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# SPDR<sup>®</sup> ETFs Chart Pack

**Key Charts to Help Navigate the Market**

**May 2024 Edition**

Please see Appendix D for more information on investment terms used in this Chart Pack.

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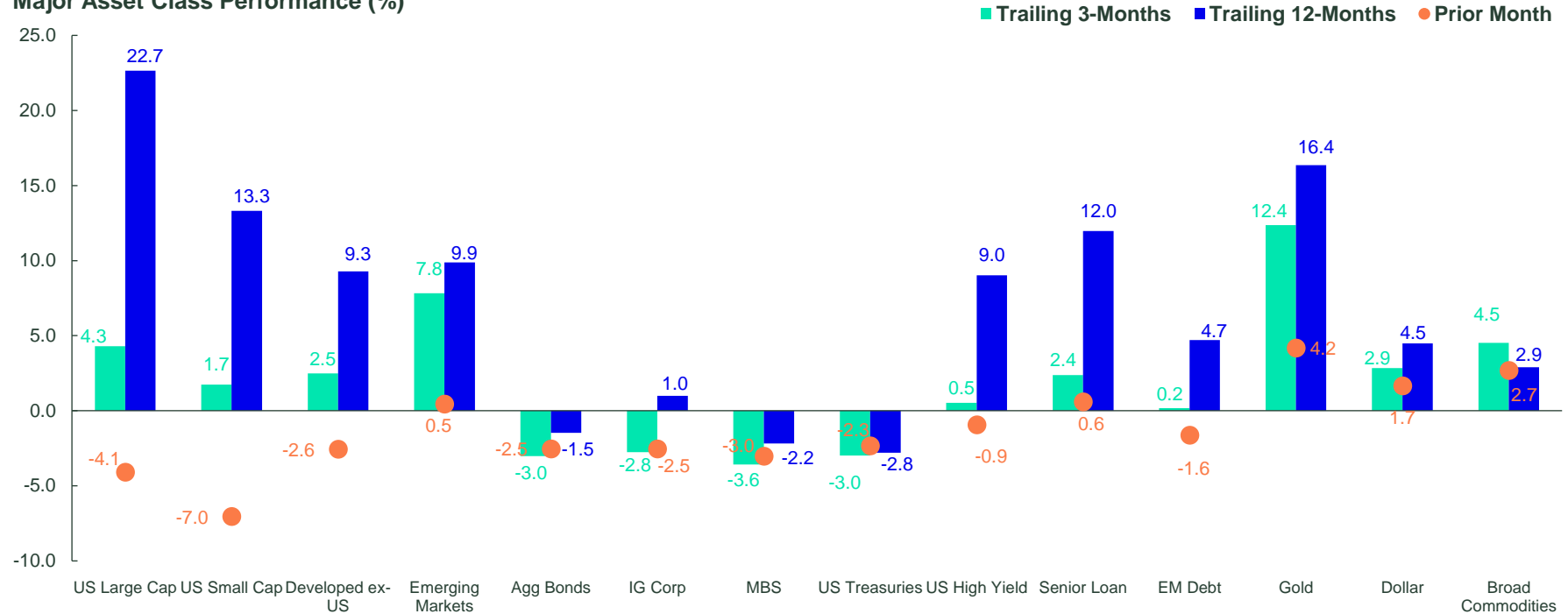
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# 1. Market Environment

# Asset Class Performance

A rise in geopolitical uncertainty and continued Fed hawkishness led to a rally in perceived safe-haven assets, such as the dollar and gold

Major Asset Class Performance (%)



Source: Bloomberg Finance, L.P., as of April 30, 2024. **Past performance is not a reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income. All the index performance results referred to are provided exclusively for comparison purposes only. It should not be assumed that they represent the performance of any particular investment. Performance returns for periods of less than one year are not annualized. Agg Bonds = Bloomberg US Agg Total Return Index | Broad Commodities = Bloomberg Commodity Total Return Index | Developed ex-US = MSCI EAFE Total Return Index | Dollar = DXY Dollar Index | EM Debt = Bloomberg EM Hard Currency Total Return Index | Emerging Markets = MSCI Emerging Markets Index | Gold = LBMA Gold Price Index | IG Corp = Bloomberg US Corporate Total Return Index | MBS = Bloomberg US MBS Index Total Return Index | Senior Loan = Morningstar LSTA US Leveraged Loan Total Return Index | US High Yield = Bloomberg US Corporate High Yield Total Return Index | US Large Cap = S&P 500 Total Return Index | US Small Cap = Russell 2000 Total Return Index | US Treasuries = Bloomberg US Treasury Total Return Index.

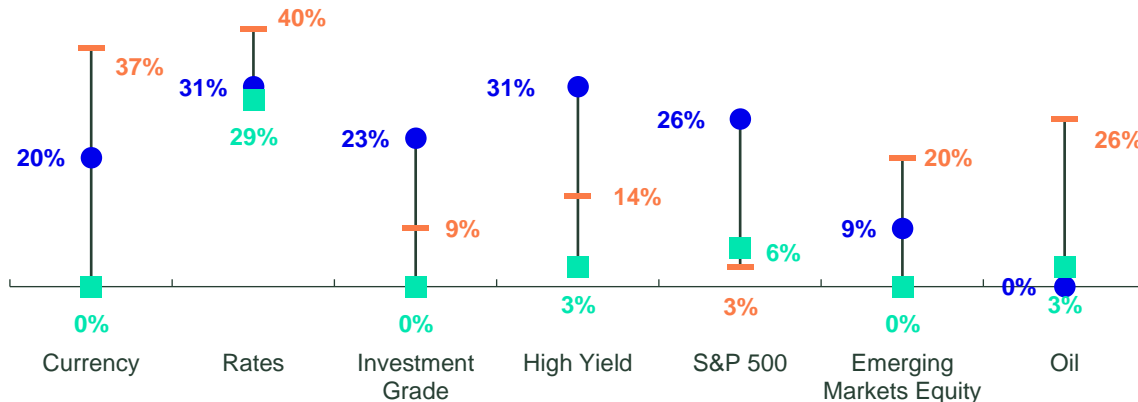
# Cross Asset Volatility

Credit and US equity implied volatility jumped to their highest level since last fall, while rate and oil implied volatility were little changed

## Cross-Asset Implied Volatility

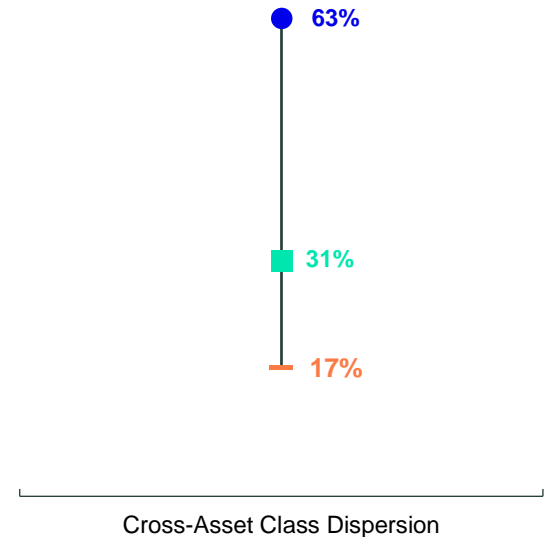
Percentile Rank of Daily Average, Three-Year

