TRIVARIATE RESEARCH

WHAT REALLY HAPPENED IN Q4 2024

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A MUST READ TO UNDERSTAND TODAY'S US STOCK MARKET

At the start of each quarter, we compile a detailed summary of the recently completed quarter with the goal of helping investors understand what really happened, enabling them to make better investment decisions. In addition, we share insights that will facilitate investor communications, client conversations, and quarterly letters. Furthermore, this report seeks to identify and monitor emerging risk management concerns. We created this methodology to inform the letters we wrote while previously running our hedge fund. We have organized today's work into six distinct areas:

1. **Performance facts:** Indices, cohorts, sectors and industries, specialty baskets, largest performers and contributors
2. **Factor efficacy:** Overall, within sector, and any substantial changes or reversals
3. **Opportunity set:** Which areas of the market were increasingly better for potential alpha generation, insights generated by assessing changes to company-specific risk, valuation dispersion, and pairwise correlations
4. **Corporate profitability:** Where were the biggest changes to the earnings outlook from the beginning to the end of the quarter by sector, and how do we gauge estimate achievability
5. **Macro / Economic:** What happened to level and change for US economic activity, consumer activity, financial conditions / interest rates, industrial activity, commodities / oil, the dollar, Chinese and European economies during the previous quarter
6. **13F filings & insider transactions:** Which managers changed ownership stakes in high conviction stocks, and which stocks saw open market insider buys/sells.

GROWTH BEAT VALUE, EQUALLY-WEIGHTED BEAT CAP-WEIGHTED

Another solid quarter: The S&P500 appreciated 2.07% during Q4, though is down 3.4% from early December highs. The Nasdaq ended up 6.17% during Q4, though off 4.3% from highs.

Allocators should be investing in short-sellers: We looked back over the last 100 quarters and counted the percentage of stocks that beat or lagged the market by 10% or more during that quarter. By this metric, 2024 was an amazing year for stock picking. Q3 was the 2nd best quarter for finding stocks that beat by more than 10% in a quarter since the TMT bubble. Q4 was also above average. For short ideas, i.e., those lagging the market by 10% or more during a quarter, Q2 2024 was the best quarter in over 20 years, and Q4 was the 3rd best – several stocks meaningfully underperformed.

Growth beat value: Growth beat value by 10.8% in Q4 on a cap-weighted basis, and 10.3% on an equally-weighted basis. Equally-weighted growth stocks (up 8.7%) beat cap-weighted growth (up 6.9%). This was the 2nd quarter in a row this happened. Value stocks were down 4.1%. Overall, market-cap played less of a role during the quarter, as there were not significant differences between cap-and-equally-weighted returns across the board. Companies that performed well in Q3 (3-month momentum) continued to do well in Q4, up 7.4% on a cap-weighted basis, 3.1% equally-weighted.

Sectors: Consumer Discretionary (up 14.1%), Communication Services (8.6%), and Financials (6.7%) were best, Materials (down 12.8%), Healthcare (down 10.7%), and Real Estate (down 8.8%) were the worst during Q4.

INFLATION WAS MIXED, MOMENTUM AND AI WORKED IN Q4

Industries: Among the S&P500, Autos (up 47%), Banks (up 12.2%) and Consumer Discretionary (up 10%) were best, Materials (down 12.8%), Pharma / Bio & Life Sciences (down 12%) and REITS (down 9.4%) were worst.

Inflation-exposed stocks were mixed in Q4: Because the beta-adjusted inflation basket has a lot of Energy stocks, the basket was down 8.3% in Q4. Stocks like HAL, NOV, and PTEN were all down more than 15% in Q4. LYB (down 21%), STLD (down 11%), and CAT (down 7%) also lagged. Banks, which are also inflation-exposed, generally performed well.

Momentum worked in Q4: Stocks that had good 3-, 6-, and 12-month momentum all outperformed stocks with bad 3-, 6-, and 12-month momentum during Q4. Generally, if you were good in Q3, you were good in Q4.

AI growth outperformed: We created an AI basket by using language processing on transcripts to search for terms related to AI. The AI-focused growth stocks beat the growth stocks where AI is not being asked about on their earnings call transcripts by 8.8% during Q4. NVDA was up 10.6% during Q4. AVGO also joined the "Trillion Club" in Q4, up 34.4%.

Big Movers: Ten stocks were up more than 200% in Q4, including quantum computing company RGTI up over 10x in Q4. Nine stocks were down more than 60% in the quarter, most of which were stocks in the Healthcare sector. On a market-cap basis, TSLA, AMZN, and NVDA added over $1 trillion combined. The biggest five names included AVGO and GOOGL. For the second straight quarter, MSFT was one of the biggest market cap. detractors. LLY is the only company to decline more than $100 billion during Q4.

GROWTH METRICS WORKED AND VALUATION METRICS FAILED IN Q4

Factors: We track the performance of over 250 signals and report the performance between buying the top quintile and shorting the bottom quintile over the subsequent month and quarter. Companies with high SG&A-to-sales performed well, as did those with low inventory-to-sales. Classic growth metrics like revenue growth (both trailing and forecasted), and gross margins also were efficacious for picking winners from losers in Q4. Valuation metrics generally did not work in Q4.

