11.7\% | 11.5\% | 11.8\% | 11.9\% | 11.4\% | 11.3\% | 10.2\% | 9.0\% | 11.3\% | 11.7\% | 10.6\% | 13.5\% | 13.8\% | 13.6\% | 13.0\% | 13.3\% | 13.0\% | 13.1\% | 12.6\% |
| S\&P 500 ex. Financials \& Real Est | 10.5\% | 11.0\% | 11.2\% | 11.0\% | 10.6\% | 10.2\% | 10.6\% | 11.0\% | 10.5\% | 10.2\% | 9.9\% | 8.7\% | 10.4\% | 10.4\% | 9.9\% | 11.9\% | 12.4\% | 12.5\% | 12.1\% | 12.0\% | 12.0\% | 12.3\% | 12.0\% |
| S\&P 500 ex. Energy | 12.2\% | 12.6\% | 12.6\% | 12.3\% | 12.1\% | 12.0\% | 12.3\% | 12.5\% | 11.9\% | 11.8\% | 10.7\% | 9.8\% | 12.0\% | 12.3\% | 11.3\% | 14.2\% | 14.4\% | 13.9\% | 13.3\% | 13.7\% | 13.2\% | 12.9\% | 12.4\% |
| S\&P 500 ex. Tech | 10.3\% | 10.7\% | 10.8\% | 10.4\% | 10.4\% | 10.3\% | 10.6\% | 10.7\% | 9.8\% | 10.1\% | 8.7\% | 7.5\% | 9.9\% | 9.9\% | 9.1\% | 12.0\% | 12.3\% | 12.0\% | 11.2\% | 11.8\% | 11.4\% | 11.8\% | 11.3\% |
| S\&P ex. Energy, Fin \& Real Est | 10.9\% | 11.5\% | 11.6\% | 11.4\% | 11.0\% | 10.8\% | 11.1\% | 11.6\% | 11.1\% | 10.7\% | 10.4\% | 9.6\% | 11.1\% | 11.1\% | 10.6\% | 12.5\% | 12.9\% | 12.9\% | 12.3\% | 12.3\% | 12.2\% | 12.0\% | 11.7\% |
| S\&P ex. Energy, Fin, Real Est, Healthcare | 10.9\% | 11.7\% | 11.7\% | 11.7\% | 11.1\% | 10.9\% | 11.3\% | 11.9\% | 11.4\% | 10.9\% | 10.5\% | 9.1\% | 11.3\% | 11.6\% | 10.8\% | 12.7\% | 13.3\% | 13.3\% | 12.8\% | 12.5\% | 12.2\% | 12.2\% | 11.9\% |
| FANG (FB, AMZN, NFLX, Google) | 14.0\% | 15.7\% | 16.1\% | 14.1\% | 14.3\% | 15.1\% | 14.8\% | 12.2\% | 13.5\% | 12.3\% | 10.6\% | 11.8\% | 15.3\% | 15.6\% | 13.6\% | 18.8\% | 17.9\% | 15.3\% | 17.9\% | 17.4\% | 9.7\% | 9.6\% | 5.7\% |
| FANG \& AAPL | 17.5\% | 17.8\% | 18.5\% | 18.0\% | 17.4\% | 16.8\% | 16.0\% | 15.3\% | 17.6\% | 15.4\% | 13.3\% | 13.9\% | 16.5\% | 19.2\% | 16.4\% | 21.3\% | 20.5\% | 18.1\% | 21.4\% | 19.9\% | 14.8\% | 13.5\% | 12.2\% |
| S\&P ex FANG | 11.6\% | 11.9\% | 12.1\% | 11.8\% | 11.6\% | 11.3\% | 11.7\% | 11.9\% | 11.3\% | 11.3\% | 10.2\% | 8.9\% | 11.1\% | 11.5\% | 10.5\% | 13.2\% | 13.6\% | 13.5\% | 12.7\% | 13.0\% | 13.1\% | 13.3\% | 12.9\% |
| S\&P ex FANG \& AAPL | 11.4\% | 11.8\% | 11.9\% | 11.4\% | 11.4\% | 11.1\% | 11.5\% | 11.7\% | 10.9\% | 11.1\% | 10.0\% | 8.6\% | 10.9\% | 10.9\% | 10.1\% | 12.8\% | 13.2\% | 13.2\% | 12.1\% | 12.7\% | 12.8\% | 13.1\% | 12.7\% |
| S\&P ex. Energy \& Fin \& Real Est \& FANG | 10.8\% | 11.3\% | 11.4\% | 11.2\% | 10.8\% | 10.6\% | 11.0\% | 11.5\% | 10.9\% | 10.6\% | 10.4\% | 9.4\% | 10.8\% | 10.7\% | 10.4\% | 12.0\% | 12.5\% | 12.7\% | 11.8\% | 11.9\% | 12.3\% | 12.1\% | 12.0\% |
| Communication Services | 15.6\% | 16.5\% | 16.7\% | 15.3\% | 15.6\% | 15.9\% | 16.4\% | 15.3\% | 16.1\% | 15.1\% | 13.9\% | 13.8\% | 15.6\% | 16.8\% | 15.1\% | 19.1\% | 18.9\% | 18.0\% | 17.3\% | 18.2\% | 17.0\% | 14.7\% | 12.3\% |
| Consumer Discretionary | 6.8\% | 7.9\% | 8.5\% | 7.1\% | 7.6\% | 7.0\% | 7.6\% | 8.0\% | 6.8\% | 7.1\% | 3.6\% | 3.0\% | 7.3\% | 6.3\% | 5.2\% | 8.1\% | 8.1\% | 7.6\% | 8.0\% | 7.8\% | 5.1\% | 6.1\% | 7.3\% |