● Apr-24 ■ Mar-24 — Jan-24



## Cross-Asset Dispersion

Percentile Rank, Three-Year

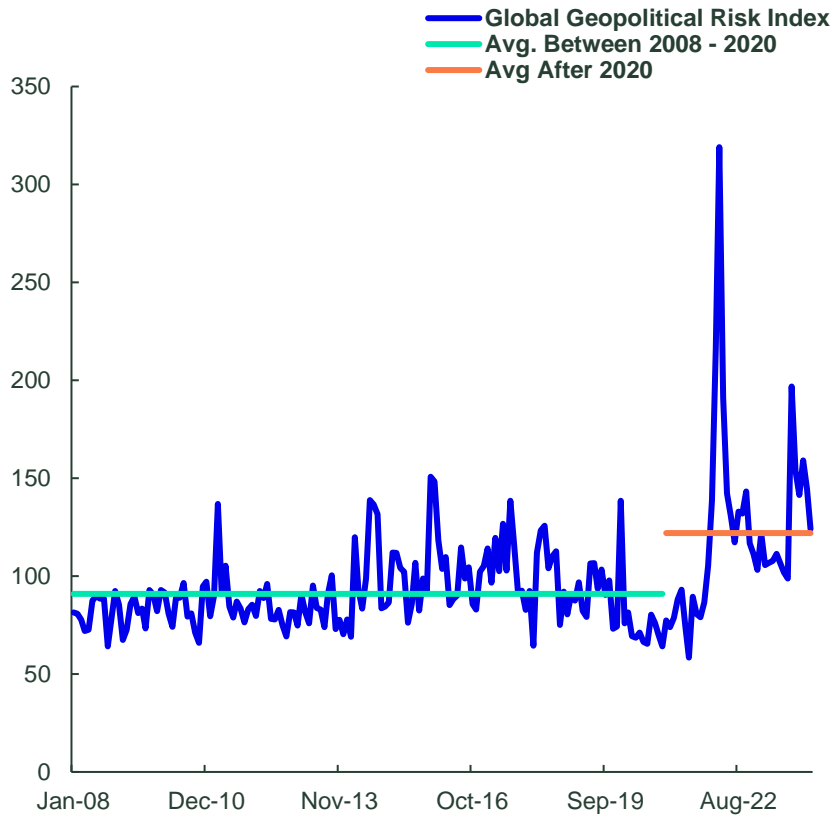


Source: Bloomberg Finance, L.P., as of April 30, 2024. **Past performance is not a reliable indicator of future performance.** Currency-implied volatility is measured by the J.P. Morgan Global FX Volatility Index. Rates-implied volatility is measured by the MOVE Index. Oil-implied volatility is derived from oil future contracts. Emerging markets-implied volatility is measured by the CBOE Emerging Markets ETF Volatility Index. High Yield bond-implied volatility is measured by the CBOE High Yield Corporate Bond ETF Volatility Index. Cross-asset dispersion is measured by standard deviation of monthly returns of S&P 500, Russell 2000, Russell 3000 Growth, Russell 3000 Value, MSCI Emerging Markets, MSCI World ex-USA, Bloomberg US Aggregate, US Corporate High Yield, EM USD Aggregate, EM Local Currency Government, S&P/LSTA US Leveraged Loan 100, Bloomberg Commodity Indices, LBMA Gold Price PM.

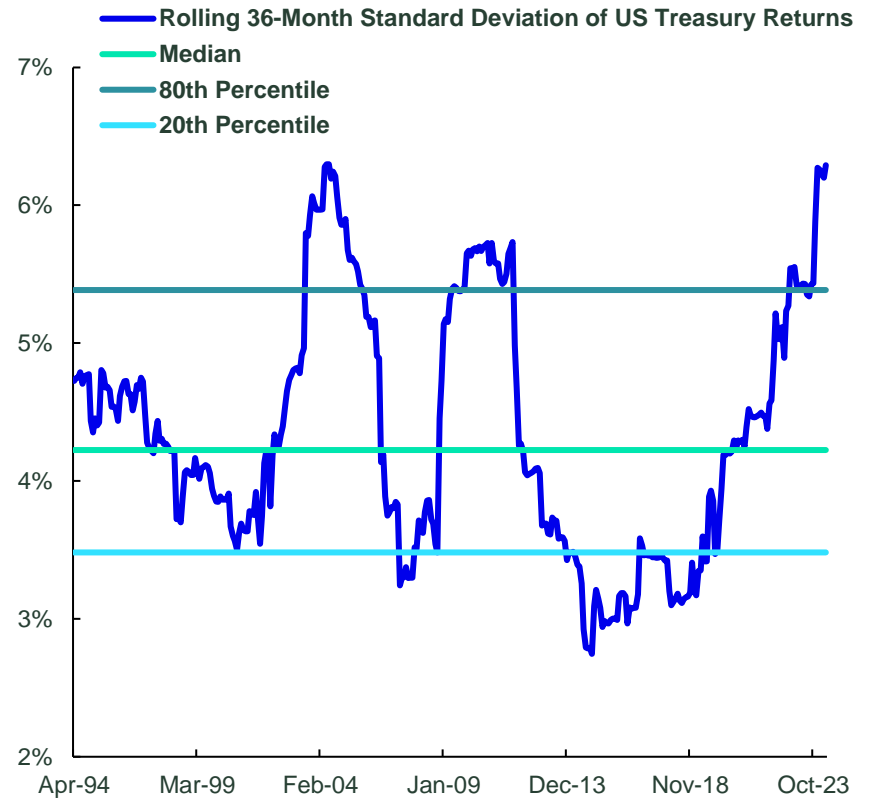
# Geopolitical and Rate Risks

Geopolitical risks and realized bond volatility are elevated, creating challenges and opportunities to generate investment returns

Global Geopolitical Risk Index



US Treasurys' Rolling 36-Month Standard Deviation of Returns



Source: Economic Policy Uncertainty, Bloomberg Finance, L.P., as of April 30, 2024.

# Gold

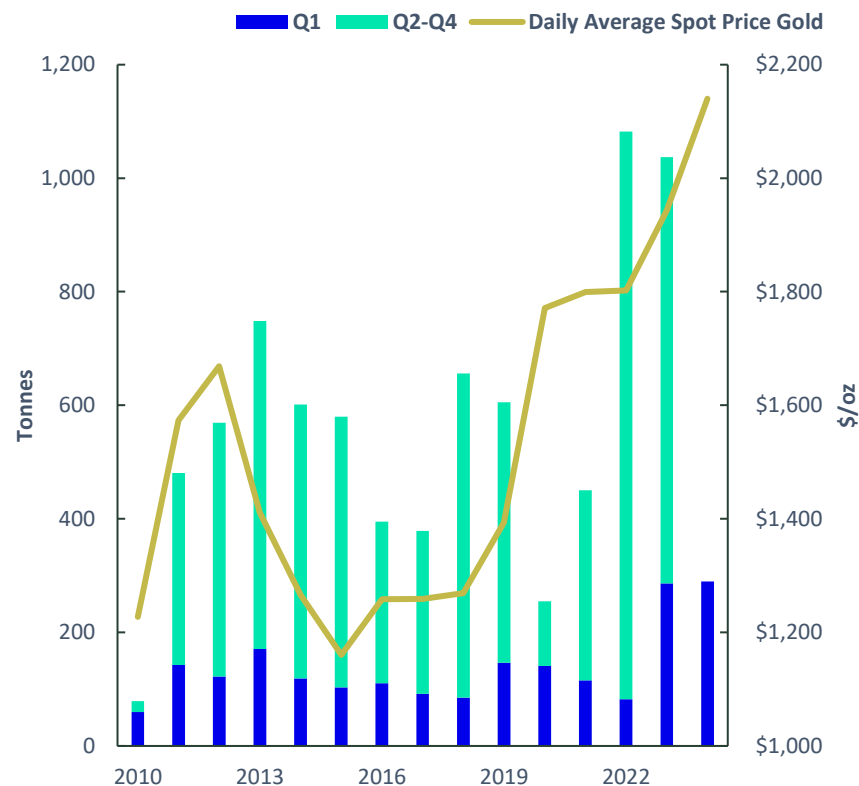
Higher gold prices are supported by non-investment gold demand, mainly purchases from central banks

