



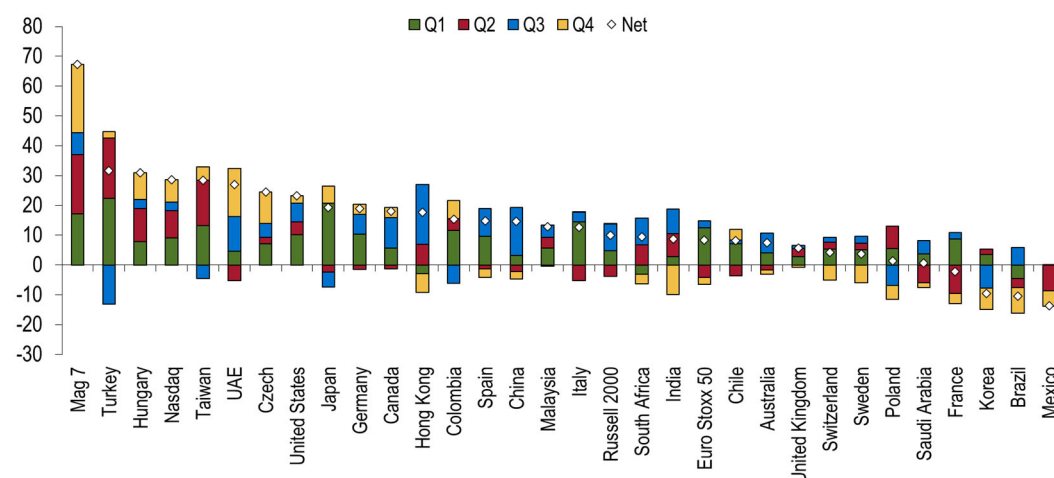
CORPORATE EARNINGS MONITOR HIGHLIGHTS: Q3 2024

- **Major global equity indices finished higher in 2024**, led by the group of large cap technology stocks known as the Magnificent 7. Most indices edged higher during Q3 2024, despite being interrupted by a severe, but ultimately transitory, sell off in early August. Equities were mixed during Q4, although finished lower on net.
- **The share of companies beating revenue expectations was relatively similar to the previous quarter, although the share of companies beating Earnings Per Share (EPS) expectations were generally lower.**
- **Profit margins improved in Asia ex-Japan and the United States** while falling elsewhere, ultimately driving changes in EPS quarter-over-quarter.
- **Most regions, in aggregate, increased dividends in Q3 2024.** Total share buybacks increased for companies in the S&P 500 and Euro STOXX but decreased for FTSE 100 and TOPIX.
- **Year-over-year EPS growth is projected to be positive in most regions over the next year**, despite downward revisions throughout 2024; however, with significant cross-country heterogeneity. Downward revisions throughout the year are common, with 2024 being within the historical norm. From a sectoral perspective, revisions were generally negative except for Technology Services and Health Services.
- **Divergence between US and Europe economic activity mirrors differences in earnings profiles.**
- **Analysts remain optimistic on US small cap stocks in 2H 2025 amid monetary easing and supportive policies from the new US administration, despite continued underperformance with respect to large cap stocks.**
- **Potential new policies remain a key focus of S&P 500 managers on earnings disclosures, as the mentioning of tariffs surpassed levels seen during the previous episode.** Managers citing AI fell in Q3 2024 earnings disclosures after peaking in Q2 2024.
- **Estimates based on 200+ [in house] asset pricing/DDM models reveals equity risk premium has compressed since the previous monitor**, although the spread of estimates has increased.
- **S&P 500 valuation metrics remain highly conditional on future profitability based on historical levels.** Metrics for the S&P 500 are in the top 5th percentile compared to historical levels, while other regions are generally lower.

GLOBAL OVERVIEW

Most global equity indices finished the year higher. A wide-spread rally in Q3 was partially offset by a relatively weak Q4.

1. Performance of Selected Indices (2024 percent change)



- Most global equities rallied in Q3, despite an abrupt transitory selloff in early August.
- The Magnificent 7 outperformed major global indices.
- Equities in Advanced Economies outperformed those in Emerging Markets by almost 12% during 2024.
- Regionally, Latin American equities underperformed driven by negative returns in Brazil and Mexico.

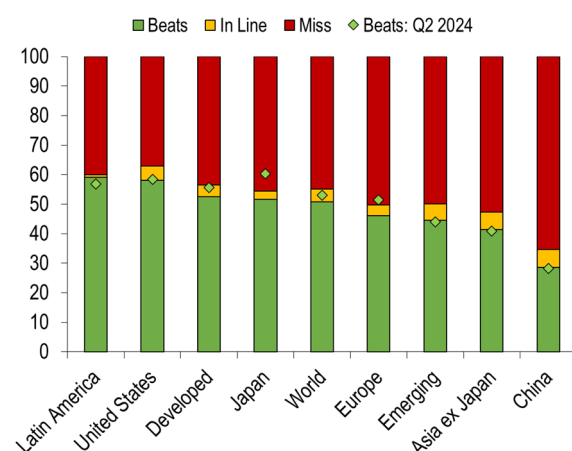
Source: Bloomberg Finance L.P.; and IMF staff calculations.

Note: Mag 7 refers to Magnificent 7, which includes Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia, Tesla.

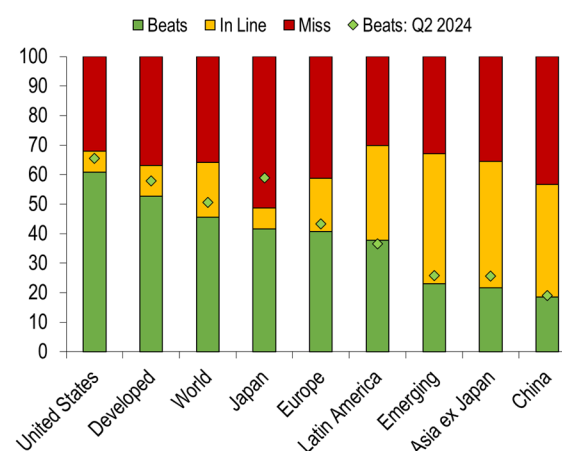
Positive revenue surprises in Q3 2024 were relatively similar to the preceding quarter...

...while positive EPS surprises were generally lower.

2. Q3 2024 Revenue Surprises for Selected Regions (Percent of firms)



3. Q3 2024 EPS Surprises for Selected Regions (Percent of firms)



- Latin America and the US had the largest share of companies beating revenue expectations.
- China and Asia ex-Japan experienced the lowest share of companies beating revenue expectations.
- The US and developed economies had the largest share of companies beating EPS expectations.

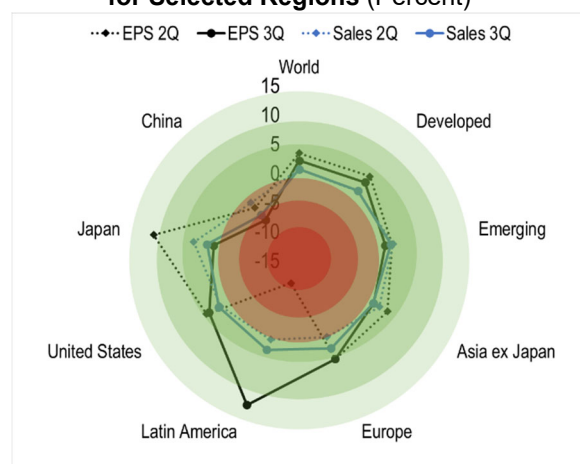
- The share of companies in Japan beating revenue expectations saw the largest drop relative to the preceding quarter.
- China and Asia ex-Japan experienced the lowest share of companies beating EPS expectations.