The alpha environment was mixed in Q4 on 3 key metrics we assessed:

Valuation dispersion generally fell: We analyzed the dispersion of price-to-forward earnings (cross-sectional standard deviation) for each industry. Valuation dispersion generally fell, rising in only 7 of 25 Industry Groups. Utilities and Media & Entertainment saw the biggest increases in valuation dispersion. REITs, Transportation, and Consumer Discretionary Distribution & Retail saw the biggest compression in multiples.

Median pairwise correlations were generally higher: During Q4, pairwise correlations (PWC) were mostly higher, declining in only five of 25 Industry Groups. PWC rose the most in Semiconductors and Capital Goods, declined the most in Utilities.

Company-specific risk (CSR) was mixed: CSR was mixed during Q4, rising the most in Utilities, REITs, and Media & Entertainment, falling the most in Insurance and Capital Goods.

EPS ESTIMATES WERE UNCHANGED, MACRO DATA LEVEL IN Q4

Earnings estimates for Q4 are slightly lower: Current bottom-up earnings expectations are for 7.8% growth for 2024, and 13.3% in 2025 - slightly lower than the expectations than at the end of Q3 for 2024. Analysts are forecasting a 23.4% earnings decline in Energy for 2024, and a 12.1% decline for Materials. 2024 earnings growth is forecasted to finish the highest in Technology (up 21.8%), Utilities (up 19.6%) and Communication Services (up 19.2%). Estimates embed double-digit growth in 2025, though several sectors have lower expectations, like Energy, Real Estate, Utilities, Financials, and Consumer Staples. As we start the January earnings season, we don't think we will see any material negative pre-release announcements this week. S&P500 earnings expectations are unchanged for the full year of 2024 versus where they were at the end of September. For Q4 earnings expectations, estimates are 3.3% lower now than a quarter ago, with the biggest declines in Energy, Materials, and Healthcare.

Macro data was mixed in Q4: Our proprietary Economic Activity, Consumer Activity, and Industrial Activity gauges were all level in Q4.

Yields a big story: The 10-year yield had a big move during the quarter, ending the year at 4.57%, approaching highs for this cycle reached in October of 2023, after ending Q3 at 3.78%. The 2-year yield also rose, ending at 4.24%, vs. the 3.64% at the 3rd quarter-end. The 2-year yield has been below the 10-year yield (i.e., "normal" or "un-inverted") for much of the quarter, for the first time in 2.5 years. 12-month forward Fed Funds rate expectations were 3.095% at the end of September and are 3.93% now, indicating a stronger belief in higher yields and a more hawkish Fed post election.

OIL HIGHER, DOLLAR STRONGER IN Q4, OTHER COMMODITIES DOWN

Oil up, Commodities down: Brent oil modestly rose during the quarter, moving from $71.77 to $74.64, or up 4% during Q4. WTI was up 5.2% in Q4. Despite this, the Daily National Average Gasoline Price of $3.06 at the end of Q4 is lower than the $3.20 at the end of Q3. Natural gas was up 24% during Q4 after rising 12% in Q3. Demand for natural gas may grow to meet the AI power boom. Other commodities were largely lower during Q4. Wheat was down 8.7% in Q4 after rising 5.5% in Q3. Cotton was down 9.2% in Q4, and sugar was down 15% after rising 9.1% in Q3.

The dollar strengthened: There were huge moves in the Dollar during Q4, and we suspect some corporates will mention "Constant Currency" when they report in January. Mostly, the currency movements were the reverse of what happened in Q3. The DXY was 7.7% stronger in Q4 after being weaker by 5% the previous quarter. The Dollar weakened by 9.45% vs. the Yen. The Dollar strengthened against the Euro by 7%, the Pound by 6.4%, and the Loonie by 6.35% during Q4.

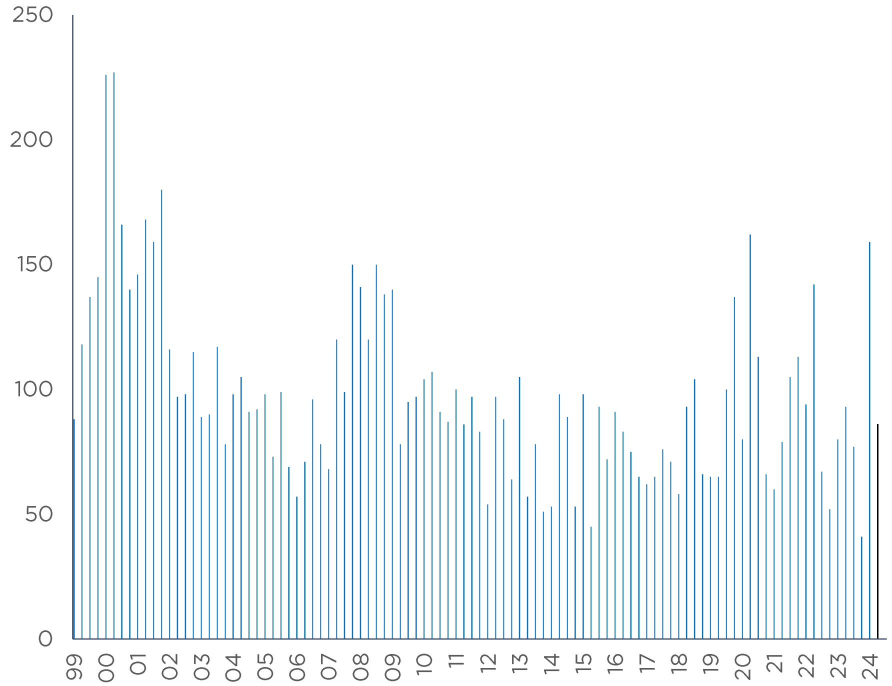
Conviction stocks: The Trivariate definition of high conviction is fund managers who own more than 3% of their long assets under management in a single stock. Among the proprietary universe of managers we follow, investors have increased positions in stocks like AMZN, APO, and V, while fewer managers have conviction in NVDA, UNH, and UBER today than at the end of Q3.