## Global Gold Demand

Metric Tons

	Q1 2023	Q1 2024	YoY Change %
Daily Avg. Spot Price Gold (\$/oz)	1892.00	2140.00	13
<b>Total Gold Demand</b>	<b>1163.70</b>	<b>1101.80</b>	<b>-5</b>
Jewelry	531.00	535.00	1
Technology	71.20	78.60	10
Investment	275.30	198.60	-28
Total Gold Bar and Coin	303.90	312.30	3
ETFs and Similar	-28.60	-113.70	-
Central Banks & Other Inst.	286.20	289.70	1

## Strong Central Bank Demand for Gold Carried Over into 2024



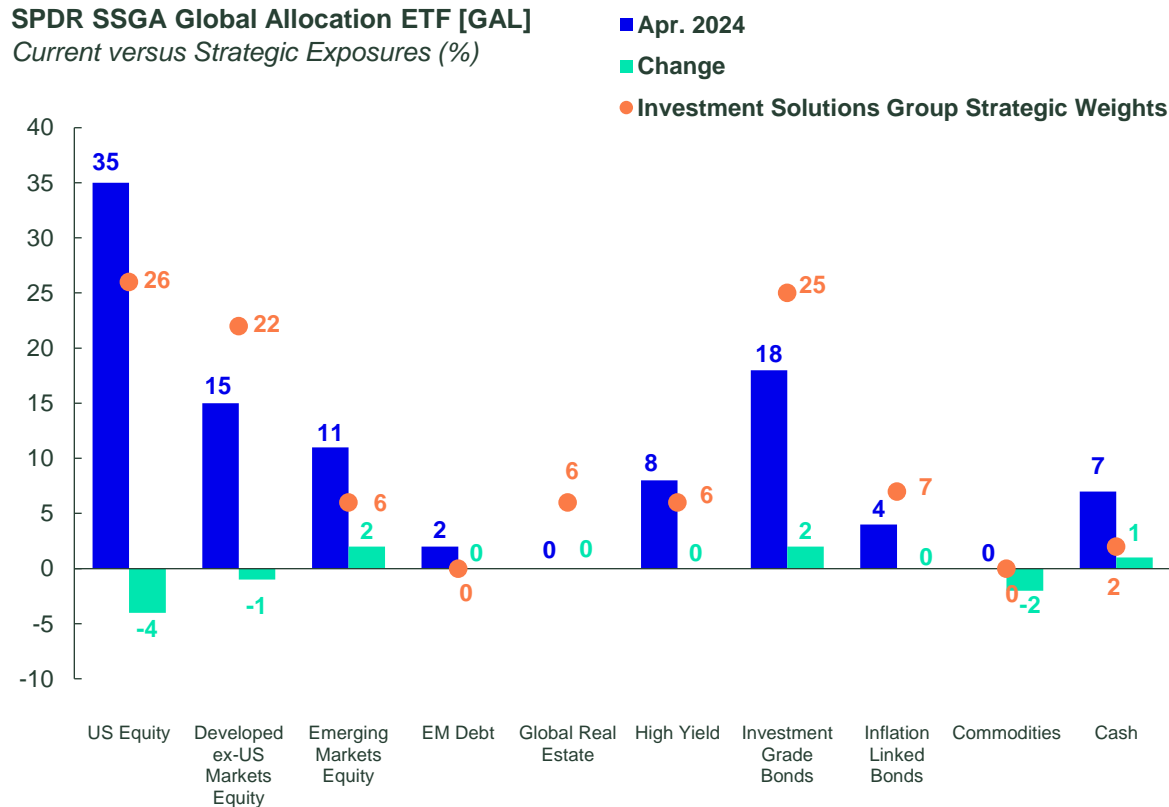
Source: Metals Focus, Refinitiv GFMS, ICE Benchmark Administration, World Gold Council, and State Street Global Advisors, data as of April 30, 2024.

# State Street Current Positioning

Given increased equity volatility, State Street pared back US and developed ex-US equity allocations — funding allocation to IG bonds and EM equities

## SPDR SSGA Global Allocation ETF [GAL]

Current versus Strategic Exposures (%)



## Tactical Rebalance Trades

<b>Bought</b>	<ul style="list-style-type: none"> <li>Emerging Market Equity</li> <li>IG Bond</li> <li>Cash</li> </ul>
<b>Sold</b>	<ul style="list-style-type: none"> <li>US Equity</li> <li>Developed ex-US</li> <li>Commodities</li> </ul>

## Sector Rotation Trades

US Equity Allocation Total: 6%

<b>Mar.</b>	<b>Comm. Svcs.</b> 2%	<b>Indust.</b> 2%	<b>Tech.</b> 2%	
<b>Apr.</b>	<b>Comm. Svcs.</b> 2%	<b>Indust.</b> 2%	<b>Tech.</b> 1%	<b>Energy</b> 1%

Source: State Street Global Advisors. As of April 30, 2024. Exposures are as of the date indicated, are subject to change, and should not be relied upon as current thereafter. This information should not be considered a recommendation to invest in a particular sector. It is not known whether the sectors shown will be profitable in the future. The information above is rounded to the nearest whole number.



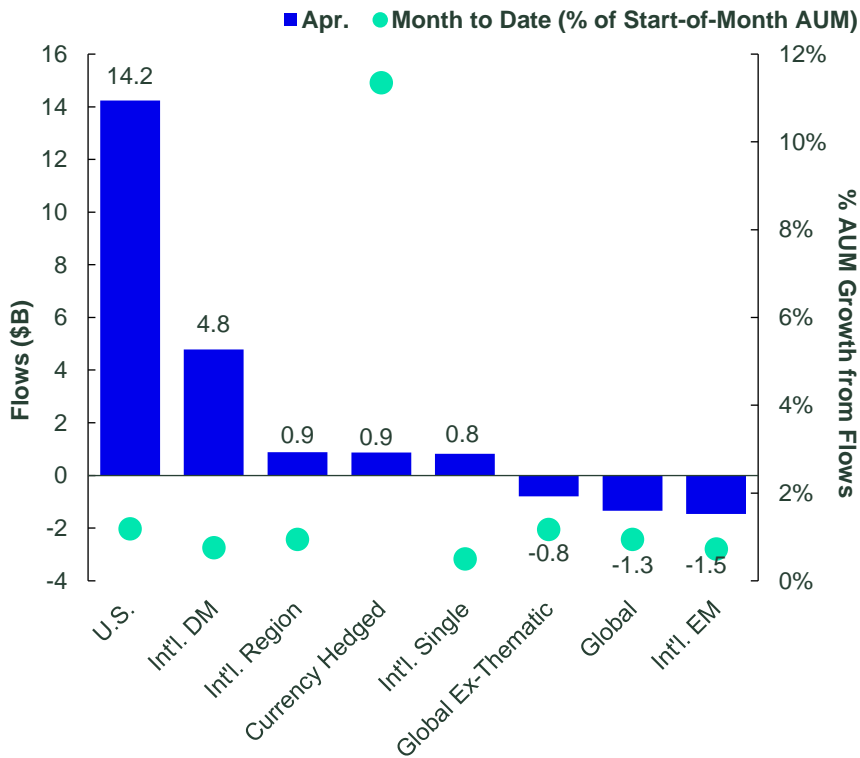
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# 2. Investor Behavior