Source: FactSet; and IMF staff calculations.

Compared to the previous quarter, the magnitude of EPS surprises declined in most regions.

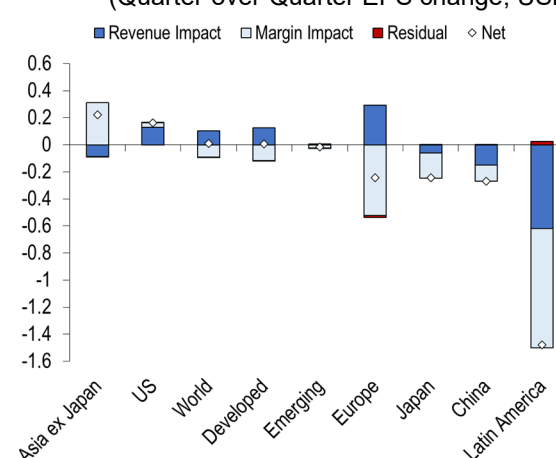
A decomposition of EPS reveals changes in revenue and profit margins varied across regions.

4. Top- and Bottom-Line Surprise Magnitude for Selected Regions (Percent)



- The magnitude of EPS surprises declined in Q3 2024 for all regions except Latin America, which experienced the largest positive surprise.
- Companies in China generally underperformed expectations.

5. EPS Decomposition for Selected Regions (Quarter-over-Quarter EPS change, USD)



- Asia ex-Japan saw the largest increase in EPS quarter-over-quarter, driven by improvements in profit margins, although partially offset by a deterioration in revenues.
- EPS declined the most in Latin America, driven by a deterioration in both revenues and profit margins.
- Large FX swings during the quarter were a headwind to revenues outside the US.

Source: FactSet; and IMF staff calculations.

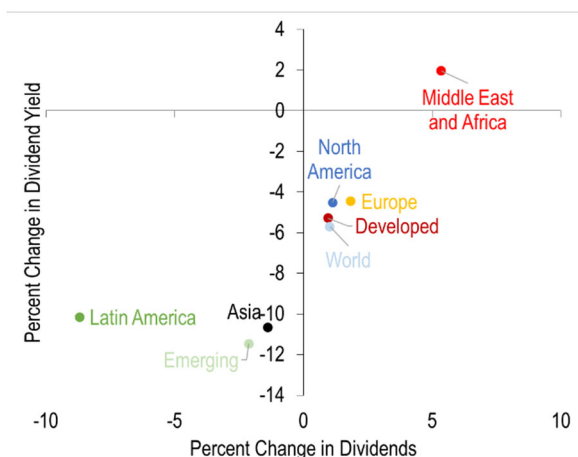
Note: 'Magnitude,' in chart 4, is percent of net income or sales above/below estimated value before reported results. The dotted lines represent surprises in Q2 2024 and solid lines represent Q3 2024. In chart 5, Revenues and Profit Margin data are cumulative for the last 12 months. The chart shows quarterly change in last 12 month data. Changes in FX influence the revenue impact series.

Dividend yield declined in most regions, despite companies increasing dividends.

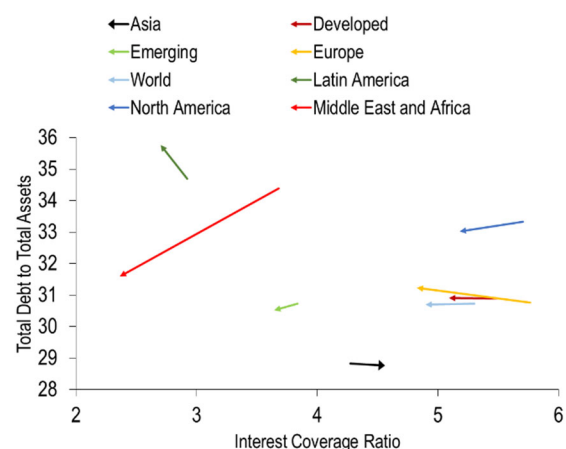
Most regions experienced a decrease in the interest-coverage-ratio (ICR), while changes in leverage were mixed.

6. Dividend Yield for Selected Regions (Percentage change quarter-over-quarter, last 12 months)

7. Coverage and Leverage Ratios for Selected Regions (Year-over-year change in Ratios, last 12 months)



- Dividends increased in most regions, but at a slower pace than stock prices, reducing dividend yield.
- The Middle East and Africa is the only region in the top right quadrant, illustrating dividends increased at a faster rate than stock prices.



- Interest Coverage Ratios have declined in most regions due to higher interest expenses.
- Companies in Latin America, Europe, and developed economies experienced an increase in total debt to total assets year-over-year.

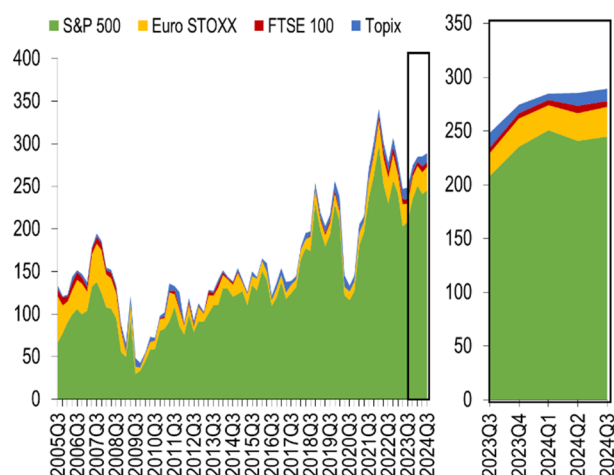
Source: FactSet; and IMF staff calculations.

Note: Chart 6 shows the quarter-over-quarter percent change using last 12-month data. Chart 7 shows the year-over-year change in ratios using last 12-month data.

Share buybacks have increased compared to the previous quarter for the S&P 500 and Euro STOXX but decreased for the FTSE 100 and TOPIX.

Buybacks as a percent of market cap have declined in Q3 2024 for the selected indices relative to the preceding quarter.

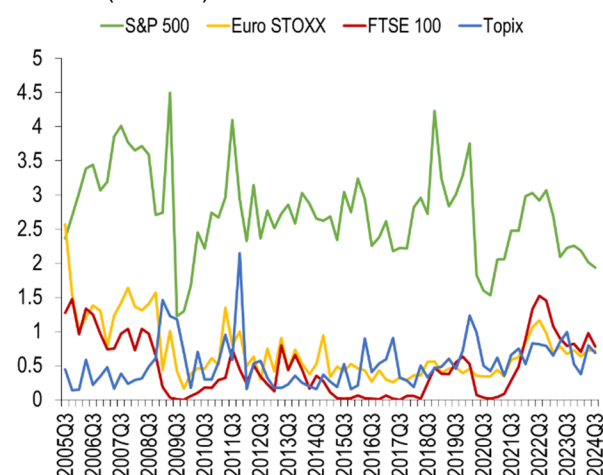
8. Share Buybacks by Index (Billions USD)



- Total share buybacks in USD increase in Q3 2024 for these indices.
- Management teams from the S&P 500 and Euro STOXX increased buybacks in Q3, potentially signaling belief of undervaluation in the current environment.