Insider activity: PBF, SPG, NEWT, and CNC had the most insider buys with no sales during Q4. PCTY, SITM, IBEX, and GFF had the most insider sales with no insider buys.

FINDING LOSERS HAS BEEN EASIER THAN MOST PERIODS IN HISTORY

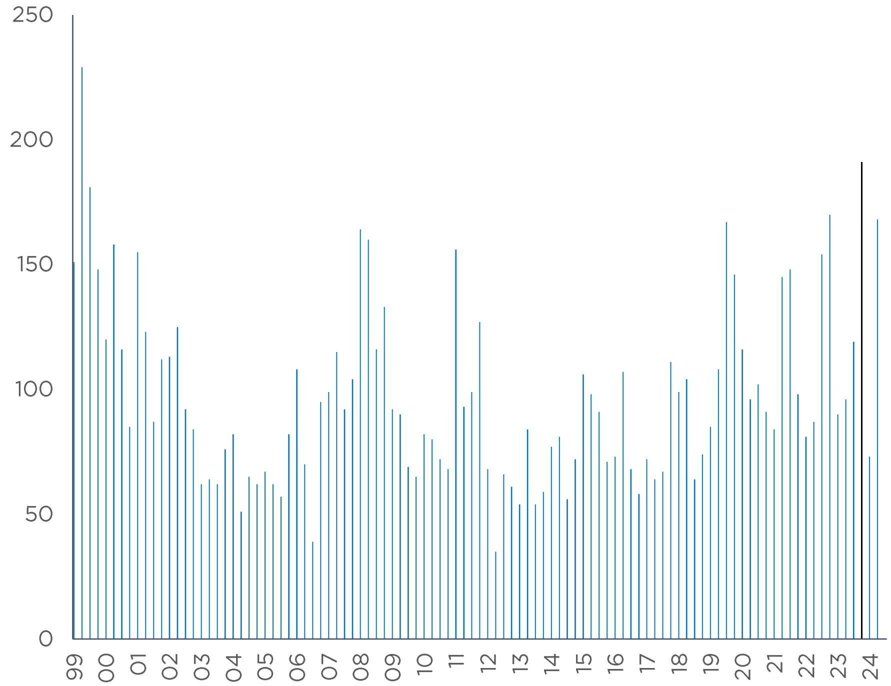
We looked back over the last 100 quarters and counted the percentage of stocks that beat or lagged the market by 10% or more during that quarter. By this metric, 2024 was an amazing year for stock picking. Q3 was the 2nd best quarter for finding stocks that beat by more than 10% in a quarter since the TMT bubble (left). Q4 was also above average. For short ideas, i.e., those lagging the market by 10% or more during a quarter, Q2 2024 was the best quarter in over 20 years, and Q4 was the 3rd best – several stocks meaningfully underperformed (right). We hear it is so difficult to raise money for long / short investing, in contrast with how good the short-selling environment remains.

Number of Stocks Beating S&P500 >10%
Each Quarter Since Q3 1999, Top 500 US Equities
Through End-December, 2024



Source: Trivariate Research

Number of Stocks Lagging S&P500 >10%
Each Quarter Since Q3 1999, Top 500 US Equities
Through End-December, 2024



Source: Trivariate Research

Q4: GROWTH BEAT VALUE, 3-MONTH MOMENTUM WORKED

Growth beat value by 10.8% in Q4 on a cap-weighted basis, and 10.3% on an equally-weighted basis. Equally-weighted growth stocks (up 8.7%) beat cap-weighted growth (up 6.9%). Over the last 100 quarters, the S&P500 was up 72 of those, and in 34 of those, equally-weighted growth beat cap-weighted growth. This was the 2nd quarter in a row this happened. Value stocks were down 4.1%. Overall, market-cap played less of a role during the quarter, as there were not huge differences between cap-and-equally-weighted returns across the board. Companies that performed well in Q3 (3-month momentum) continued to do well in Q4, up 7.4% on a cap-weighted basis, 3.1% equally-weighted.

Q4 2024 Portfolio Returns

Portfolio	Cap-Weighted Average Return	Simple Average Return	Difference
3-Month Momentum	7.4%	3.1%	4.2%
Long Mega / Large Cap, Short Mid Cap.	2.7%	(0.9%)	3.6%
Long High Quality, Short Junk	5.5%	2.1%	3.4%
6-Month Momentum	7.6%	4.6%	3.0%
12-Month Momentum	6.8%	4.5%	2.3%
Long Mid Cap, Short Small / Micro Cap.	(0.9%)	(1.5%)	0.5%
Hyper Growth	5.8%	5.9%	(0.2%)
Long Value, Short Growth	(10.8%)	(10.3%)	(0.5%)
High Quality	3.0%	3.7%	(0.6%)
Value	(4.1%)	(2.3%)	(1.8%)
Growth	6.9%	8.7%	(1.8%)
High Yield	(3.2%)	(1.3%)	(1.9%)
Junk Quality	(2.8%)	1.1%	(3.9%)
Cheap Stocks with Bad Momentum	(3.9%)	0.6%	(4.4%)