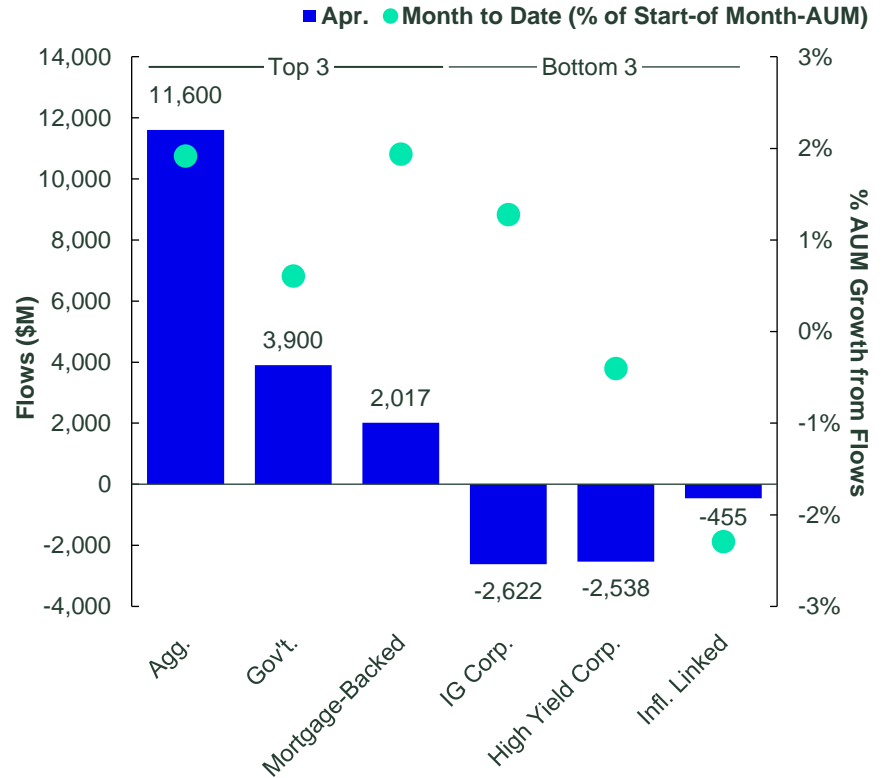
# Flow Trends

US-listed ETFs took in just \$35 billion last month, as equity ETF flows were 40% below their monthly average amid a pullback in the equity rally

Flows by Equity Regions



Fixed Income Top and Bottom 3 Sectors



Source: State Street Global Advisors, Bloomberg Finance, L.P., as of April 30, 2024.

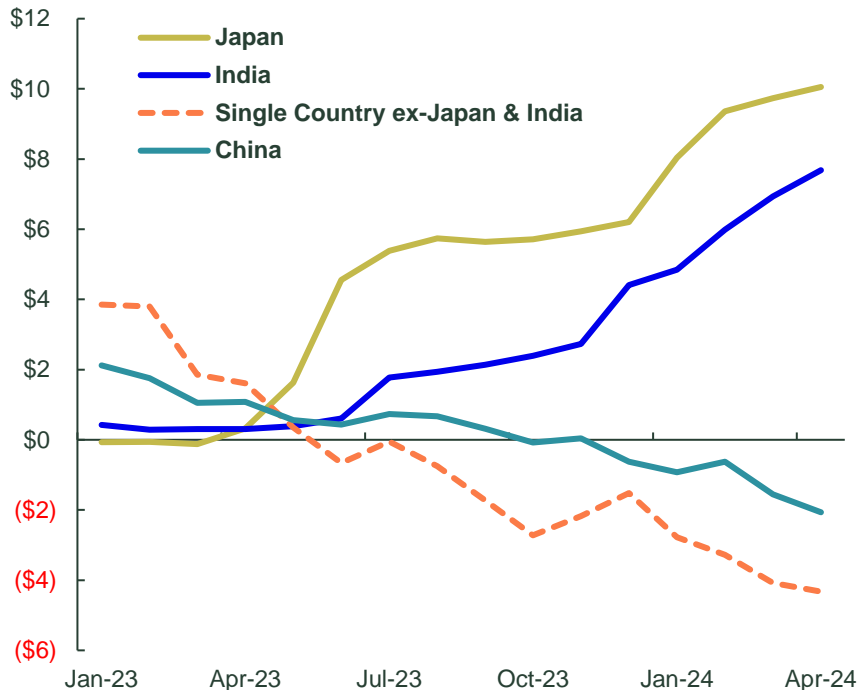
Sectors, asset classes and flows are as of the date indicated, are subject to change, and should not be relied upon as current thereafter.

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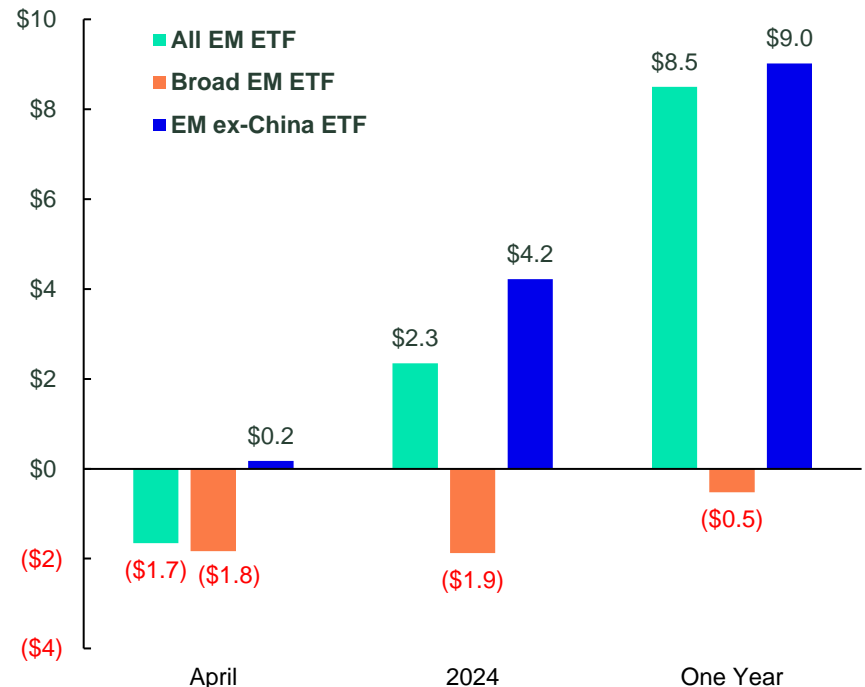
# Flow Trends (Continued)

While overall ETF flows were tempered, investors did make discrete tactical allocations overseas — overweighting India and Japan, while shunning China

**Japan, India, and China Cumulative Flows vs. Single Country Flows Since 2023, \$ Billions**



**Emerging Market ETF Flows (Broad EM versus EM ex-China) \$ Billions**

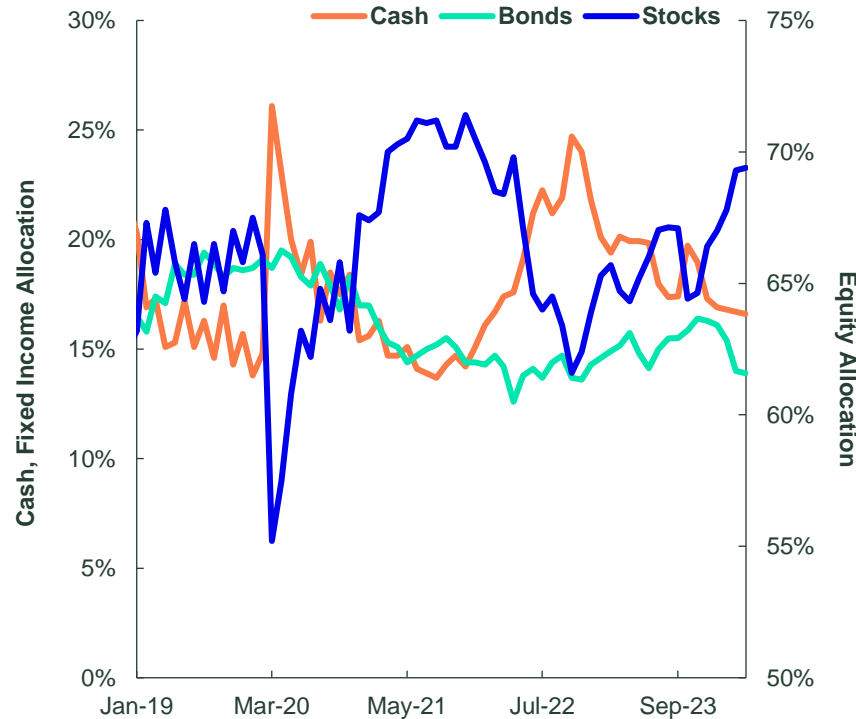


Source: State Street Global Advisors, Bloomberg Finance, L.P., as of April 30, 2024, Sectors, asset classes and flows are as of the date indicated, are subject to change, and should not be relied upon as current thereafter. This information should not be considered a recommendation to invest in a particular sector shown. It is not known whether the sectors shown will be profitable in the future.