| Multiline \& Specialty Retail | 6.6\% | 8.0\% | 6.8\% | 7.1\% | 7.9\% | 6.7\% | 7.9\% | 6.9\% | 7.0\% | 8.3\% | 3.8\% | 8.4\% | 8.1\% | 7.1\% | 9.0\% | 8.8\% | 9.6\% | 8.4\% | 7.2\% | 12.3\% | 8.0\% | 8.1\% | 7.8\% |
| Consumer Staples | 7.4\% | 8.1\% | 8.0\% | 7.6\% | 7.6\% | 7.1\% | 7.8\% | 8.0\% | 7.5\% | 7.5\% | 7.1\% | 7.4\% | 8.1\% | 7.6\% | 7.4\% | 7.5\% | 7.9\% | 7.8\% | 7.4\% | 7.7\% | 7.3\% | 7.3\% | 7.2\% |
| Energy | 6.4\% | 6.5\% | 7.9\% | 7.8\% | 7.3\% | 4.8\% | 5.9\% | 5.6\% | 4.8\% | 5.4\% | 3.8\% | -8.9\% | -0.8\% | -0.1\% | -0.8\% | 4.6\% | 6.6\% | 9.1\% | 9.8\% | 8.4\% | 10.7\% | 14.8\% | 14.5\% |
| Financials | 18.5\% | 17.7\% | 17.7\% | 16.2\% | 17.4\% | 18.1\% | 18.0\% | 16.6\% | 15.9\% | 17.1\% | 10.6\% | 9.4\% | 16.0\% | 19.2\% | 13.8\% | 23.1\% | 22.5\% | 19.5\% | 18.7\% | 21.7\% | 18.4\% | 17.0\% | 15.3\% |
| Financials ex. BAC, C \& JPM | 16.4\% | 15.6\% | 15.5\% | 14.0\% | 15.2\% | 15.7\% | 15.4\% | 14.4\% | 13.3\% | 14.7\% | 10.5\% | 8.9\% | 14.1\% | 16.4\% | 12.6\% | 19.6\% | 19.4\% | 16.8\% | 16.8\% | 18.9\% | 16.9\% | 15.3\% | 13.3\% |
| Health Care | 10.8\% | 10.9\% | 11.0\% | 10.0\% | 10.6\% | 10.4\% | 10.7\% | 10.4\% | 9.8\% | 10.1\% | 10.0\% | 11.0\% | 10.4\% | 9.5\% | 10.0\% | 11.8\% | 11.6\% | 11.7\% | 10.6\% | 11.5\% | 11.9\% | 11.3\% | 10.9\% |
| Industrials | 9.3\% | 10.6\% | 10.5\% | 10.2\% | 10.4\% | 9.3\% | 9.4\% | 10.5\% | 8.8\% | 9.7\% | 7.3\% | 2.5\% | 6.2\% | 6.7\% | 5.7\% | 6.9\% | 9.3\% | 9.4\% | 8.0\% | 8.4\% | 8.2\% | 10.4\% | 9.8\% |
| Industrials ex. BA | 9.3\% | 10.8\% | 10.7\% | 10.1\% | 10.2\% | 9.4\% | 11.1\% | 10.9\% | 9.8\% | 10.6\% | 8.0\% | 3.7\% | 6.8\% | 7.9\% | 6.9\% | 7.6\% | 9.7\% | 10.0\% | 9.7\% | 9.5\% | 9.0\% | 11.0\% | 11.2\% |
| Industrials ex. Defense | 9.2\% | 10.7\% | 10.4\% | 10.2\% | 10.4\% | 9.2\% | 9.4\% | 10.5\% | 8.7\% | 9.7\% | 7.0\% | 1.5\% | 5.7\% | 6.3\% | 5.2\% | 6.5\% | 9.2\% | 9.6\% | 7.8\% | 8.3\% | 7.9\% | 10.8\% | 9.7\% |
| Information Technology | 24.0\% | 24.2\% | 24.9\% | 23.7\% | 22.6\% | 21.8\% | 22.2\% | 23.0\% | 24.1\% | 21.9\% | 22.4\% | 20.9\% | 22.4\% | 24.3\% | 22.2\% | 24.8\% | 25.4\% | 25.7\% | 26.2\% | 24.6\% | 25.0\% | 23.5\% | 23.7\% |
| Materials | 9.1\% | 10.2\% | 4.2\% | 8.3\% | 8.9\% | 7.6\% | 11.4\% | 10.5\% | 9.5\% | 9.2\% | 9.0\% | 8.7\% | 9.6\% | 10.3\% | 9.2\% | 11.8\% | 14.7\% | 13.5\% | 13.0\% | 13.6\% | 13.6\% | 14.4\% | 11.2\% |
| Real Estate | 34.2\% | 34.8\% | 33.8\% | 34.0\% | 34.4\% | 34.9\% | 34.3\% | 34.3\% | 33.2\% | 34.3\% | 32.9\% | 33.5\% | 34.7\% | 35.6\% | 34.6\% | 36.4\% | 37.5\% | 36.2\% | 34.2\% | 37.4\% | 36.9\% | 37.1\% | 35.2\% |
| Utilities | 12.9\% | 12.1\% | 15.3\% | 9.1\% | 12.5\% | 13.2\% | 12.6\% | 16.8\% | 11.2\% | 12.9\% | 15.1\% | 14.6\% | 17.7\% | 11.4\% | 13.9\% | 13.0\% | 15.0\% | 18.1\% | 9.0\% | 13.7\% | 15.3\% | 11.7\% | 13.4\% |