Source: Trivariate Research

RED SWEEP DROVE SOFTWARE AND AERO&DEFENSE TO OUTPERFORM

TSLA was up 54.4% during Q4, driving the cap-weighted returns for Automobiles to best, even though they were down on an equally-weighted basis. Entertainment (up 19.1%), and Broadline Retail (15.1%) were the best cap-weighted industries. Metals & Mining (down 16.1%) and Life Sciences Tool & Services (down 13.3%) were the two worst cap-weighted performing industries. Comparing cap-to-equally-weighted returns, Software up 15.4% and Aerospace & Defense (up 14.9%) performed far better than those industries on a cap-weighted basis, as the perception of a strong military and more M&A following the “Red Sweep” drove outperformance.

Q4 2024 Select GICS Industry and Sector Returns for Top 3000 Universe

Sector or Industry	Cap-Weighted Average Return	Simple Average Return	Difference
Automobiles	42.9%	(0.3%)	43.1%
Broadline Retail	15.1%	2.3%	12.8%
Independent Power & Renewable Electricity Producers	1.4%	(10.5%)	11.9%
Industrial Conglomerates	3.4%	(8.0%)	11.4%
Consumer Discretionary	11.5%	0.6%	10.8%
Entertainment	19.1%	9.4%	9.7%
Real Estate Management & Development	(1.8%)	(10.3%)	8.5%
Communication Services	8.8%	4.1%	4.7%
Financials	7.5%	6.3%	1.2%
Consumer Staples	(1.7%)	(1.3%)	(0.4%)
Real Estate	(7.6%)	(6.6%)	(0.9%)
Energy	(0.5%)	1.8%	(2.3%)
Health Care	(9.7%)	(6.9%)	(2.8%)
Utilities	(5.0%)	(1.9%)	(3.0%)
Industrials	(1.9%)	2.1%	(4.0%)
Materials	(10.7%)	(6.6%)	(4.2%)
Information Technology	5.5%	11.1%	(5.6%)
Metals & Mining	(16.1%)	(7.4%)	(8.7%)
Construction Materials	1.4%	10.6%	(9.2%)
Personal Care Products	(8.6%)	1.7%	(10.3%)
Life Sciences Tools & Services	(13.3%)	(3.0%)	(10.3%)
Software	4.8%	15.4%	(10.6%)
Aerospace & Defense	(3.7%)	14.9%	(18.5%)

Source: Trivariate Research

MOMENTUM AND AI WORKED IN Q4, ENERGY STOCKS WERE WEAK

Inflation-exposed stocks were down 8.3% in Q4. While most Banks did well, Energy and select Metals performed poorly. Momentum worked across most horizons, and AI-Semis worked, with AVGO and NVDA beating the market during Q4.

Q4 2024 Select Portfolio Returns

Sector	Return	Observation
Inflation Basket	(8.3%)	Because the beta-adjusted inflation basket has a lot of Energy stocks, the basket was down 8.3% in Q4. Performance was very mixed during Q4. Stocks like HAL, NOV, and PTEN were all down more than 15% in Q4. LYB (down 21%), STLD (down 11%), and CAT (down 7%) also lagged. Banks, which are also inflation-exposed, generally performed well, as the curve normalized, and the outlook for activity improved.
12-Month Momentum	4.5%	
6-Month Momentum	4.6%	We show Q1-Q5 spreads for these three different momentum metrics. Stocks that had good 3- and 6 and 12-month momentum all outperformed stocks with bad 3- and 6- and 12-month momentum during Q4. Generally, if you were good in Q3, you were good in Q4.
3-Month Momentum	3.1%	
AI	8.8%	We created an AI basket by using language processing on transcripts to search for terms related to AI. We then created a basket of stocks where AI-related terms were most frequently mentioned. This basket beat growth stocks that did not mention AI on their transcripts by 8.8% during Q4. This means the AI-focused growth stocks beat the growth stocks where AI is not being asked about on their earnings call transcripts. NVDA was up 10.6% during Q4. AVGO also joined the "Trillion Club" in Q4, up 34.4%.

Source: Trivariate Research

3 COMPANIES ADDED MORE THAN $1 TRILLION, LLY WAS THE LOSER

Ten stocks were up more than 200% in Q4, including Quantum Computing Company RGTI up over 10x (left). Nine stocks were down more than 60% in the quarter, most of which were Healthcare. On a market-cap basis, TSLA, AMZN, and NVDA added over $ 1 trillion combined. The biggest five names included AVGO and GOOGL. For the second straight quarter, MSFT was one of the biggest market cap. detractors. LLY is the only company to decline more than $100 billion during Q4 (right).