Source: Bloomberg Finance L.P.; and IMF staff calculations.

9. Share Buybacks to Market Cap of Index (Percent)



- Buybacks as a percent of market cap declined in Q3 2024 for these indices.
- The FTSE 100 experienced the largest percentage point drop quarter-over-quarter.

Analysts continue to expect positive global EPS growth in 2024-2025...

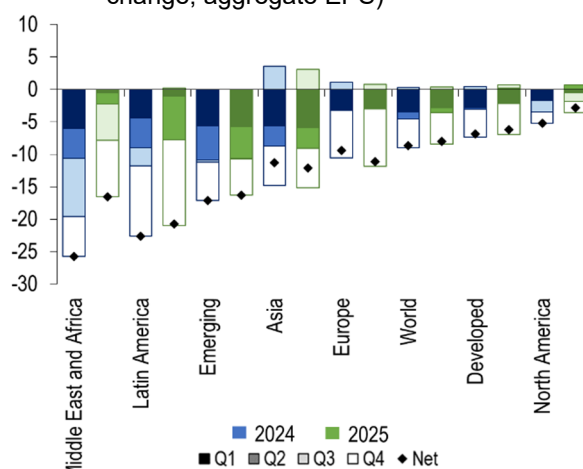
10. Actual and Projected Global EPS Growth by Region (Year-over-year growth)

	2023	2024e	2025e
World	-2.96	6.50	13.89
Developed	-0.56	7.87	13.57
Emerging	-7.44	0.99	17.48
North America	0.53	8.04	16.63
Europe	5.42	3.26	8.92
Asia	-7.05	10.62	14.04
Latin America	-15.75	-6.76	13.54
Middle East and Africa	-9.37	-12.63	29.69
Selected Countries:			
United States	1.57	8.95	16.75
Japan	-0.44	8.37	9.21
Italy	24.36	-16.93	5.66
United Kingdom	-6.93	0.60	8.46
Brazil	-8.61	-14.53	21.03
India	27.76	7.96	15.85
China	-7.85	-4.98	23.49

- Analysts expect positive EPS growth for 2024 and 2025.
- Regionally, the Middle East and Africa and Latin America are expected to have negative EPS growth in 2024 before rebounding in 2025.
- Based on the selected countries, Italy is expected to underperform in both 2024 and 2025.

...despite regional expected year-end EPS for 2024 and 2025 being lower than the previous monitor...

11. Global EPS Revisions by Region (Percent change, aggregate EPS)



- The Middle East and North Africa have experienced the largest negative revision for 2024 potentially driven by macroeconomic and geopolitical pressures.
- Emerging markets generally had larger negative revisions compared to their advanced economy counterparts.

Source: FactSet; and IMF staff calculations.

Note: Table shows actual and blended (combinations of actual and expected results) year-over-year EPS growth by region and selected countries. "e" = expected. In chart 11, blue bars are aggregate analyst revisions to year end 2024 EPS expectations for each region. Green bars are aggregate analyst revisions to year end 2024 EPS expectations for each region. Dark color bars are revisions during Q1, medium-colored bars are revisions during Q2, light colored bars are revisions during Q3, and white bars are revisions during Q4.

...this is common, as analysts typically lower expected year-end EPS throughout the year.

12. Total Revisions by Year for Selected Regions (Percent)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024e	2025e
World	6.45	-11.04	-14.30	-13.18	-15.11	-17.88	-11.30	5.05	-4.05	-15.28	-34.06	13.49	-9.47	-12.21	-9.46	-0.71
Developed	6.14	-10.27	-13.34	-11.71	-13.51	-15.25	-12.79	6.75	-1.42	-14.07	-32.67	14.20	-8.07	-10.19	-7.40	-0.55
Emerging	6.15	-13.78	-16.64	-17.21	-20.65	-29.48	-13.36	-1.11	-14.15	-18.46	-38.79	6.95	-19.48	-17.67	-17.90	-1.24
North America	3.39	-1.69	-7.74	-8.58	-7.40	-12.67	-9.52	-1.12	6.40	-10.19	-30.24	18.79	-3.97	-6.79	-5.15	-0.07
Europe	6.81	-12.01	-13.98	-13.91	-26.39	-22.02	-13.76	12.14	-6.83	-11.86	-42.31	21.51	-14.66	-7.69	-11.36	-1.61
Asia	12.63	-18.58	-20.58	-11.87	-12.61	-18.16	-13.89	7.84	-12.57	-20.92	-28.90	2.95	-20.62	-19.78	-11.78	-0.93
Latin America	8.68	-19.66	-26.46	-29.96	-33.34	-45.35	-3.82	-2.01	-9.67	-26.57	-126.91	-11.05	27.00	-10.51	-21.58	1.40
Middle East and Africa	-8.08	-11.09	-4.84	-15.23	-11.97	-17.25	-18.97	-0.50	-9.43	-44.50	-34.82	28.58	28.12	-15.30	-11.23	-0.65

Source: FactSet; and IMF staff calculations.

Note: Total revisions are the percent change in expected year end EPS from the start of the year to final results.

GLOBAL SECTORS

Sectoral performance shows Information Technology has outperformed, while Materials, Consumer Staples, Energy, Health Care and Real Estate lagged during 2024.

13. Sector Performance by Index (2024 percent change)

	Index	Materials	Industrials	Cons. Staples	Energy	Info Tech	Cons. Disc	Comm Services	Financials	Health Care	Utilities	Real Estate
S&P 500	23.31	-1.83	15.64	11.98	2.31	35.69	29.13	38.89	28.43	0.90	19.58	1.73
MSCI AE	17.00	-7.46	11.65	3.45	-0.37	32.18	20.36	32.57	23.75	-0.14	9.96	-0.59
MSCI EM	5.05	-21.36	-1.12	-12.98	-9.07	18.63	10.11	14.08	6.77	-1.88	0.43	0.62
Canada	17.99	19.32	8.51	17.25	18.23	37.69	9.46	-26.46	25.01	5.72	8.57	1.65
MSCI Europe	5.75	-4.83	12.93	-5.03	-9.11	11.57	1.17	11.15	19.94	2.54	-2.62	-4.74
Japan	19.22	-4.43	24.77	4.38	26.02	8.03	16.88	19.46	48.82	9.65	-0.47	4.49
MSCI Latin America	-30.43	-29.80	-22.29	-32.03	-26.94	-37.57	-23.47	-27.85	-32.52	-49.53	-28.33	-42.95
MSCI EMEA	1.69	-13.71	-3.32	4.21	-13.48	19.04	9.88	-4.14	5.38	-9.42	6.51	37.90
MSCI Asia	10.02	-20.92	2.92	-7.92	-1.88	18.77	10.58	18.87	15.36	1.03	9.79	-8.14
China	14.68	5.02	12.52	-8.20	18.19	23.28	24.10	27.86	31.99	-13.40	21.08	-15.27
MSCI World	15.73	-10.03	10.77	1.92	-1.44	30.80	19.08	30.22	21.19	-0.19	8.83	-0.44

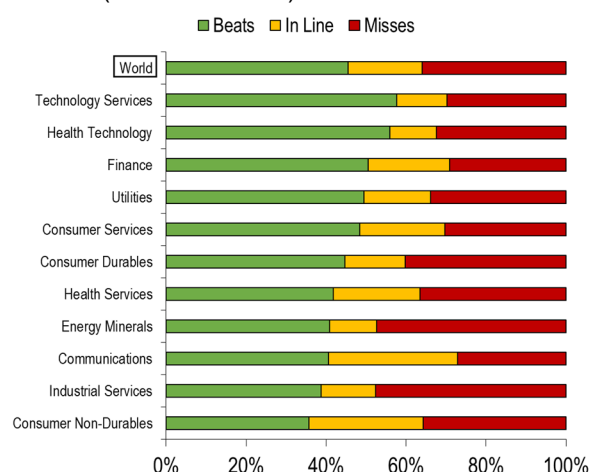
Source: Bloomberg Finance L.P.; and IMF staff calculations

Note: Cons. Staples = Consumer Staples, Info Tech = Information Technology, Cons. Disc = Consumer Discretionary, Comm Services = Communication Services. Color scheme is relative to entire table.