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

S\&P 500: Blended bottom-up 3Q22 Sales and EPS sequential q/q growth by sector: 3Q22 vs. 2Q22
Blended btm-up 3Q22 Sales and EPS sequential q/q growth (3Q22 vs. 2Q22)
Sales q/q Growth (3Q22 vs. 2Q22) (Actual for reported and estimate for remaining)
$\square$ EPS q/q Growth (3Q22 vs. 2Q22)


[^1]S\&P 500: Blended bottom-up 3Q22 Sales and EPS y/y growth by sector: 3Q22 vs. 3Q21


[^2]S\&P 500: Blended bottom-up 3Q22 Sales and EPS sequential q/q growth for macro tilts: 3Q22 vs. 2Q22
Blended btm-up 3Q22 Sales and EPS sequential q/q growth (3Q22 vs. 2Q22) for S\&P 500 $\square$ Sales q/q Growth (3Q22 vs. 2Q22) macro tilts (Actual for reported and estimate for remaining)
EPS q/q Growth (3Q22 vs. 2Q22)


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


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

## S\&P 500 performance statistics in election years

|  | Years with 10\%+ Jan-Apr Returns |  |  |  | All Years |  |  |  | Non-recession Years |  |  |  | Mid-term Election Years |  |  |  | Non-recession Mid-term Election Years |  |  |  | Election Years |  |  |  | Non-recession Election Years (Presidential and Mid-term) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time Period | Avg | Std Dev | Max | Min | Avg | Std Dev | Max | Min | Avg | Std Dev | Max | Min | Avg | Std Dev | Max | Min | Avg | Std Dev | Max | Min | Avg | Std Dev | Max | Min | Avg | Std Dev | Max | Min |
| Jan | 5.9\% | 4.1\% | 13.2\% | 0.2\% | 0.9\% | 5.0\% | 13.2\% | -8.6\% | 1.0\% | 4.6\% | 13.2\% | -7.1\% | -2.0\% | 3.4\% | 3.3\% | -7.6\% | -1.1\% | 3.1\% | 3.3\% | -6.2\% | -0.7\% | 4.6\% | 11.8\% | -7.6\% | 0.3\% | 4.2\% | 11.8\% | -6.2\% |
| Feb | 2.6\% | 3.5\% | 7.1\% | -2.9\% | 0.2\% | 3.7\% | 7.1\% | -11.0\% | 0.3\% | 3.2\% | 7.1\% | -9.2\% | 1.0\% | 4.0\% | 7.1\% | -6.1\% | 1.4\% | 3.9\% | 7.1\% | -3.0\% | 0.5\% | 3.3\% | 7.1\% | -6.1\% | 0.9\% | 3.3\% | 7.1\% | -3.9\% |
| Mar | 3.2\% | 1.0\% | 5.3\% | 2.1\% | 1.2\% | 3.4\% | 9.7\% | -10.2\% | 1.5\% | 2.9\% | 9.7\% | -4.6\% | 1.1\% | 3.1\% | 5.9\% | -4.6\% | 1.7\% | 3.4\% | 5.9\% | -4.6\% | 0.6\% | 3.7\% | 9.7\% | -10.2\% | 1.5\% | 3.4\% | 9.7\% | -4.6\% |
| Apr | 2.1\% | 2.9\% | 7.5\% | -1.4\% | .3\% | 3.8\% | 9.4\% | -9.0\% | .3\% | 3.3\% | 8.5\% | -6.2\% | -0.7\% | 4.6\% | 8.5\% | -9.0\% | 0.2\% | 4.2\% | 8.5\% | -6.2\% | 0.2\% | 3.9\% | 8.5\% | -9.0\% | 0.5\% | 3.5\% | 8.5\% | -6.2\% |
| May | 0.3\% | 3.7\% | 5.0\% | -6.3\% | 0.2\% | 3.7\% | 9.2\% | -8.6\% | 0.2\% | 3.6\% | 9.2\% | -8.6\% | -1.7\% | 5.0\% | 9.2\% | -8.6\% | -1.9\% | 4.5\% | 5.0\% | -8.6\% | -0.8\% | 4.2\% | 9.2\% | -8.6\% | -1.3\% | 3.7\% | 5.0\% | -8.6\% |
| Jun | 1.4\% | 3.1\% | 4.8\% | -4.8\% | -0.2\% | 3.3\% | 5.4\% | -8.6\% | 0.1\% | 3.2\% | 5.4\% | -8.2\% | -2.1\% | 3.4\% | 3.9\% | -8.2\% | -2.0\% | 4.0\% | 3.9\% | -8.2\% | -0.6\% | 3.7\% | 4.3\% | -8.6\% | -0.1\% | 3.6\% | 4.3\% | -8.2 |
| Jul | 0.6\% | 4.6\% | 8.8\% | -6.8\% | 0.6\% | 4.1\% | 8.8\% | -7.9\% | 0.7\% | 4.0\% | 8.8\% | -7.9\% | 0.1\% | 5.2\% | 7.3\% | -7.9\% | 0.4\% | 5.0\% | 6.9\% | -7.9\% | -0.1\% | 4.1\% | 7.3\% | -7.9\% | -0.1\% | 3.8\% | 6.9\% | -7.9\% |