Q4 2024 Select Stock Total Returns

Ticker	Company	Q4 Total Return	December 31 Market Cap. (US$ Bil.)
RGTI	Rigetti Computing, Inc.	1,056.1%	4.27
QBTS	D-Wave Quantum Inc.	754.6%	1.88
SRRK	Scholar Rock Holding Corporation	439.6%	4.05
RCAT	Red Cat Holdings, Inc.	405.9%	1.03
IONQ	IonQ, Inc.	377.9%	9.04
SOUN	SoundHound AI, Inc.	325.8%	7.34
QURE	uniQure N.V.	258.2%	0.86
REAL	The RealReal, Inc.	248.1%	1.20
PSTX	Poseida Therapeutics, Inc.	235.7%	0.94
ACHR	Archer Aviation Inc.	221.8%	4.19
TNGX	Tango Therapeutics, Inc.	(59.9%)	0.33
LAZR	Luminar Technologies, Inc.	(60.1%)	0.18
EVH	Evolent Health, Inc.	(60.2%)	1.29
TMDX	TransMedics Group, Inc.	(60.3%)	2.09
ANAB	AnaptysBio, Inc.	(60.5%)	0.40
SANA	Sana Biotechnology, Inc.	(60.8%)	0.36
IGMS	IGM Biosciences, Inc.	(63.1%)	0.36
NOVA	Sunnova Energy International Inc.	(64.8%)	0.43
KROS	Keros Therapeutics, Inc.	(72.7%)	0.64
CATX	Perspective Therapeutics, Inc.	(76.1%)	0.22

Source: Trivariate Research

Q4 2024 Select Stock Market Cap. Delta

Ticker	Company	Q4 Market Cap. Added (Lost) (US$ Bil.)	December 31 Market Cap. (US$ Bil.)
TSLA	Tesla, Inc.	460.5	1,296.4
AMZN	Amazon.com, Inc.	351.2	2,306.9
NVDA	NVIDIA Corporation	309.8	3,288.8
AVGO	Broadcom Inc.	281.0	1,086.7
GOOGL	Alphabet Inc.	274.4	2,323.5
XOM	Exxon Mobil Corporation	(48.0)	472.8
MSFT	Microsoft Corporation	(64.6)	3,133.8
AMD	Advanced Micro Devices, Inc.	(69.5)	196.0
UNH	UnitedHealth Group Incorporated	(74.4)	465.5
LLY	Eli Lilly and Company	(102.6)	695.1

Source: Trivariate Research

MOST GROWTH METRICS WORKED, AND VALUATION FAILED IN Q4

We track the performance of over 250 signals and report the performance between buying the top quintile and shorting the bottom quintile over the subsequent month and quarter. Companies with high SG&A-to-sales performed well, as did those with low inventory-to-sales. Classic growth metrics like revenue growth (both trailing and forecasted), and gross margins also were efficacious for picking winners from losers in Q4. Valuation metrics generally did not work in Q4.

Best and Worst Performing Signals During Q4 2024, Rebalanced Monthly (Top 500)

Signal	October Return	November Return	December Return	Q4 2024 Return
Average YoY Revenue Growth (Trailing 12Q)	4.8%	6.3%	(0.5%)	10.9%
Gross Margin	4.7%	2.8%	2.4%	10.2%
Forecast Revenue Growth	4.0%	4.7%	1.1%	10.0%
Forecast Long-Term EPS Growth	3.8%	2.9%	2.9%	9.8%
Cash-to-Assets	2.6%	3.2%	3.5%	9.5%
2-Year Forecast Revenue Growth	3.9%	4.9%	0.2%	9.2%
R&D-to-Sales	3.6%	2.7%	2.6%	9.1%
Net Cash Ratio	3.0%	3.0%	2.5%	8.8%
Share Turnover (6-Month Mean)	1.0%	3.9%	2.9%	8.0%
EPS Growth (12Q)	2.8%	3.2%	1.8%	8.0%
PPE Accruals	(1.2%)	(3.3%)	(0.5%)	(4.9%)
ROTE Growth	(0.4%)	(4.9%)	0.2%	(5.1%)
EV-to-EBITDA	(2.5%)	(1.4%)	(1.5%)	(5.3%)
Net Debt-to-Market Cap.	(2.9%)	(2.2%)	(1.5%)	(6.6%)
Trailing Dividend Yield	(1.9%)	(3.3%)	(2.1%)	(7.2%)
Growth of SG&A-to-Sales	(3.2%)	(2.6%)	(1.6%)	(7.2%)
Net Debt-to-Forecast EBTDA	(2.4%)	(2.7%)	(2.3%)	(7.3%)
Net Debt-to-Assets	(3.3%)	(3.0%)	(2.3%)	(8.3%)
SG&A-to-Sales	(5.1%)	(5.2%)	(1.8%)	(11.6%)
Inventory-to-Sales	(6.6%)	(6.6%)	0.7%	(12.1%)

Source: Trivariate Research

Q4 GENERALLY HAD HIGHER CORRELATIONS, MIXED CSR

During Q4, pairwise correlations (PWC) were mostly higher, declining in only five of 25 Industry Groups. PWC rose the most in Semiconductors and Capital Goods, declined the most in Utilities (left). Company-specific risk (CSR) was mixed, rising the most in Utilities, REITs, and Media & Entertainment, falling the most in Insurance and Capital Goods (right).