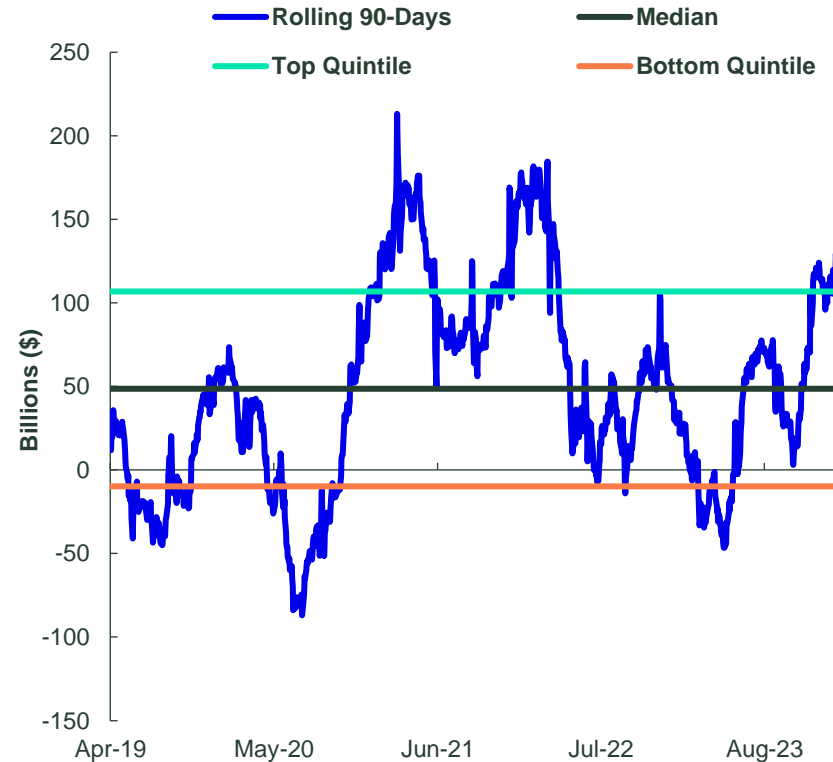
# Investor Positioning

Retail investors continue to favor stocks over bonds. ETF flows favor risk-on equities at an above average rate as well

AAL Asset Allocation Survey



Rolling Three-Month Flow Differences: Equity minus FI ETFs  
\$ Billions

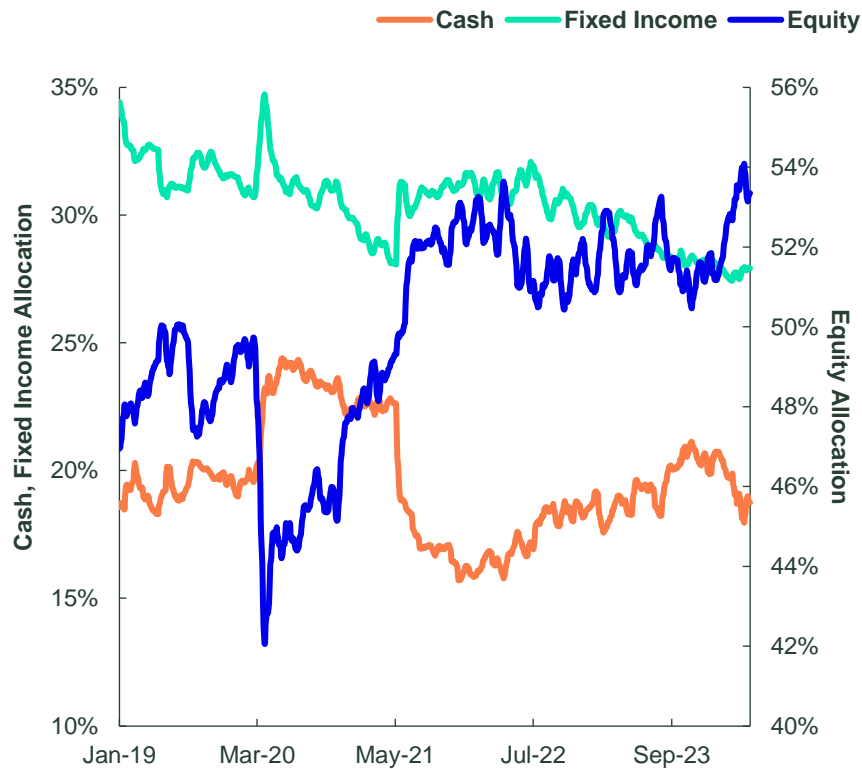


Source: AAL, Bloomberg Finance L.P., as of April 30, 2024. Trailing Five-Year window as of the date indicated used for quintile and median calculations.

# Investor Positioning (Continued)

Institutional investors and risk targeted strategies slightly pared back equities as volatility rose

State Street Institutional Investor Holdings Indicator



Equity Exposure of S&P 500 Risk Control Index



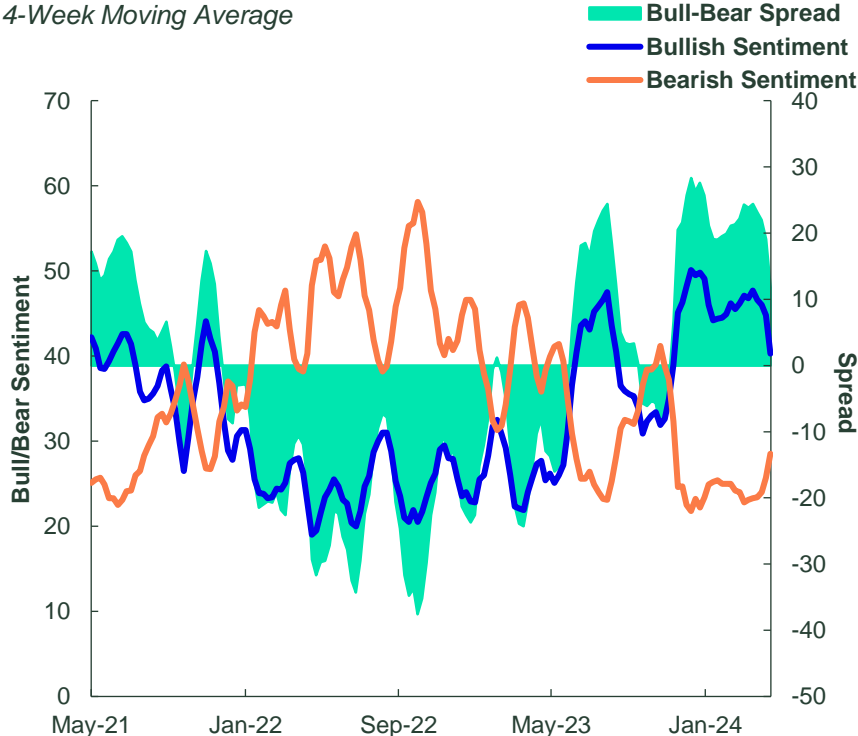
Source: State Street Global Markets, Bloomberg Finance L.P., as of April 30, 2024. The S&P 500 Risk Control 10% Index seeks to limit the volatility of the S&P 500® to a target level of 10% by allocating to a cash component. This helps to reduce exposure to dramatic fluctuations that can occur during unstable market conditions. The right chart denotes the equity exposure seen in the index.