| Aug | .7\% | 5.0\% | 7.1\% | -14.6\% | 0.1\% | 4.7\% | 11.6\% | -14.6\% | 4\% | .2\% | 10.6\% | -14.6\% | -0.6\% | 7.4\% | 11.6\% | -14.6\% | -0.6\% | 6.5\% | 7.1\% | -14.6\% | 0.5\% | 5.8\% | 11.6\% | -14.6\% | 0.5\% | 5.4\% | 10.6\% | -14.6\% |
| Sept | -0.1\% | 3.7\% | 6.2\% | -8.5\% | -0.6\% | 4.3\% | 8.8\% | -11.9\% | 0.1\% | 3.8\% | 8.8\% | -11.0\% | -1.8\% | 6.1\% | 8.8\% | -11.9\% | -1.3\% | 6.1\% | 8.8\% | -11.0\% | -0.8\% | 5.3\% | 8.8\% | -11.9\% | 0.2\% | 4.8\% | 8.8\% | -11.0\% |
| Oct | -0.8\% | 7.1\% | 8.0\% | -21.8\% | 1.1\% | 5.9\% | 16.3\% | -21.8\% | 0.9\% | 5.1\% | 10.8\% | -21.8\% | 3.9\% | 6.1\% | 16.3\% | -9.2\% | 2.9\% | 5.0\% | 8.6\% | -9.2\% | 1.6\% | 5.9\% | 16.3\% | -16.9\% | 1.6\% | 3.7\% | 8.6\% | -9.2\% |
| Nov | 0.5\% | 3.7\% | 5.9\% | -8.5\% | 1.4\% | 4.4\% | 10.2\% | -11.4\% | 1.5\% | 3.9\% | 10.2\% | -8.5\% | 2.5\% | 4.1\% | 10.2\% | -5.3\% | 2.6\% | 3.9\% | 10.2\% | -4.0\% | 1.9\% | 4.6\% | 10.2\% | -8.0\% | 1.8\% | 4.1\% | 10.2\% | -8.0\% |
| Dec | 3.1\% | 4.0\% | 11.2\% | -2.8\% | 1.5\% | 3.1\% | 11.2\% | -6.0\% | 1.7\% | 3.1\% | 11.2\% | -6.0\% | 1.1\% | 3.4\% | 6.5\% | -6.0\% | 0.8\% | 3.6\% | 6.5\% | -6.0\% | 1.0\% | 3.0\% | 6.5\% | -6.0\% | 0.8\% | 3.0\% | 6.5\% | -6.0\% |
| Q1 | 12.2\% | 4.6\% | 21.6\% | 5.5\% | 2.3\% | 7.7\% | 21.6\% | -12.1\% | 2.9\% | 6.4\% | 20.5\% | -8.4\% | 0.1\% | 6.7\% | 13.5\% | -8.6\% | 2.0\% | 6.9\% | 13.5\% | -6.2\% | 0.5\% | 6.9\% | 13.9\% | -9.9\% | 2.6\% | 6.5\% | 13.9\% | -6.5\% |
| Q2 | 3.8\% | 5.0\% | 14.2\% | -3.3\% | 1.4\% | 7.4\% | 16.9\% | -21.3\% | 1.6\% | 6.7\% | 16.9\% | -21.3\% | -4.2\% | 9.3\% | 7.1\% | -21.3\% | -3.4\% | 9.4\% | 7.1\% | -21.3\% | -1.1\% | 8.0\% | 11.9\% | -21.3\% | -0.8\% | 7.4\% | 10.4\% | -21.3\% |
| Q3 | 1.1\% | 6.8\% | 9.8\% | -11.9\% | 0.2\% | 8.3\% | 15.8\% | -26.1\% | 1.1\% | 6.6\% | 15.0\% | -17.6\% | -2.1\% | 12.3\% | 15.8\% | -26.1\% | -1.5\% | 9.3\% | 10.7\% | -17.6\% | -0.3\% | 9.4\% | 15.8\% | -26.1\% | 0.5\% | 6.9\% | 10.7\% | -17.6\% |
| Q4 | 2.8\% | 9.3\% | 20.9\% | -23.2\% | 4.0\% | 7.7\% | 20.9\% | -23.2\% | 4.3\% | 6.8\% | 20.9\% | -23.2\% | 7.6\% | 6.7\% | 20.9\% | -6.3\% | 6.4\% | 7.3\% | 20.9\% | -6.3\% | 4.5\% | 8.1\% | 20.9\% | -22.6\% | 4.3\% | 6.3\% | 20.9\% | -8.1\% |
| Jan - Apr | 14.5\% | 4.5\% | 27.3\% | 10.6\% | 3.6\% | 7.9\% | 27.3\% | -11.4\% | 3.8\% | 7.0\% | 19.1\% | -9.4\% | -0.6\% | 7.8\% | 14.6\% | -11.4\% | 2.1\% | 7.5\% | 14.6\% | -8.8\% | 0.6\% | 7.0\% | 14.6\% | -11.4\% | 3.1\% | 6.2\% | 14.6\% | -8.8\% |
| May - Sep | 2.6\% | 6.6\% | 13.5\% | -8.5\% | 0.6\% | 9.7\% | 21.1\% | -29.6\% | 1.0\% | 8.2\% | 18.2\% | -24.3\% | -6.0\% | 11.3\% | 5.9\% | -29.6\% | -5.3\% | 10.1\% | 5.9\% | -24.3\% | -1.8\% | 10.2\% | 18.0\% | -29.6\% | -0.9\% | 8.1\% | 5.9\% | -24.3\% |
| Oct - Dec | 2.8\% | 9.3\% | 20.9\% | -23.2\% | 4.0\% | 7.2\% | 20.9\% | -23.2\% | 4.5\% | 6.3\% | 20.9\% | -23.2\% | 7.6\% | 6.7\% | 20.9\% | -6.3\% | 6.4\% | 7.3\% | 20.9\% | -6.3\% | 4.5\% | 8.1\% | 20.9\% | -22.6\% | 4.3\% | 6.3\% | 20.9\% | -8.1\% |
| Whole Year | 20.4\% | 8.6\% | 34.1\% | 2.0\% | 8.1\% | 16.0\% | 34.1\% | -38.5\% | 10.7\% | 8.6\% | 34.1\% | -23.4\% | 0.6\% | 16.2\% | 26.7\% | 29 | 3.0\% | 15.5\% | 26.7\% | -23.4\% | 3.6\% | 16.1\% | 26.7\% | -38.5\% | 6.5 | 12.6 | 26.7 | 23. |