Just over 45 percent of companies beat EPS estimates in Q3 2024, globally, led by the Technology Services and Health Technology sectors.

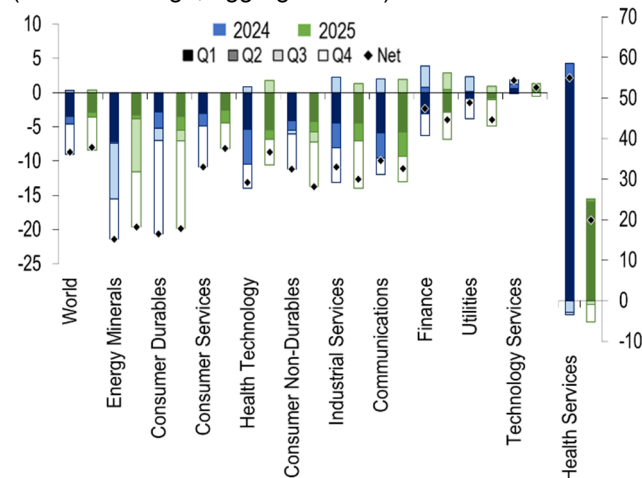
EPS revisions since the start of 2024 were generally negative, except for the Health Services and Tech Services sectors.

14. Global Q3 2024 EPS Surprise by Sector (Percent of firms)



- Just over 45 percent of companies worldwide beat earnings expectations in Q3 2024, lower than the share seen in Q2.
- Technology Services had the highest percentage of companies beat EPS while Consumer Non-Durables had the lowest share.

15. Global EPS Revisions by Sector (Percent change, aggregate EPS)



- Health Services saw major upward revisions to estimated EPS since the start of 2024 due to previous major downward revisions for the sector in Q4 2023.
- Expected EPS for global sectors remain lower relative to the last monitor.

Source: FactSet; and IMF staff calculations.

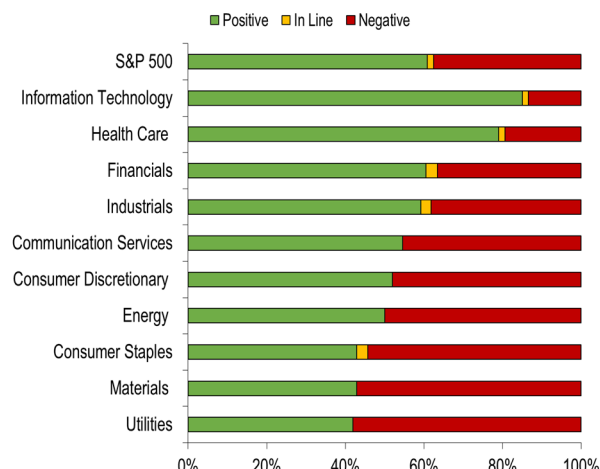
Note: In chart 15, blue bars are aggregate analyst revisions to year end 2024 EPS expectations for each sector. Green bars are aggregate analyst revisions to year end 2024 EPS expectations for each sector. Dark-colored bars are revisions during Q1, medium-colored bars are revisions during Q2, and light-colored bars are revisions during Q3, and white bars are revisions during Q4.

UNITED STATES: S&P 500

Just under 61 percent of companies in the S&P 500 beat revenue estimates in Q3 2024, led by the Information Technology and Health Care sectors...

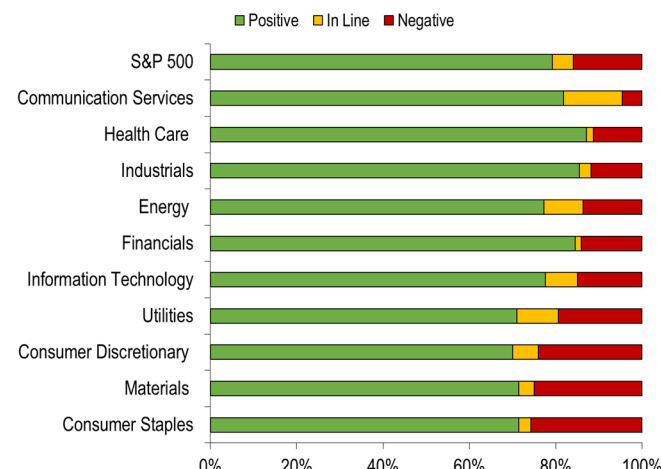
... while around 79 percent of companies reported positive earnings surprises.

16. S&P 500 Q3 2024 Revenue Surprises by Sector (Percent of firms)



- 61 percent of S&P 500 companies beat revenue expectations, which is slightly below the 62 percent share in Q2 2024.
- Utilities, Materials, and Consumer Staples experienced the highest share of companies that missed expectations.

17. S&P 500 Q3 2024 EPS Surprises by Sector (Percent of firms)

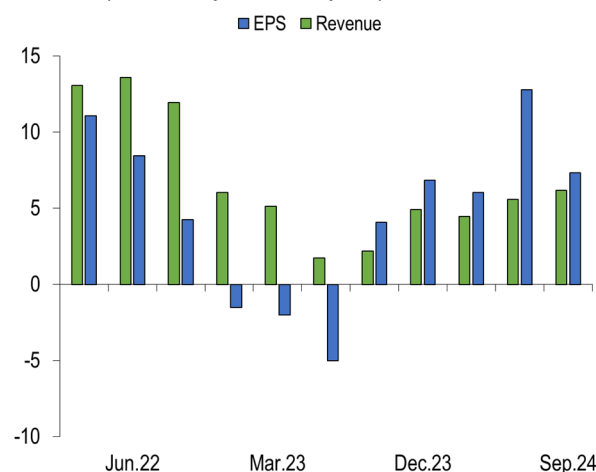


- 79 percent of S&P 500 companies reported positive EPS surprises in Q3 2024, in line with Q2 2024 and higher than the 5 year average of 77 percent.
- Larger share of EPS beats compared to revenues signals better than expected margin performance during the quarter.

Source: FactSet; and IMF Staff calculations

S&P 500 EPS growth remains positive for the fifth consecutive quarter, and revenue growth continues to increase.

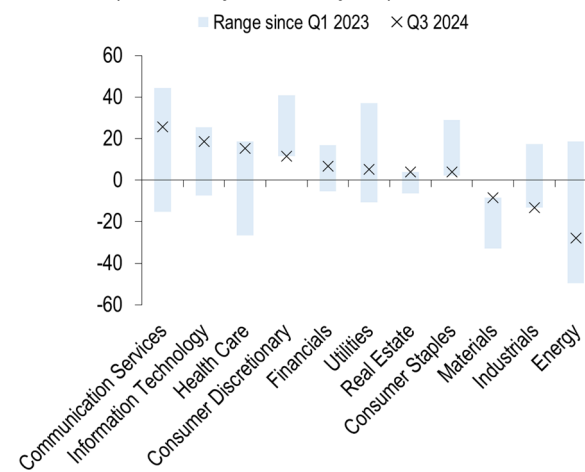
18. S&P 500 EPS and Revenue Growth (Percent, year-over-year)



- S&P 500 EPS growth remains positive for the fifth consecutive quarter.
- Revenue growth continues to increase since bottoming out in Q2 2023.