Q4 2024 Change and Level of Median Pairwise Correlation

Industry Group	Change in Median Pairwise Correlation	Level of Median Pairwise Correlation
Semiconductors & Semiconductor Equipment	13.0	56.4
Capital Goods	9.9	41.5
Technology Hardware & Equipment	9.8	36.3
Materials	9.7	35.2
Banks	8.0	74.0
Real Estate Management & Development	7.8	43.1
Insurance	7.7	34.0
Media	7.0	24.2
Commercial & Professional Services	6.8	28.1
Consumer Services	6.3	27.0
Consumer Discretionary Distribution & Retail	6.2	29.8
Energy	6.1	42.6
Financial Services	5.7	34.5
Software & Services	5.6	25.6
Pharmaceuticals, Biotechnology & Life Sciences	4.3	23.5
Transportation	4.2	28.0
Consumer Durables & Apparel	3.6	33.5
Automobiles & Components	3.4	39.8
Consumer Staples Distribution & Retail	3.2	24.5
Health Care Equipment & Services	2.5	19.0
Household & Personal Products	(0.1)	21.2
Telecommunication Services	(0.3)	18.0
Food, Beverage & Tobacco	(0.5)	16.9
Equity Real Estate Investment Trusts (REITs)	(6.5)	41.7
Utilities	(8.2)	38.8

Source: Trivariate Research

Q4 2024 Change and Level of Company-Specific Risk (%)

Industry Group	Change in CSR	Level of CSR
Utilities	6.3	62.9
Equity Real Estate Investment Trusts (REITs)	3.5	57.4
Media & Entertainment	2.8	67.4
Semiconductors & Semiconductor Equipment	2.7	48.8
Technology Hardware & Equipment	2.5	56.6
Household & Personal Products	2.5	71.7
Automobiles & Components	1.7	54.0
Consumer Staples Distribution & Retail	1.4	67.9
Food, Beverage & Tobacco	0.7	73.9
Telecommunication Services	0.2	76.9
Financial Services	0.1	53.4
Commercial & Professional Services	0.1	61.2
Consumer Discretionary Distribution & Retail	0.0	63.1
Consumer Durables & Apparel	(0.1)	56.2
Energy	(0.2)	57.0
Real Estate Management & Development	(0.9)	52.4
Pharmaceuticals, Biotechnology & Life Sciences	(1.2)	71.8
Software & Services	(1.3)	62.6
Transportation	(1.6)	63.6
Banks	(2.0)	33.0
Materials	(2.0)	55.0
Health Care Equipment & Services	(2.1)	70.0
Consumer Services	(2.3)	62.6
Capital Goods	(2.4)	49.3
Insurance	(3.6)	63.8

Source: Trivariate Research

VALUATION DISPERSION WAS GENERALLY LOWER IN Q4

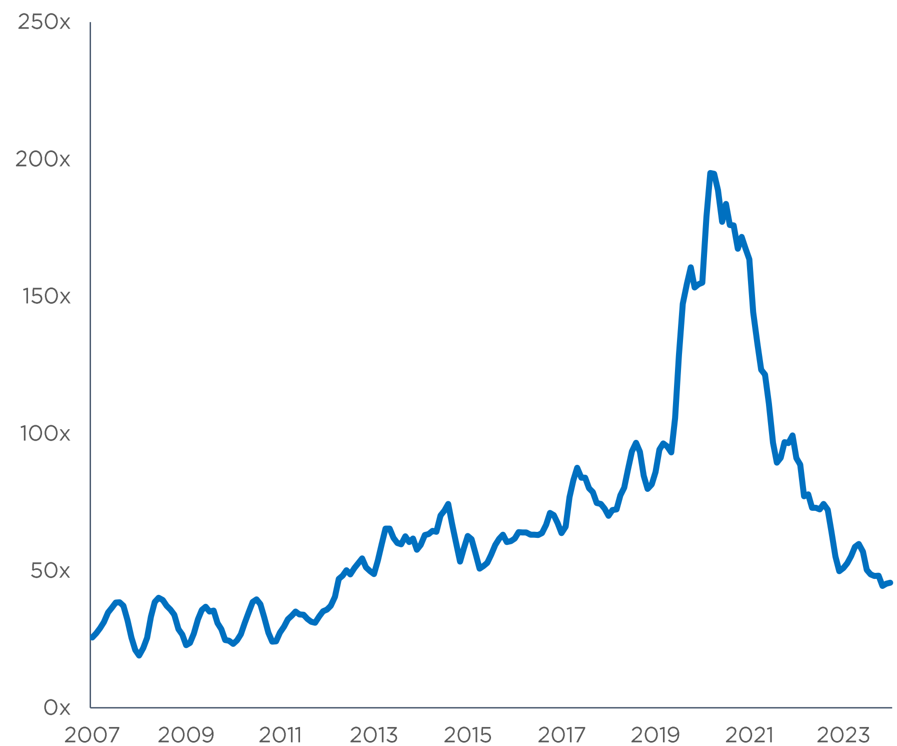
We analyzed the dispersion of price-to-forward earnings (cross-sectional standard deviation) for each industry (left table). Valuation dispersion generally fell, rising in only 7 of 25 Industry Groups. Utilities and Media & Entertainment saw the biggest increases in valuation dispersion (left). REITs, Transportation, and Consumer Discretionary Distribution & Retail saw the biggest compression in multiples. Software & Services valuation dispersion is no longer aberrant (right), as Software multiples have broadly compressed for nearly three years.