| Time Period | All Years |  |  |  | Non-recession Years |  |  |  | Non Presidential Election Years |  |  |  | Presidential Election Years |  |  |  | Presidential Election Years ex. Recessions (1960, 1980, 2008) |  |  |  | Presidential Election Years ex. 2008 |  |  |  | Presidential Election Years in Recessions (1960, 1980, 2008) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Avg | Std Dev | Max | Min | Avg | Std Dev | Max | Min | Avg | Std Dev | Max | Min | Avg | Std Dev | Max | Min | Avg | Std Dev | Max | Min | Avg | Std Dev | Max | Min | Avg | Std Dev | Max | Min |
| Jan | 0.9\% | 5.0\% | 13.2\% | -8.6\% | 1.0\% | 4.6\% | 13.2\% | -7.1\% | 1.1\% | 5.0\% | 13.2\% | -8.6\% | 0.3\% | 5.3\% | 13.2\% | -7.1\% | 1.0\% | 3.9\% | 11.8\% | -5.1\% | 0.8\% | 5.2\% | 11.8\% | -7.1 | -2.5\% | 7.2\% | 5.8\% | -7.1\% |
| Feb | 0.2\% | 3.7\% | 7.1\% | -11.0\% | 0.3\% | 3.2\% | 7.1\% | -9.2\% | 0.3\% | 4.1\% | 7.1\% | -11.0\% | 0.1\% | 2.5\% | 7.1\% | -3.9\% | 0.3\% | 2.0\% | 4.2\% | -3.9\% | 0.3\% | 2.4\% | 4.2\% | -3.9\% | -1.0\% | 2.2\% | 0.9\% | -3.5\% |
| Mar | 1.2\% | 3.4\% | 9.7\% | -10.2\% | 1.5\% | 2.9\% | 9.7\% | -4.6\% | 1.4\% | 3.0\% | 8.5\% | -6.4\% | 0.6\% | 4.5\% | 9.7\% | -10.2\% | 1.7\% | 3.0\% | 9.7\% | -3.3\% | 0.6\% | 4.6\% | 9.7\% | -10.2\% | -4.1\% | 5.3\% | -0.6\% | -10.2\% |
| Apr | 1.3\% | 3.8\% | 9.4\% | -9.0\% | 1.3\% | 3.3\% | 8.5\% | -6.2\% | 1.5\% | 4.1\% | 9.4\% | -9.0\% | 1.0\% | 2.9\% | 9.4\% | -3.1\% | 0.7\% | 2.2\% | 8.2\% | -3.1\% | 0.8\% | 2.8\% | 8.2\% | -3.1\% | 2.4\% | 3.6\% | 4.8\% | -1.8\% |
| May | 0.2\% | 3.7\% | 9.2\% | -8.6\% | 0.2\% | 3.6\% | 9.2\% | -8.6\% | 0.2\% | 3.9\% | 9.2\% | -8.6\% | 0.1\% | 3.0\% | 9.2\% | -6.3\% | -0.5\% | 2.3\% | 2.3\% | -6.3\% | 0.1\% | 3.1\% | 4.7\% | -6.3\% | 2.8\% | 1.8\% | 4.7\% | 1.1\% |
| Jun | 2\% | 3.3\% | 5.4\% | -8.6\% | 0.1\% | 3.2\% | 5.4\% | -8.2\% | -0.5\% | 3.3\% | 5.4\% | -8.2\% | 0.9\% | 3.2\% | 5.4\% | -8.6\% | 1.4\% | 1.8\% | 4.3\% | -2.2\% | 1.6\% | 2.0\% | 4.3\% | -2.2\% | -1.3\% | 6.3\% | 2.7\% | -8.6\% |
| Jul | 0.6\% | 4.1\% | 8.8\% | -7.9\% | 0.7\% | 4.0\% | 8.8\% | -7.9\% | 0.8\% | 4.4\% | 8.8\% | -7.9\% | 0.0\% | 3.0\% | 8.8\% | -4.6\% | -0.3\% | 2.0\% | 3.9\% | -4.6\% | 0.0\% | 3.1\% | 6.5\% | -4.6\% | 1.0\% | 4.8\% | 6.5\% | -2.5\% |
| Aug | 0.1\% | 4.7\% | 11.6\% | -14.6\% | 0.4\% | 4.2\% | 10.6\% | -14.6\% | -0.3\% | 5.0\% | 11.6\% | -14.6\% | 1.4\% | 3.5\% | 11.6\% | -3.9\% | 1.4\% | 3.2\% | 10.6\% | -3.9\% | 1.4\% | 3.6\% | 10.6\% | -3.9\% | 1.5\% | 1.0\% | 2.6\% | 0.6\% |
| Sept | -0.6\% | 4.3\% | 8.8\% | -11.9\% | 0.1\% | 3.8\% | 8.8\% | -11.0\% | -0.9\% | 4.4\% | 8.8\% | -11.9\% | 0.2\% | 4.1\% | 8.8\% | -9.1\% | 1.4\% | 2.3\% | 5.4\% | -5.3\% | 0.9\% | 3.3\% | 5.4\% | -6.0\% | -4.2\% | 6.0\% | 2.5\% | 9.1\% |