Most S&P 500 sectors experienced positive EPS growth in Q3 2024, although Energy, Industrials, and Materials underperformed.

19. S&P 500 Q3 2024 EPS Growth by Sector (Percent, year-over-year)

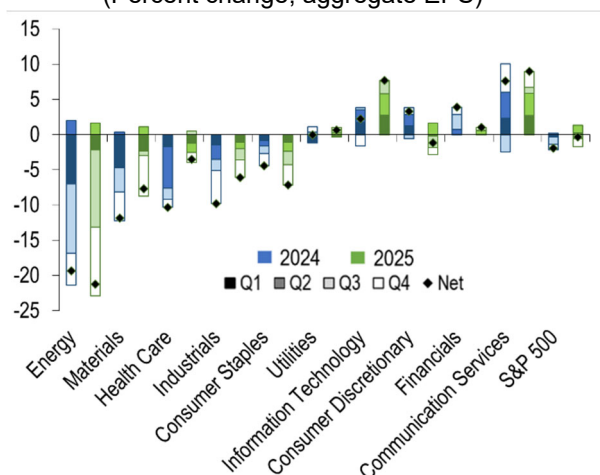


- Most S&P 500 sectors experienced positive EPS growth in Q3 2024.
- Energy, Industrials, and Materials were the only sectors to experience negative EPS growth.

Source: Bloomberg Finance L.P.; and IMF staff calculations

Expected year end 2024 and 2025 EPS for the S&P 500 declined since the last monitor; Energy experienced the largest decline over the year.

20. S&P 500 EPS Revisions by Sector
(Percent change, aggregate EPS)



- Analysts have lowered expected S&P 500 EPS for year end 2024 and 2025.
- Most sectors experienced negative revisions during Q3 and Q4.
- Energy saw the largest negative revisions throughout the year, amid falling WTI.

Source: Bloomberg Finance L.P.; FactSet; and IMF staff calculations

Note: In chart 20, blue bars are aggregate analyst revisions to year end 2024 EPS expectations for each sector. Green bars are aggregate analyst revisions to year end 2025 EPS expectations for each sector. Dark-colored bars are revisions during Q1, medium-colored bars are revisions during Q2, and light-colored bars are revisions during Q3, and white bars are revisions during Q4. In chart 21, stock price reaction is the average one-day percentage change of all companies in each category in excess of the S&P 500 Index.

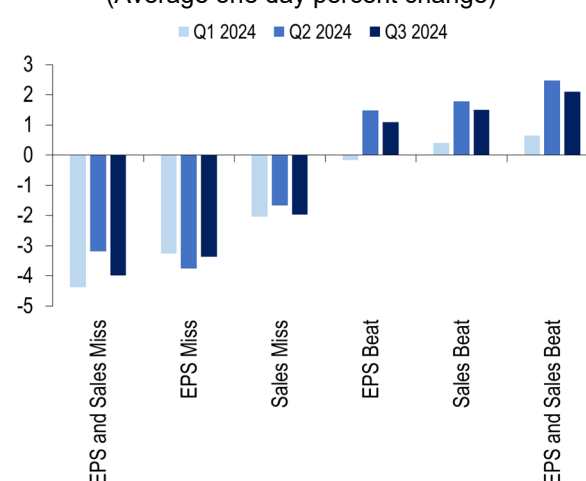
The share of companies issuing positive EPS guidance decreased relative to the previous quarter and remains below the share of companies issuing negative guidance.

22. S&P 500 EPS Company Guidance (Percent of firms)

- Information Tech, Health Care, Real Estate, and Materials saw earnings growth near the top of their three year range.

On average, S&P 500 company stock prices were rewarded less than last quarter for beating expectations.

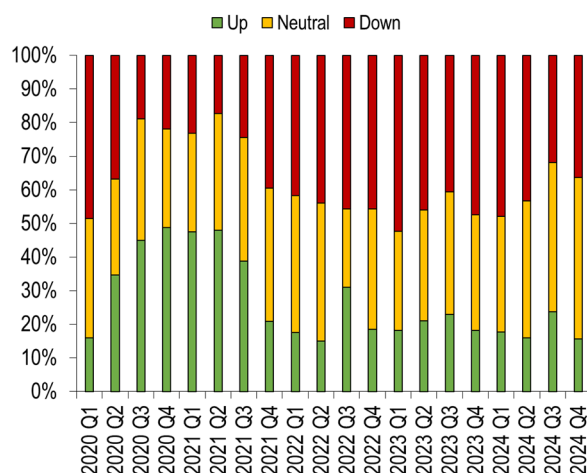
21. Stock Price Reaction to Earnings Results
(Average one day percent change)



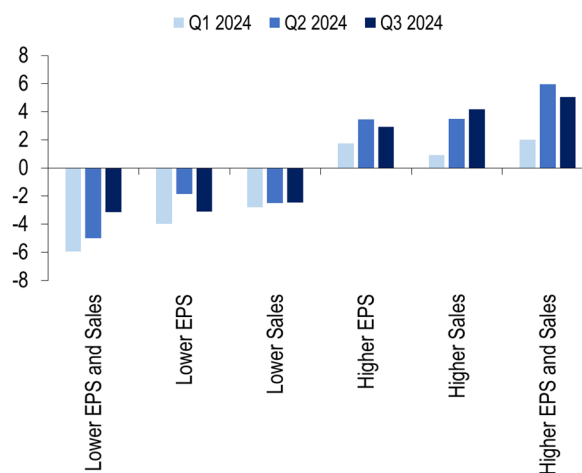
- On average, companies that beat EPS expectations were rewarded less than the previous quarter.
- On average, companies that beat both EPS and sales expectations were rewarded less than the previous quarter.

On average, stock prices have generally been more sensitive to changes in company guidance than earnings results.

23. Average Stock Price Reaction to Company Guidance (Average one day percent change)



- The share of companies that issued positive and negative EPS guidance declined relative to last quarter, as neutral guidance increased.
- The share of companies that issued positive guidance is well below the average since Q1 2020.



- On average, companies issuing positive EPS guidance have been rewarded less than the previous quarter.
- On average, companies issuing both positive guidance for EPS and sales have been rewarded less than the previous quarter.

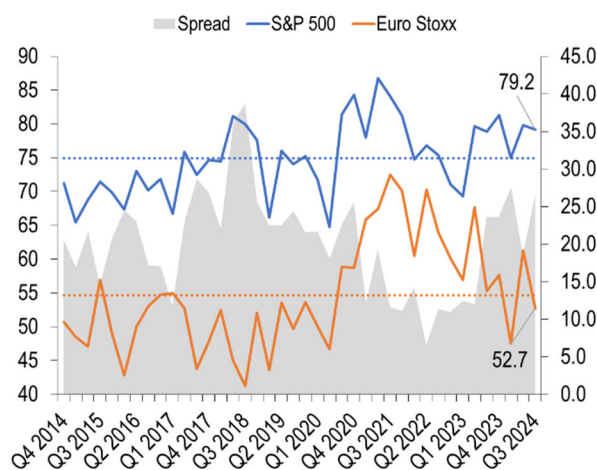
Source: Bloomberg Finance L.P.; and IMF staff calculations.