# Investor Sentiment

Bearish sentiment among retail investors is at its highest since late November. Institutional risk appetite also decreased, but remains risk-on

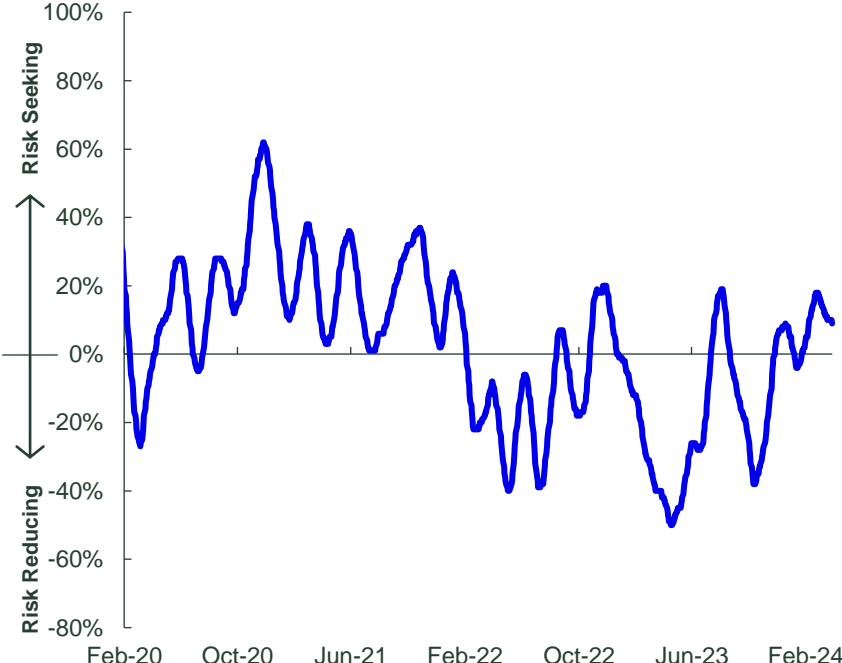
**AAIL US Investor Sentiment Bullish and Bearish Reading Spreads**

4-Week Moving Average



**State Street Institutional Investor Risk Appetite Index**

Rolling 30-Day Moving Average



Source: AAIL, State Street Global Market Insights, as of April 30, 2024. **Past performance is not a reliable indicator of future performance.** The AAIL Investor Sentiment Survey offers insight into the mood of individual investors. Risk Appetite Index. This is derived from measuring investor flows in 22 different dimensions of risk across equities, FX, fixed income, Commodity-linked assets and asset allocation trends. The index captures the proportion of the twenty-two risk elements that saw either risk seeking or risk reducing behavior.

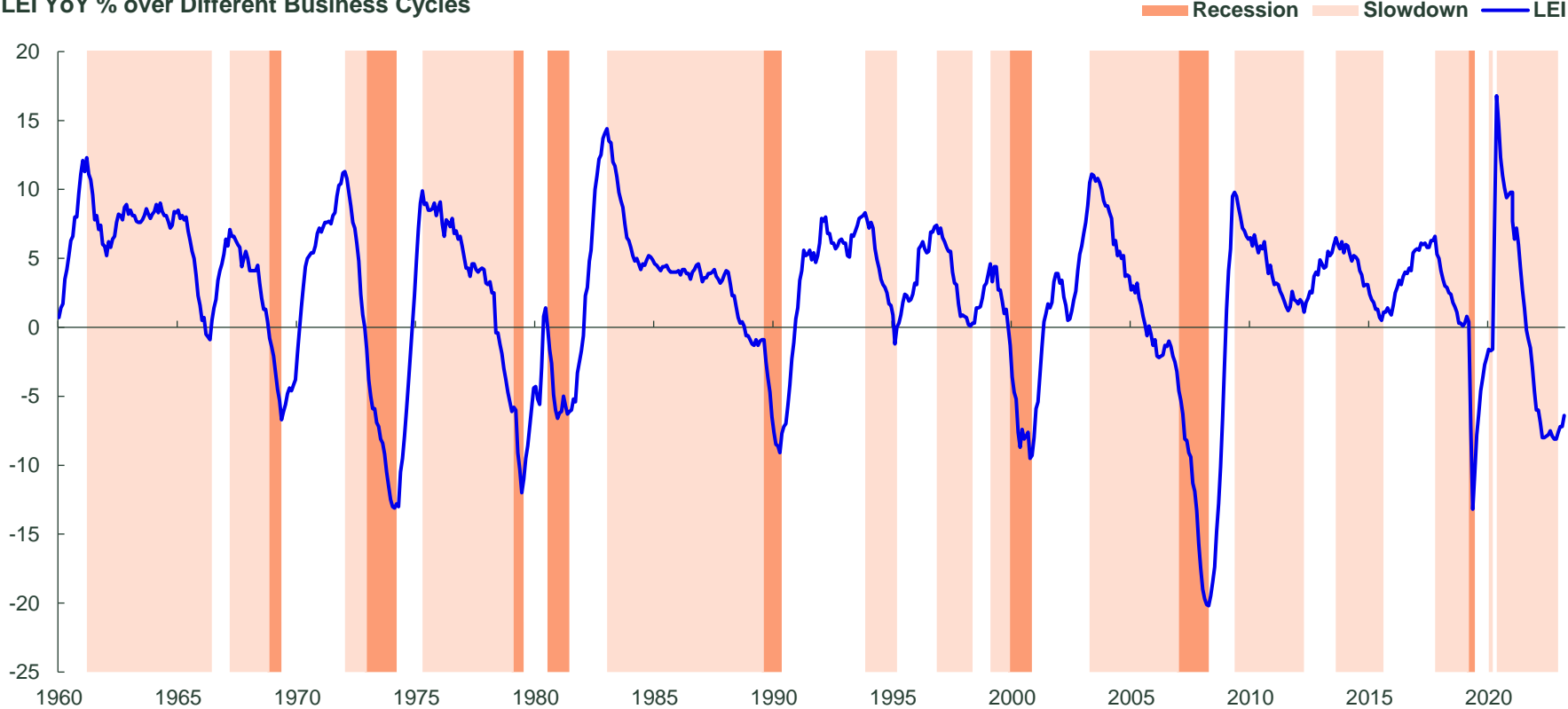
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# 3. Econ, Fundamentals & Factors

# Business Cycle Trends

Trends in leading economic indicators continue to recover, illustrating the resiliency of the current US economy

LEI YoY % over Different Business Cycles



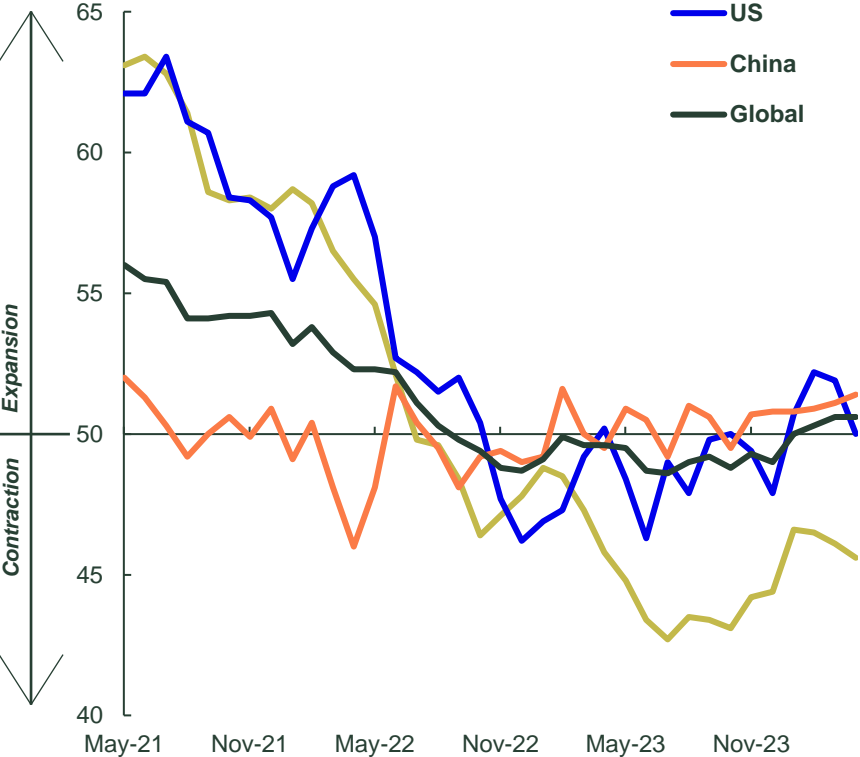
Source: Bloomberg Finance L.P., as of April 30, 2024.