| Oct | 1.1\% | 5.9\% | 16.3\% | -21.8\% | 0.9\% | 5.1\% | 10.8\% | -21.8\% | 1.8\% | 6.1\% | 16.3\% | -21.8\% | -0.9\% | 4.7\% | 16.3\% | -16.9\% | 0.2\% | 1.3\% | 2.6\% | -2.2\% | 0.3\% | 1.6\% | 2.6\% | -2.2\% | -5.2\% | 10.2\% | 1.6\% | -16.9\% |
| Nov | 1.4\% | 4.4\% | 10.2\% | -11.4\% | 1.5\% | 3.9\% | 10.2\% | 8.5\% | 1.4\% | 4.2\% | 10.2\% | -11.4\% | 1.4\% | 5.0\% | 10.2\% | -8.0\% | 1.2\% | 3.3\% | 7.3\% | -8.0\% | 2.1\% | 4.5\% | 10.2\% | -8.0\% | 2.3\% | 9.0\% | 10.2\% | -7.5\% |
| Dec | 1.5\% | 3.1\% | 11.2\% | -6.0\% | 1.7\% | 3.1\% | 11.2\% | -6.0\% | 1.7\% | 3.2\% | 11.2\% | -6.0\% | 0.9\% | 2.6\% | 11.2\% | -4.2\% | 1.0\% | 1.9\% | 5.2\% | -4.2\% | 0.9\% | 2.7\% | 5.2\% | -4.2\% | 0.7\% | 4.0\% | 4.6\% | -3.4\% |
| Q1 | 2.3\% | 7.7\% | 21.6\% | -12.1\% | 2.9\% | 6.4\% | 20.5\% |  | 2.8\% | 7.9\% | 21.6\% | -12.1\% | 0.9\% | 7.0\% | 16.9\% |  | 3.1\% | 4.9\% | 13.9\% | -6.5\% | 1.7\% | 6.5\% | 13.9\% | . | . | 2.3\% | -5.4\% | , |
| Q2 | 1.4\% | 7.4\% | 16.9\% | -21.3\% | 1.6\% | 6.7\% | 16.9\% | -21.3\% | 1.2\% | 8.1\% | 16.9\% | -21.3\% | 2.0\% | 4.7\% | 15.8\% | -3.8\% | 1.6\% | 3.2\% | 10.4\% | -3.8\% | 2.4\% | 4.6\% | 11.9\% | -3.8\% | 3.8\% | 7.6\% | 11.9\% | -3.2\% |
| Q3 | 0.2\% | 8.3\% | 15.8\% | -26.1\% | 1.1\% | 6.6\% | 15.0\% | -17.6\% | -0.3\% | 9.2\% | 15.8\% | -26.1\% | 1.6\% | 4.9\% | 20.9\% | -8.9\% | 2.4\% | 2.6\% | 8.4\% | -2.3\% | 2.3\% | 4.1\% | 9.8\% | -6.0\% | -1.7\% | 10.1\% | 9.8\% | -8.9\% |
| Q4 | 4.0\% | 7.7\% | 20.9\% | -23.2\% | 4.3\% | 6.8\% | 20.9\% | -23.2\% | 4.8\% | 7.5\% | 20.9\% | -23.2\% | 1.5\% | 8.0\% | 36.2\% | -22.6\% | 2.4\% | 3.7\% | 8.7\% | -8.1\% | 3.2\% | 4.7\% | 8.7\% | -8.1\% | -1.9\% | 17.9\% | 8.6\% | -22.6\% |
| Feb-Aug * | 6.0\% | 13.5\% | 43.8\% | -39.3\% | 7.4\% | 12.2\% | 37.3\% | -30.2\% | 5.7\% | 15.3\% | 43.8\% | -39.3\% | 6.7\% | 6.2\% | 21.2\% | -11.6\% | 8.0\% | 5.1\% | 21.2\% | -4.0\% | 8.1\% | 5.0\% | 21.2\% | -4.0\% | 1.5\% | 9.4\% | 12.7\% | -11.6\% |
| Sep - Oct * | 2.6\% | 16.4\% | 128.5\% | -81.5\% | 6.5\% | 14.2\% | 128.5\% | -80.2\% | 4.6\% | 15.5\% | 128.5\% | -80.2\% | -2.9\% | 19.0\% | 60.2\% | -81.5\% | 10.0\% | 7.6\% | 60.2\% | -30.2\% | 7.6\% | 10.2\% | 60.2\% | -32.2\% | -42.7\% | 35.5\% | 27.7\% | -81.5\% |
| Nov-Jan* | 16.3\% | 14.2\% | 88.2\% | -47.2\% | 18.3\% | 10.9\% | 88.2\% | -24.2\% | 16.8\% | 14.4\% | 88.2\% | -41.6\% | 14.9\% | 14.2\% | 79.3\% | -47.2\% | 17.9\% | 8.0\% | 54.4\% | -16.6\% | 20.8\% | 10.3\% | 79.3\% | -16.6\% | 3.5\% | 30.5\% | 79.3\% | -47.2\% |
| whole Year | 8.1\% | 16.0\% | 34.1\% | -38.5\% | 10.7\% | 8.6\% | 34.1\% | -23.4\% | 8.5\% | 16.4\% | 34.1\% | -29.7\% | 6.7\% | 15.5\% | 25.8\% | -38.5\% | 9.6\% | 8.1\% | 20.3\% | -10.1\% | 9.9\% | 9.5\% | 25.8\% | -10.1\% | -5.2\% | 32.2\% | 25.8\% | -38.5\% |