Note: In chart 23, stock price reaction is the average one-day percentage change of all companies in each category in excess of the S&P 500 Index.

SELECTED TOPICS: US EUROPE DIVERGENCE, SMALL CAPS, AND MAGNIFICENT 7

The share of firms beating EPS expectations in the S&P 500 has increased relative to the share in the Euro Stoxx.

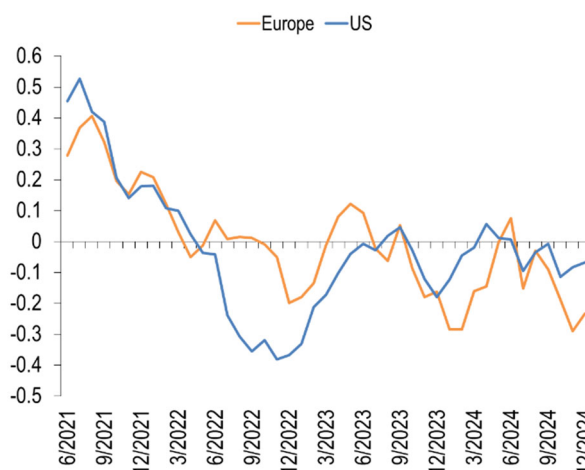
24. Percentage of Firms beating EPS Expectations (Percent of firms)



- The share of companies beating EPS expectations in the S&P 500 has increased relative to the number of companies in the Euro Stoxx.
- The share of beats is above its 10 year average for the S&P 500 while the Euro Stoxx is below.

Earnings momentum has been more negative in Europe than the US for the majority of 2024.

25. Earnings Momentum (Index)



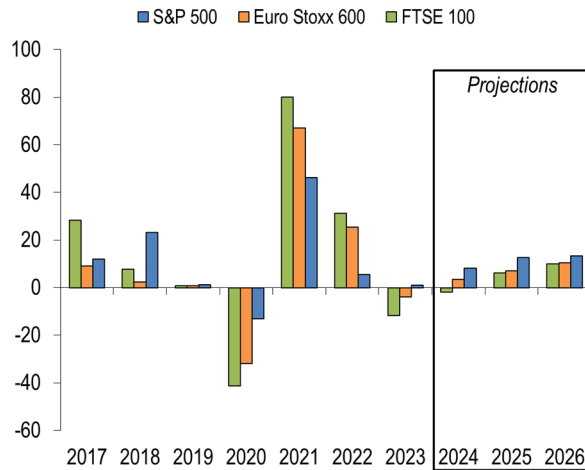
- Earnings momentum in Europe continues to be more negative than the US.
- The divergence in earnings momentum mirrors the divergence in economic activity between the two regions.

Sources: Bloomberg Finance L.P.; FactSet; and IMF staff calculations.

Note: In chart 25, Earnings momentum is the number of stocks with 12m forward EPS revised up minus the number of stocks 12m forward EPS revised down divided by the total number of revisions.

S&P 500 EPS growth is expected to exceed the Euro Stoxx 600 and FTSE 100 over the next few years...

26. EPS Growth (Year-over-Year percent change)

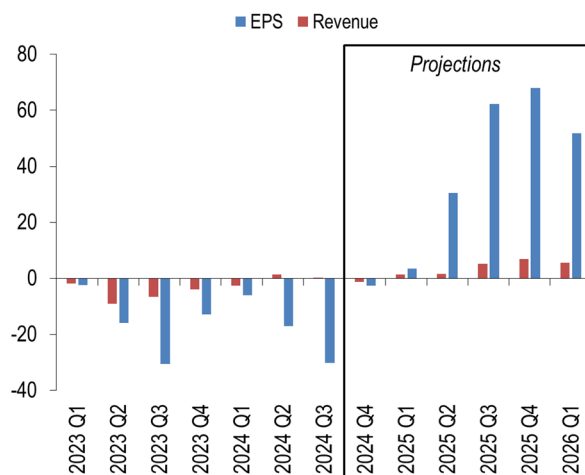


- The S&P 500 EPS growth outperformance over the next few years has coincided with markets believing in “US Exceptionalism”.
- EPS growth in Europe is nonetheless expected to rebound, outpacing the FTSE 100.

Sources: Bloomberg Finance L.P.; and IMF staff calculations.

Analysts remain optimistic on US small cap stocks in 2H 2025 amid monetary easing and supportive policies from the new US administration.

28. Russell 2000 EPS and Revenue Growth (Percent, year-over-year)

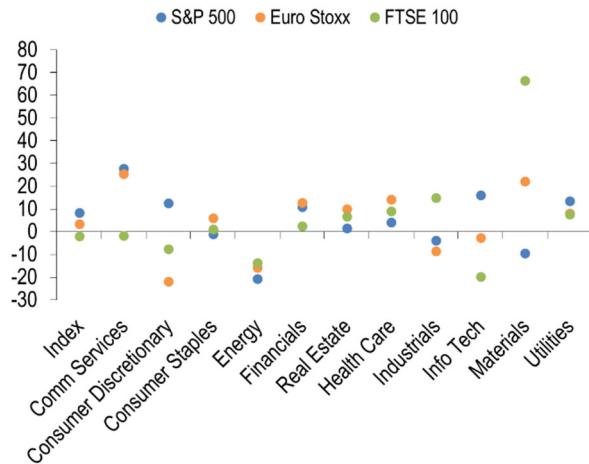


- Analysts expect EPS and revenue growth for the Russell 2000 to rebound later this year.
- Rotation from large cap into small and mid-cap stocks has been a recurring theme from analysts during the previous quarter.

Sources: Bloomberg Finance L.P.; and IMF staff calculations.

... although expected sector specific EPS growth for 2024 varies.

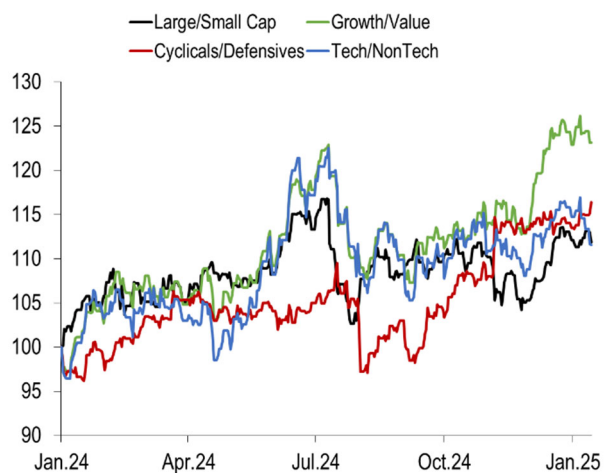
27. Expected 2024 EPS Growth by Sector (Year-over-Year percent change)



- Financials, Real Estate, Health Care, and Utilities are expected to have positive EPS growth for 2024 in all indexes.
- Analysts expect Materials in the FTSE 100 and Euro Stoxx, and Communication Services in the S&P 500 and Euro Stoxx to outperform in 2024.

US stock markets experienced a short-lived change in investor positioning over the summer.