Q4 2024 Level and 3m Change in 3-Month Average of Cross-Sectional Dispersion in Price-to-Forward Earnings

Industry Group	Change of PEF Dispersion	Level of PEF Dispersion
Utilities	12.4x	18.4x
Media & Entertainment	6.7x	32.8x
Automobiles & Components	2.6x	19.5x
Consumer Staples Distribution & Retail	1.3x	11.7x
Energy	1.0x	26.1x
Banks	0.3x	8.1x
Household & Personal Products	0.2x	9.3x
Capital Goods	(0.4x)	24.3x
Consumer Services	(0.6x)	32.8x
Telecommunication Services	(1.5x)	21.0x
Commercial & Professional Services	(1.7x)	17.4x
Financial Services	(1.8x)	15.7x
Software & Services	(2.5x)	45.6x
Semiconductors & Semiconductor Equipment	(3.3x)	37.2x
Health Care Equipment & Services	(3.9x)	41.9x
Insurance	(4.2x)	9.7x
Pharmaceuticals, Biotechnology & Life Sciences	(6.1x)	31.7x
Consumer Durables & Apparel	(6.3x)	15.4x
Food, Beverage & Tobacco	(6.9x)	13.9x
Materials	(7.1x)	23.8x
Technology Hardware & Equipment	(8.1x)	24.7x
Consumer Discretionary Distribution & Retail	(8.7x)	24.9x
Transportation	(8.7x)	25.8x
Equity Real Estate Investment Trusts (REITs)	(10.8x)	31.1x
Real Estate Management & Development	(12.4x)	20.6x

Source: Trivariate Research

Software & Services Price-to-Forward Earnings Dispersion Through End-December, 2024



Source: Trivariate Research

EPS FORECASTS ARE FOR 7.8% EPS GROWTH IN 2024, 13.3% IN 2025

Current bottom-up earnings expectations are for 7.8% growth for 2024, and 13.3% in 2025 - slightly lower than the expectations than at the end of Q3 for 2024. Analysts are forecasting a 23.4% earnings decline in Energy for 2024, and a 12.1% decline for Materials. 2024 earnings growth is forecasted to finish the highest in Technology (up 21.8%), Utilities (up 19.6%) and Communication Services (up 19.2%). Estimates embed double-digit growth in 2025, though several sectors have lower expectations, like Energy, Real Estate, Utilities, Financials, and Consumer Staples.

Bottom-Up Analyst Earnings Growth Expectations
December 27th, 2024

Sector	2023	1Q24	2Q24	3Q24	4Q24E	2024E	2025E
S&P 500	2.0%	5.8%	10.2%	7.2%	7.9%	7.8%	13.3%
S&P ex-Financials	0.6%	4.8%	8.9%	7.5%	7.0%	7.1%	14.6%
Consumer Discretionary	30.0%	21.6%	12.0%	6.8%	8.7%	11.5%	10.2%
Consumer Staples	9.1%	7.8%	1.8%	2.7%	(2.5%)	2.3%	5.0%
Energy	(28.9%)	(27.4%)	(4.7%)	(29.3%)	(29.1%)	(23.4%)	2.5%
Financials	8.6%	10.1%	16.1%	6.0%	12.5%	11.1%	7.8%
Health Care	(19.9%)	(26.5%)	15.5%	12.4%	10.8%	1.7%	19.6%
Industrials	12.8%	4.1%	(1.6%)	(9.5%)	(4.5%)	(3.1%)	18.4%
Info Tech	8.1%	26.4%	22.9%	21.1%	18.1%	21.8%	20.3%
Materials	(20.5%)	(22.1%)	(10.4%)	(10.7%)	(3.0%)	(12.1%)	15.5%
Communication Services	23.5%	36.4%	1.1%	22.1%	19.5%	19.2%	13.9%
Utilities	7.0%	32.7%	19.7%	18.3%	8.1%	19.6%	4.7%
Real Estate	27.0%	5.0%	(0.1%)	2.8%	4.8%	3.1%	6.5%

Source: Trivariate Research

COMM SERVICES: HIGHER Q4 EXPECTATIONS THAN AT THE END OF Q3

As we start the January earnings season, we don't think we will see any material negative pre-release announcements this week. Perhaps we will see some currency related commentary based on the magnitude of the strengthening dollar in Q4. Overall, for the S&P500, earnings expectations are unchanged for the full year of 2024 versus where they were at the end of September. For Q4 earnings expectations, estimates are 3.3% lower now than a quarter ago, with the biggest declines in Energy, Materials, and Healthcare. Communication Services is the only sector with higher Q4 expectations now than three months ago.

2024 EPS Revisions: September 27th, 2024 vs. December 27th, 2024

Sector	3Q24E	4Q24E	2024E
S&P 500	3.3%	(3.3%)	(0.0%)
Communication Services	11.2%	2.7%	3.6%
Utilities	11.4%	(2.6%)	2.8%
Consumer Discretionary	8.8%	(2.1%)	1.8%
Financials	6.4%	(1.8%)	1.1%
Info Tech	3.2%	(0.6%)	0.6%
Real Estate	(0.1%)	(0.3%)	(0.1%)
Consumer Staples	2.3%	(4.8%)	(0.6%)
Health Care	2.7%	(7.8%)	(1.4%)
Industrials	(9.9%)	(6.3%)	(4.1%)
Materials	(4.8%)	(13.1%)	(4.3%)
Energy	(8.5%)	(15.3%)	(5.9%)