[^4]
## //Dws

## DWS Investment GmbH S\&P 500 Annual EPS Outlook

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


| S\&P 500 EPS | Year | $1 Q$ | 2Q | 3Q | $4 Q$ |
| :--- | ---: | :---: | :---: | :---: | :---: |
| 2019A | $\mathbf{1 6 3}$ | 39 | 41 | 41 | 42 |
| 2020A | $\mathbf{1 4 0}$ | 33 | 28 | 38 | 42 |
| 2021A | $\mathbf{2 1 0}$ | 49 | 53 | 54 | 54 |
| 2022E | $\mathbf{2 2 2}$ | 55 | 58 | 55 | 54 |
| 2023E | $\mathbf{2 2 0}$ | 52 | 55 | 56 | 57 |

[^5]DWS Investment GmbH View: S\&P 500 fair value by sector: Assuming a $\sim 5.75 \%$ real cost of equity (CoE) for overall S\&P 500


Source: IBES, DWS Investment GmbH as of $11 / 9 / 2022$. Past performance may not be indicative of future results.
 data was compiled 9/30/2022.
The estimated 2022 year end upside is on absolute valuation basis of each sector, not on relative sector valuation basis

## S\&P 500 Intrinsic Valuation Model

| S\&P 500 Capitalized EPS Valuation |  | S\&P 500 Dividend Discount Model |  | S\&P 500 Long-term EPS \& DPS Growth |  | S\&P 500 Cost of Equity \& Fair Book Multiple |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DWS 2022E S\&P 500 EPS | \$222.00 | DWS 2022E S\&P 500 DPS | \$68.00 | DWS 2022E S\&P 500 aggregate ROE | 21.1\% | Fair long-term nominal return on S\&P 500 index | 8.75\% |
|  |  | 2022E dividend payout ratio | $31 \%$ | 2021E end S\&P 500 book value per share | \$1,050 | Components of estimated fair S\&P 500 return: |  |
|  | \$220.00 | DWS "normal 2022E" S\&P 500 DPS | \$68.00 | DWS "normal 2022E" S\&P 500 aggregate ROE | 19.2\% | + Long-term real risk free interest rate | 1.25\% |
| DWS "normal 2022E" S\&P 500 EPS "Normal 2022E" EPS / 2022E EPS | 99\% | Normal dividend payout ratio | 34\% |  |  | + Long-term fair S\&P 500 equity risk premium* <br> = Long-term real S\&P 500 cost of equity | 4.50\% |
|  |  |  |  | S\&P EPS retained for true reinvestment | 47\% |  | 5.75\% |
| Accounting quality adjustment to pro forma EPS | -\$18.00 | EPS directed to net share repurchases | \$39.00 | Estimated ROE on reinvested S\&P EPS | 8.75\% | + Long-term inflation forecast | 3.00\% |
|  |  | Normal share repurchase payout ratio | 19\% | Economic margin (EM) or ROE-CoE | 0.00\% | = S\&P 500 nominal cost of equity | 8.75\% |
| Normal 2022E S\&P 500 EPS fair to capitalize | \$202 | Total payout of S\&P 500 EPS | \$107.00 | 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 $\quad 3.00 \%$ |  | Fair S\&P 500 Market Value and Book Value Multiple |  |
|  |  |  |  | + Fair return on true reinvestment | 2.70\% |  |  |
| S\&P 500 EPS Capitalization Valuation |  | S\&P 500 DPS Discount Model |  | + Value added return on true reinvestment | 0.00\% | 2021E end S\&P 500 book value per share | \$1,050 |