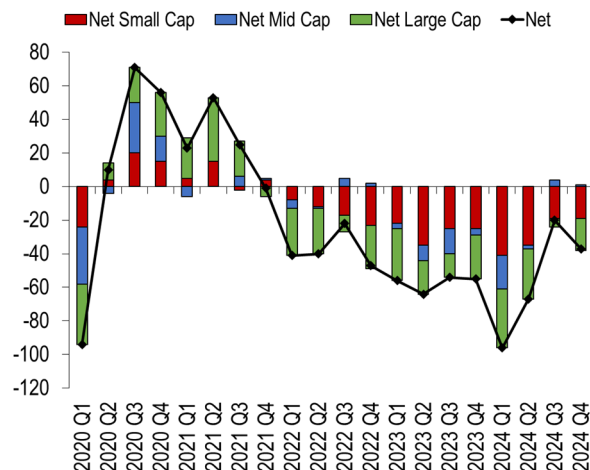
29. Performance Ratios (Price Ratios, Indexed: Jan 1, 2024 =100)



- US stock markets experienced a change in investor positioning over the summer.
- Rotation from large to small caps, growth to value, and cyclical to defensive saw the second group outperform mostly in July and August.
- Rotation was short lived as outperformance faded going into 2025.

The net number of US companies issuing negative guidance during Q4 2024 has passed the number seen in Q3, driven by Small and Large Cap firms.

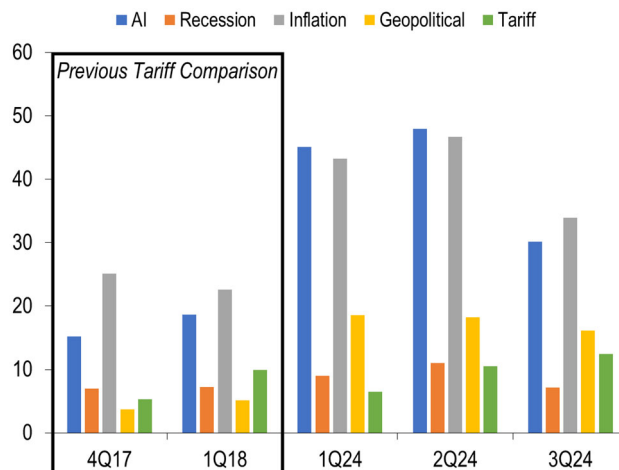
30. EPS Guidance of US Firms by Market Cap (Net number of firms)



- The number of companies issuing negative guidance relative to positive guidance for Mid- and Large-Cap companies increased since the previous quarter.
- On net, more Large- and Small-Cap companies issued negative guidance, while more Mid Caps issued positive guidance in Q4 2024.

The share of S&P 500 managers mentioning AI and inflation on earnings disclosures fell in Q3 2024, while mentioning of tariffs continues to increase, surpassing levels seen during the previous wave of tariffs.

31. Percentage of S&P 500 Earnings Disclosures Where Key Words are Used (Percent)



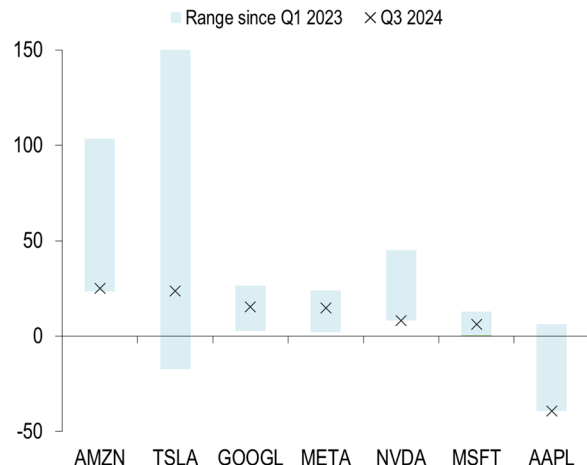
- The share of earnings disclosures discussing AI fell in Q3 2024 after peaking the previous quarter.
- The discussion of tariffs increased amid the US presidential election, surpassing levels seen during the previous wave of tariffs.

Sources: Bloomberg Finance L.P.; FactSet; and IMF staff calculations.

Note: Chart 31 illustrates the percentage of S&P 500 company earnings disclosure that use each word – does not indicate sentiment.

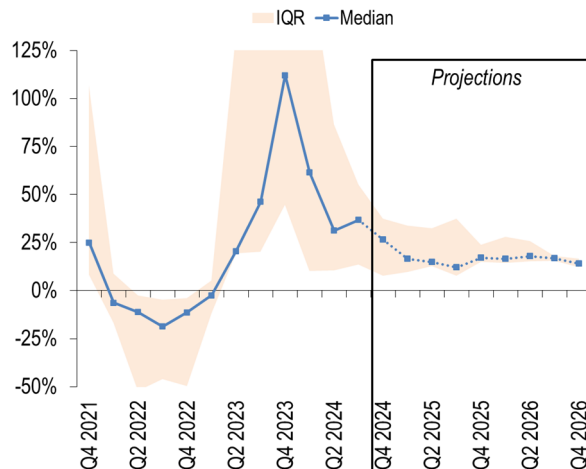
Most of the Magnificent 7 experienced positive EPS surprises in Q3 2024, although at the lower end of their 2 year range...

32. Magnificent 7 EPS Surprise Magnitude (Percent)



...and analysts expect Magnificent 7 EPS growth to slow over the next few quarters.

33. Magnificent 7 EPS Growth (Percent, year-over-year)



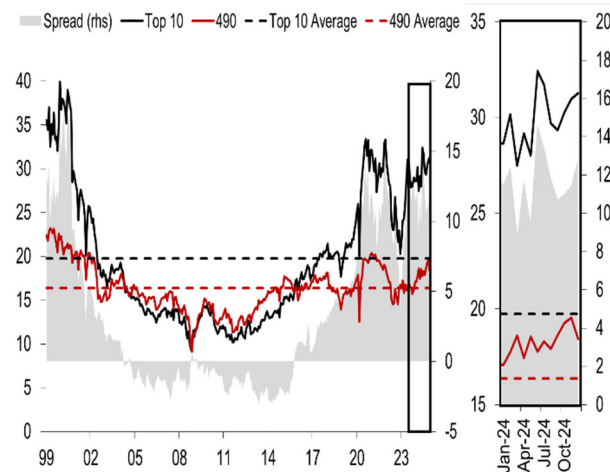
- Six out of the seven Magnificent 7 companies experienced positive EPS surprises in Q3 2024, with Apple having the only negative surprise.
- The magnitudes of surprises mostly fell in the mid-to-bottom of ranges since Q1 2023.
- Analysts expect EPS growth for the Magnificent 7 to slow over the next few years, although remaining in double digit territory.
- Market participants will continue to monitor the earnings results of these companies, given their high concentration in the S&P 500.

Sources: Bloomberg Finance L.P.; and IMF staff calculations.
Note: In chart 32, 75 percentile peaks at 252% in Q3 2023.

VALUATION AND SENTIMENT

12-month forward P/E ratios for the top 10 and remaining 490 companies in the S&P 500 are near historical highs, although still lower than levels seen post COVID and the tech bubble.