Source: Trivariate Research

ECONOMIC, INDUSTRIAL AND CONSUMER ACTIVITY IS ALL LEVEL

Q4 2024 Changes in Macro Regime

Macro Signal	Q3 2024 Regime	Q4 2024 Regime	Comments
Economic Activity	Decreasing	Level	Trivariate's Proprietary Economic Activity Gauge is now level after decreasing in Q3. The US Leading Economic Indicators are negative but have cyclically troughed and are less negative to start the year than they were at the end of September. However, other data are mixed-to-positive. The NFIB Small Business Optimism spiked in July to its highest level since early in 2022. On the contrary, the Philly Fed Business Outlook was choppy ending the quarter at its lowest level since Q1 2023. The Citi Economic Surprise Index ended the quarter where it started, having peaked in mid-November, eroding steadily over the last six weeks and now negative.
Consumer Activity	Decreasing	Level	Trivariate's Proprietary Consumer Activity gauge is level in Q4. The unemployment rate ticked up to 4.2% in the November payrolls from 4.1% in the October payrolls, about steady since the middle of 2024. Wages declined, ending November at 4.3% growth vs. 5.3% 6-months earlier. This is the lowest wage growth since the initial COVID recovery in 2021. 90-day credit card delinquencies were modestly higher during Q4, ending at 0.70% vs. 0.67% at the end of September. The University of Michigan Consumer Sentiment gauge ended December 2024 at 74.0, above the end September level of 70.1, and the highest level since the end of April 2024.
Financial Conditions	Level	Level	Overall financial conditions are quite loose vs. any longer-term history. Shorter-term, financial conditions ended the quarter at a similar level to the start of the quarter. The 10-year yield had a big move during the quarter though, ending the year at 4.57%, approaching highs for this cycle reached in October of 2023, after ending Q3 at 3.78%. The 2-year yield also rose, ending at 4.24%, vs. the 3.64% at the 3rd quarter-end. The 2-year yield has been below the 10-year yield (i.e., "normal" or "un-inverted") for much of the quarter, for the first time in 2.5 years. 12-month forward Fed Funds rate expectations were 3.095% at the end of September and are 3.93% now, indicating a stronger belief in higher yields and a more hawkish Fed post the election.
Yield Curve 63d	Bull Steepening	Level	
Yield Curve 126d	Bull Steepening	Bear Steepening	
Yield Curve 252d	Bull Steepening	Bull Steepening	
Industrial Activity	Level	Level	Trivariate's Proprietary Industrial Activity gauge remained level in Q4. There are signs the Industrial Economy has bottomed. North American Car-Loads were higher at the end of Q4 than Q3. Dry Van Rate Per Mile moved steadily higher during Q4, ending the year at highs. In terms of production, data are mixed. Industrial production has not yet recovered, ending November slightly lower than the end of September. In addition, US manufacturing utilization is most recently 76.8%, slightly lower than the 77.4% at the end of Q3. However, the ISM is slightly higher than the end of November, (the December number comes out tomorrow, 1/3/25). The Baker Hughes Rig Count was steady during Q4. The US Auto SAAR rose as of the last reading vs. Q3 quarter-end, at 16.5 million, now the highest level since the middle of 2021.

Source: Trivariate Research

DOLLAR WEAKER AGAINST YEN, STRONGER AGAINST ALL ELSE

Q4 2024 Changes in Macro Regime

Macro Signal	Q3 2024 Regime	Q4 2024 Regime	Comments
China	Level	Decreasing	The Chinese economy now looks like it is declining. China macro data points were mixed during Q4. The Citi Surprise Index for China trended higher in Q4, ending the quarter near highs. However, newly built commercial residential building prices declined through Q4, and FAI real estate fell steadily during Q4 as well. China auto sales were strong, finishing with over 3 million in monthly units for the last data point, the highest level in more than five years. China electricity consumption data is above where it was a year ago, but seasonally fell off in Q4, after peaking in August. There appears to be some consensus among US-based investors that China data points are bottoming.
Commodities	Decreasing	Increasing	During Q4, in general, energy products were higher and other commodities were lower. Brent oil modestly rose during quarter, moving from $71.77 to $74.64, or up 4% during Q4. WTI was up 5.2% in Q4. The Daily National Average Gasoline Price of $3.06 is lower than the $3.20 at the end of Q3. Natural gas was up 24% during Q4 after rising 12% in Q3. Demand for natural gas may grow to meet the AI power boom. Other commodities were largely lower during Q4. Wheat was down 8.7% in Q4 after rising 5.5% in Q3. Cotton was down 9.2% in Q4, and sugar was down 15% after rising 9.1% in Q3. The overall Bloomberg Commodity Index was down 1.6%. It may be that some companies can drive margin expansion through lower sequential input costs.
Oil	Level	Level	
Currency	Level	Increasing	There were huge moves in the dollar during Q4, and we suspect some corporates will mention "Constant Currency" when they report in Q4. Mostly, the currency movements were the reverse of what happened in Q3. The DXY was 7.7% stronger in Q4 after being weaker by 5% the previous quarter. The biggest currency story in Q3 2024 was the Yen, where the dollar relatively strengthened by 11.3% during Q3. That largely reversed in Q4, with the Dollar weakening by 9.45% vs. the Yen. The Dollar strengthened against the Euro by 7%, the Pound by 6.4%, and the Loonie by 6.35% during Q4.
Europe	Decreasing	Level	Signals in Europe are mixed. The Eurozone Citi Surprise is negative and moved lower the second half of Q4, after improving from end-September through the middle of November. Despite this, Eurozone consumer confidence modestly deteriorated during Q4. Eurozone unemployment was steady at 6.3% during Q4. UK Consumer Confidence is slightly less negative now than at the end of Q3.

Source: Trivariate Research

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