| Normal EPS / (real CoE - (EM/payout) - EM): |  | Normal DPS / (nominal CoE - DPS growth): |  | = Long-term earnings growth | 5.70\% | Fair PB = Fair PE * normal aggregate ROE | 3.35 |
| S\&P 500 intrinsic value at 2022 start | 3513 | S\&P 500 intrinsic value at 2022 start | 3513 | + Growth from net share repurchases | 1.11\% | Fair PE =(inc ROE-g)/(inc real ROE*(real CoE-real g)) | 17.4 |
| S\&P 500 intrinsic value at 2022 end | 3752 | S\&P 500 intrinsic value at 2022 end | 3752 | = Long-term S\&P 500 EPS/DPS growth | 6.81\% | Implied S\&P 500 fair value of book at 2022 start | 3513 |
| Implied fair fwd PE in early 2022 on 2022E \$222 EPS | 15.8 | Implied fair forward yield on 2022E DPS of \$68.0 | 1.94\% | + Fair normal dividend yield | 1.94\% | Steady-state PB = normal agg. ROE / real CoE | 3.35 |
| Implied fair trailing PE at 2022 end on 2022E \$222 EPS | 16.9 | Implied fair trailing yield on 2022E DPS of $\$ 68.0$ | 1.81\% | = Total long-term return at constant PE | 8.75\% | Confirmed by fair steady-state $\mathrm{PE}=1 /$ real CoE | 17.4 |



## S\&P 500 EPS discount model 5 steps to value: <br> 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 |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  | $\mathbf{\$ 2 1 0}$ | $\mathbf{\$ 2 1 5}$ | $\mathbf{\$ 2 2 0}$ | $\mathbf{\$ 2 2 5}$ | $\mathbf{\$ 2 3 0}$ |
|  | $\mathbf{5 . 2 5 \%}$ | 4215 | 4348 | 4482 | 4617 | 4754 |  |  |  |  |  |  |
| Real | $\mathbf{5 . 5 0 \%}$ | 3862 | 3973 | 4084 | 4197 | 4309 |  |  |  |  |  |  |
| cost of | $\mathbf{5 . 7 5 \%}$ | 3563 | 3658 | $\mathbf{3 7 5 2}$ | 3847 | 3942 |  |  |  |  |  |  |
| equity | $\mathbf{6 . 0 0 \%}$ | 3308 | 3390 | 3471 | 3552 | 3632 |  |  |  |  |  |  |
|  | $\mathbf{6 . 2 5 \%}$ | 3088 | 3158 | 3229 | 3299 | 3368 |  |  |  |  |  |  |

[^6]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 10 yr yield outlook: $2.5 \%$ inflation expectation $+1 \%$ overnight real rate $+1.5 \%$ inflation risk premium $-0 \%$ risk asset hedge $=5.00 \%$

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[^0]:    * \# Beat, \# miss and weighted surprise \% is based on EPS and sales estimate as of 9/30/2022 (as of 9/1/2022 for pre-season reporters)

[^1]:    Source: Factset, DWS Investment GmbH as of 11/9/2022. Past performance may not be indicative of future results.

[^2]:    Source: Factset, DWS Investment GmbH as of 11/9/2022. Past performance may not be indicative of future results.

[^3]:    Source: Factset, DWS Investment GmbH as of 11/9/2022. Past performance may not be indicative of future results.

[^4]:    Source: Haver, DWS Investment GmbH as of 10/28/2022. Past performance may not be indicative of future results.

[^5]:    S\&P 500 EPS historical constit
    Source: Factset, DWS Investment GmbH as of 11/9/2022. Past performance may not be indicative of future results

[^6]:    Source: DWS Investment Management GmbH