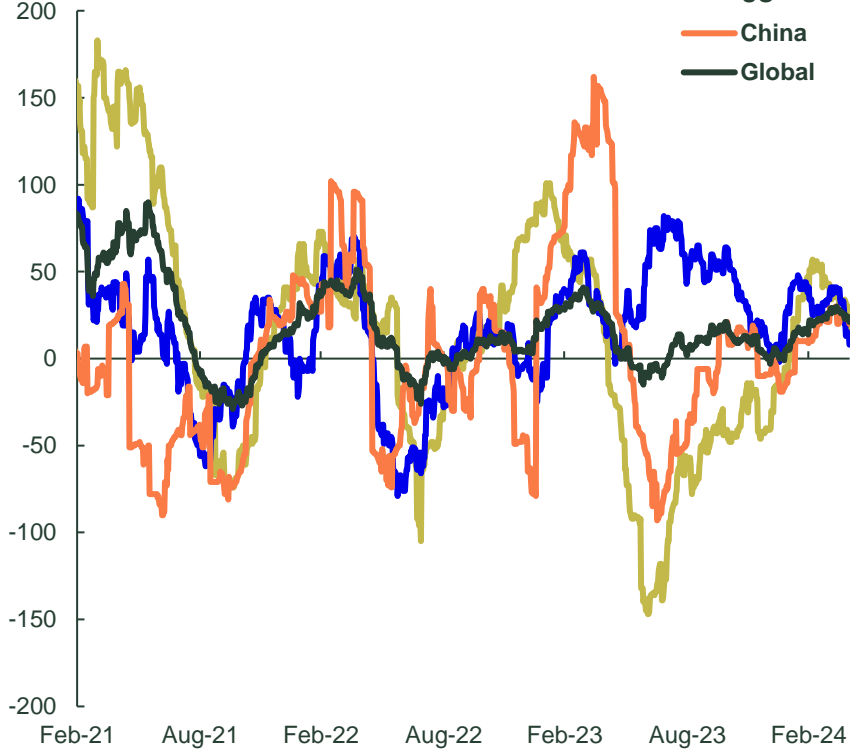
# Global Economy

Economic data has been surprising to the upside. However, global manufacturing trends remain uneven, while expansionary on a global basis

Manufacturing PMIs



Citi Economic Surprise Indices



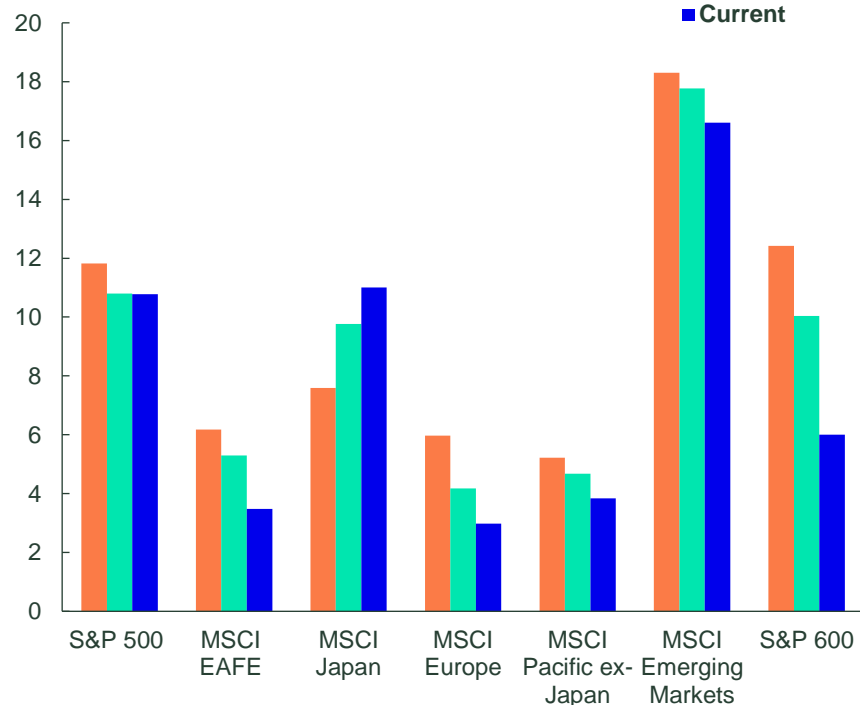
Source: Bloomberg Finance L.P., as of April 30, 2024.

# Global Earnings

Global earnings revisions have improved from three months ago, led by the US and Japan

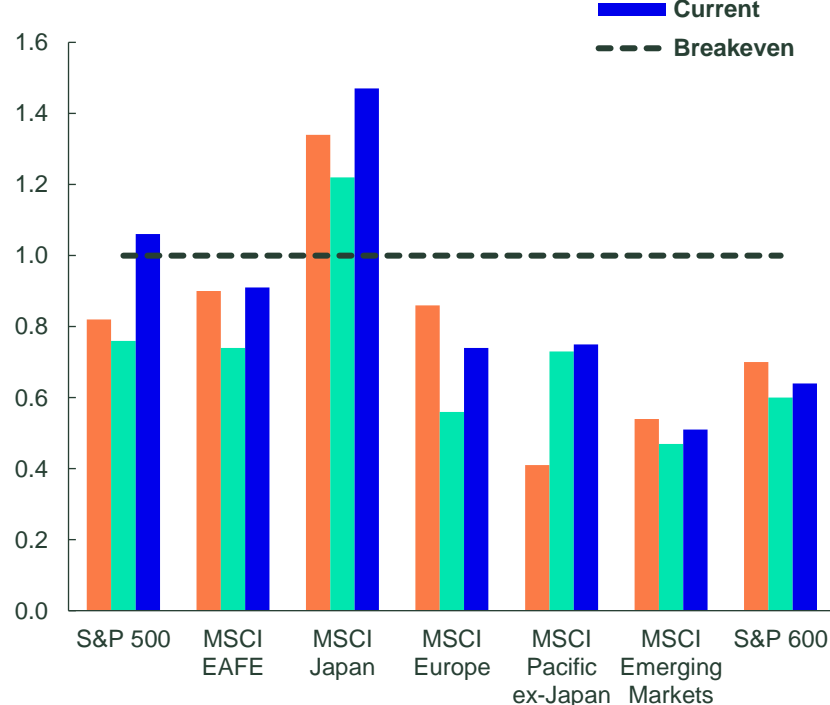
**2024 EPS Growth Estimates**

USD terms, %



**2024 EPS Revision**

3-Month Up-to-Downgrade Ratio



Source: FactSet, as of April 30, 2024. Characteristics are as of the date indicated, are subject to change, and should not be relied upon as current thereafter. EPS growth estimates are based on Consensus Analyst Estimates compiled by FactSet. Dotted line represents an equal ratio of upgrades and downgrades. Projected characteristics are based upon estimates and reflect subjective judgments and assumptions. There can be no assurance that developments will transpire as forecasted and that the estimates are accurate.