34. S&P 500 12-month forward P/E Ratio (Ratio)



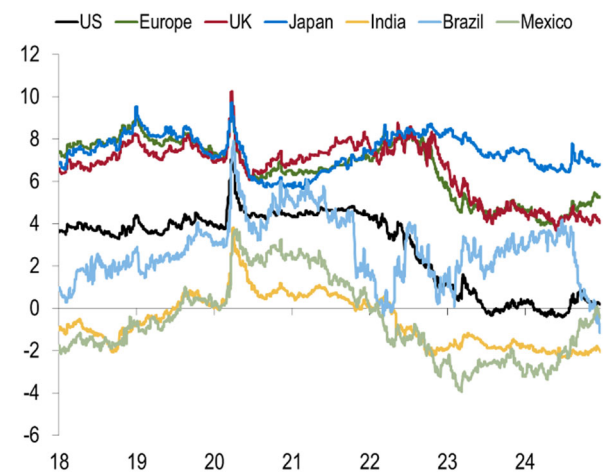
- The top 10 companies experienced an increase in their 12-month forward P/E ratios since the previous monitor while the rest of the S&P saw a decrease.
- Forward P/E ratios for the top 10 and remaining 490 remain well above their average since 1999.
- The spread between the top 10 and 490 P/E ratios increased during 2024.

Sources: Bloomberg Finance L.P.; Refinitiv Eikon Datastream IBES; and IMF staff calculations.

Note: Chart 34 shows the 12-month forward P/E ratio for the top 10 stocks based on market cap in the S&P 500 and remaining 490 on a monthly frequency. P/E ratios are calculated as weighted average harmonic mean of P/E ratios. In chart 35, implied 1-year premiums calculated as 1-year forward earnings yield of country/regions main equity index minus 12m government bond. India, Brazil, and Mexico calculations use 1 year swap yield. Earnings yield = 12-month forward Expected EPS / Stock Price.

Implied 1-year premiums have remained relatively similar to levels in the last monitor, except for substantial moves seen in Brazil and Mexico.

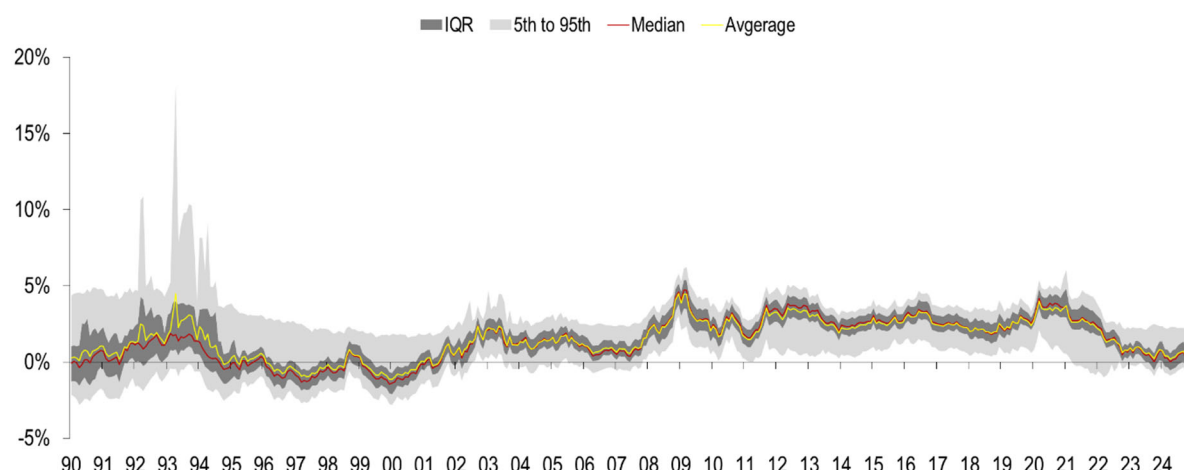
35. Implied 1-year premium (Annualized, Percent)



- Implied 1-year premiums remain positive in advanced economies.
- Implied 1-year premiums dropped significantly in Brazil as the central bank reversed course on rate cuts and is expected to continue hiking over the next year.

Estimates based on 200+ [in house] asset pricing/DDM models reveals equity risk premium has compressed since the previous monitor, although the spread of estimates has also increased.

36. S&P 500 Equity Risk Premium: Distribution Across 200+ Models (Percent)



Sources: Bloomberg Finance L.P.; Refinitiv Eikon Datastream IBES; and IMF staff calculations.

Notes: Distribution of equity risk premium is based on estimated from 224 dividend discount models. Time series includes monthly data up until December 31, 2024.

Based on trailing fundamentals, the S&P 500 exhibits valuations that are highly conditional on expected profitability growth, relative to their own past values.

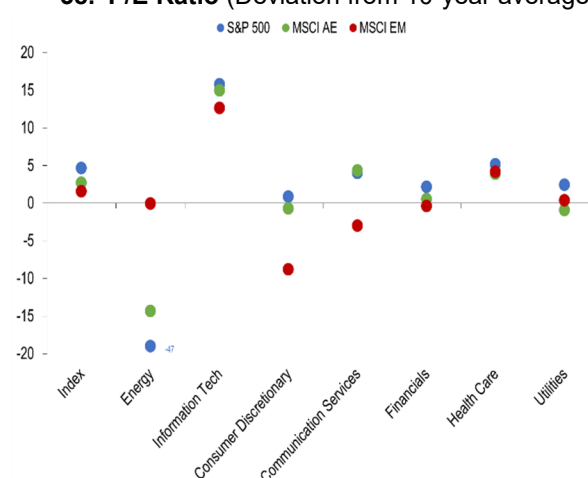
37. Fundamentals Heatmap (Percentile)

	P/E	P/CF	P/Sales	P/B
S&P 500	95.8	98.9	97.9	98.9
Euro STOXX	33.6	65.9	91.3	71.7
UK	32.9	58.4	76.6	57.7
Japan	35	87.8	98.7	91.4
Mexico	18.6	19.7	17.5	7.6
India	62.7	30.2	72	65.1
Brazil	10.8	12.7	4.1	16.6
China	50	12.6	53.8	14.1

- Stock prices in Brazil, China, and Mexico are trading at historically lower multiples when compared to other regions.
- The S&P 500 is trading at historical highs based on fundamentals.

Globally, information technology appears most stretched in terms of P/E ratios relative to its 10-year average.

38. P/E Ratio (Deviation from 10-year average)

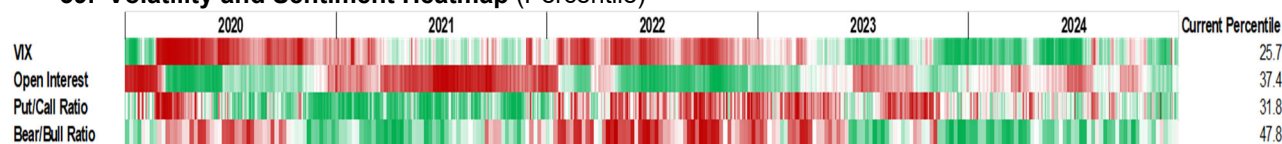


- Valuations remain highly conditional on earnings growth, especially in Tech.
- Energy remains the most undervalued relative to its 10 year average P/E.

Sources: Bloomberg Finance L.P.; and IMF staff calculations.

Equity volatility and Bear/Bull Ratio have increased since the last monitor, while open interest and Put/Call ratio have decreased.

39. Volatility and Sentiment Heatmap (Percentile)



Source: Bloomberg Finance L.P.; and IMF staff calculations.

Note: Percentiles are based on time series since January 2020. Open interest is the number of puts options divided by the number of call options outstanding for the S&P 500. Put-Call ratio measures the ratio between investors buying downside protection compared to those buying upside exposure for US equities. Bear/Bull is from the AAI US Investor Sentiment Surveys which reflect the negative/positive sentiment of investors towards the stock market over the next six months.