# Global Valuation

US small-cap valuations are attractive relative to its own history and the broad market. China and EM equity relative valuations screen near 15-year lows

Absolute & Relative Valuation Z-Score\* and 15-Year Percentile Ranking

Bottom 3 Expensive Valuation

Top 3 Attractive Valuation

		Valuation to Region History (Percentile)				Absolute Valuation Composite Z-Score	Valuation Relative to MSCI ACWI (Percentile)				Relative Valuation Z-Score
		P/E	NTM P/E	P/B	P/S		P/E	NTM P/E	P/B	P/S	
US/Style/Region	S&P 500	89%	87%	95%	90%	1.42	96%	93%	87%	83%	1.38
	S&P MidCap 400 Index	30%	31%	69%	74%	0.00	15%	11%	2%	10%	-1.55
	S&P SmallCap 600 Index	20%	10%	16%	29%	-0.83	14%	5%	0%	5%	-1.60
	Russell 1000 Value	80%	72%	91%	83%	0.78	56%	10%	14%	4%	-1.07
	Russell 1000 Growth	85%	84%	88%	88%	1.36	82%	79%	82%	86%	1.19
	MSCI EAFE	32%	58%	96%	87%	0.66	3%	9%	15%	12%	-1.68
	MSCI Europe	34%	50%	94%	84%	0.55	5%	9%	13%	2%	-1.69
	MSCI EM	78%	70%	64%	77%	0.34	35%	6%	2%	3%	-1.03
Major Countries	MSCI Canada	43%	43%	76%	31%	-0.09	19%	21%	4%	2%	-1.31
	MSCI Japan	66%	82%	99%	99%	1.04	40%	50%	29%	84%	-0.06
	MSCI Germany	23%	40%	48%	75%	-0.05	1%	9%	9%	11%	-1.60
	MSCI France	54%	70%	99%	92%	0.96	20%	18%	36%	62%	-0.44
	MSCI UK	20%	37%	87%	65%	0.02	6%	15%	20%	11%	-1.40
	MSCI China	46%	31%	6%	27%	-0.70	19%	3%	2%	3%	-1.32
	MSCI Brazil	16%	9%	36%	13%	-1.09	16%	7%	1%	2%	-1.59
	MSCI India	86%	94%	91%	96%	1.46	71%	86%	45%	58%	0.20

Source: State Street Global Advisors, FactSet, as of April 30, 2024. \* The z-score is calculated as the average z-score of valuations based on different metrics.

The z-score indicates how many standard deviations an element is from its historical mean. A z-score can be calculated from the following formula.

$z = (X - \mu) / \sigma$  where z is the z-score, X is the segment current valuations and  $\sigma$  is the standard deviation of monthly valuations over the past 15 years.

# Global Momentum

AI-fueled US Growth exposures lead on momentum, followed by regulatory reform supporting Japanese and Indian markets

## Momentum Scorecard Rankings

Bottom 3 Rank on Momentum

Top 3 Rank on Momentum

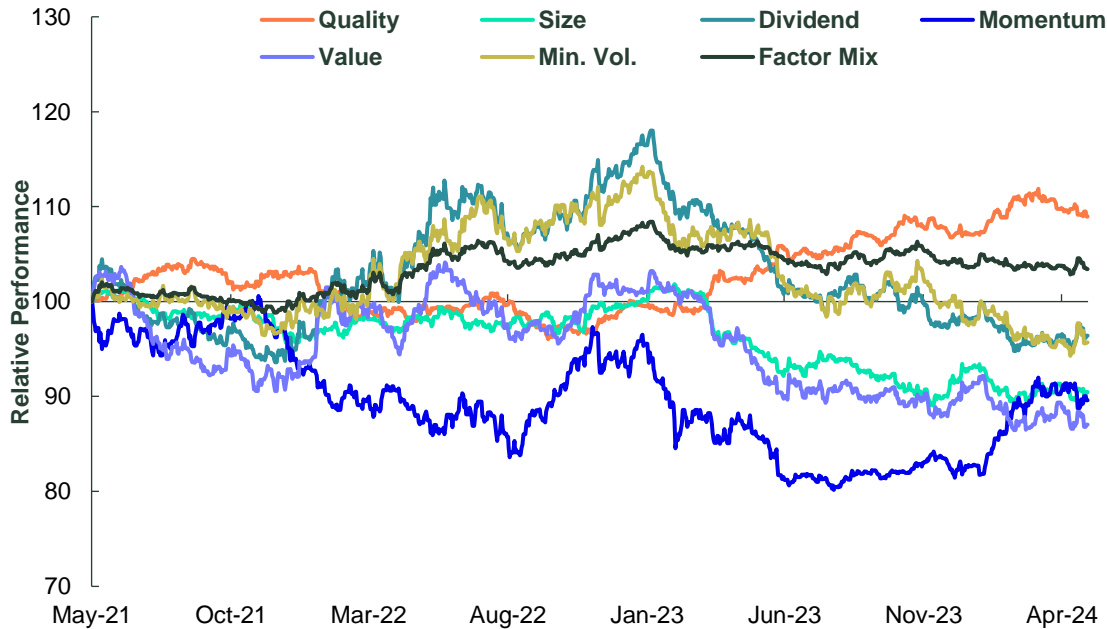
		Price Momentum*			Technicals			Continuous Momentum			Combined Average Rank
		3 Month	6 Month	12 Month	% above 50-Day Moving Average	% above 200-Day Moving Average	% Difference 50- to 200-Day Moving Average	# of Positive Return Days (90-Day Lookback)	# of Positive Return Days (180-Day Lookback)	# of Positive Return Days (12-Month Lookback)	
US/Style/Regions	S&P 500	10.2%	22.5%	27.9%	-1.2%	7.8%	9.1%	48	99	137	6
	S&P MidCap 400	9.5%	21.8%	21.3%	-1.7%	6.6%	8.5%	50	98	133	8
	S&P SmallCap 600	2.0%	16.8%	13.8%	-0.3%	4.8%	5.1%	46	88	122	13
	Russell 1000 Value	8.4%	17.9%	17.5%	-0.1%	7.5%	7.6%	54	101	137	6
	Russell 1000 Growth	11.2%	26.7%	37.9%	-0.2%	10.3%	10.5%	50	101	142	4
	MSCI EAFE	5.8%	16.8%	15.3%	-1.0%	5.5%	6.6%	53	104	145	8
	Euro Stoxx	5.4%	17.4%	15.0%	0.4%	7.0%	6.6%	52	97	140	9
	MSCI EM	2.4%	10.4%	8.2%	1.7%	6.0%	4.2%	55	100	135	10
Major Countries	MSCI Canada	4.0%	15.7%	15.1%	0.9%	7.2%	6.3%	56	103	140	7
	MSCI Japan	11.0%	20.1%	25.8%	-0.8%	10.4%	11.3%	55	102	141	4
	MSCI Germany	7.1%	21.0%	14.8%	0.8%	8.5%	7.7%	47	94	128	9
	MSCI France	5.9%	16.8%	12.1%	0.4%	7.1%	6.7%	49	95	137	9
	MSCI UK	3.1%	10.2%	10.9%	4.1%	7.2%	3.0%	49	96	132	11
	MSCI China	-2.2%	-6.3%	-17.1%	6.5%	3.7%	-2.6%	43	80	118	14
	MSCI Brazil	-7.4%	9.2%	27.0%	-2.1%	-2.2%	-0.1%	41	90	132	14
	MSCI India	6.1%	18.7%	36.8%	2.7%	13.4%	10.4%	60	112	159	3

Source: State Street Global Advisors, Bloomberg, as of April 30, 2024. \* Momentum is calculated by calculating the 3-month, 6-month and 12-month price performance, not including the most recent month. **Past performance is not a reliable indicator of future performance.**

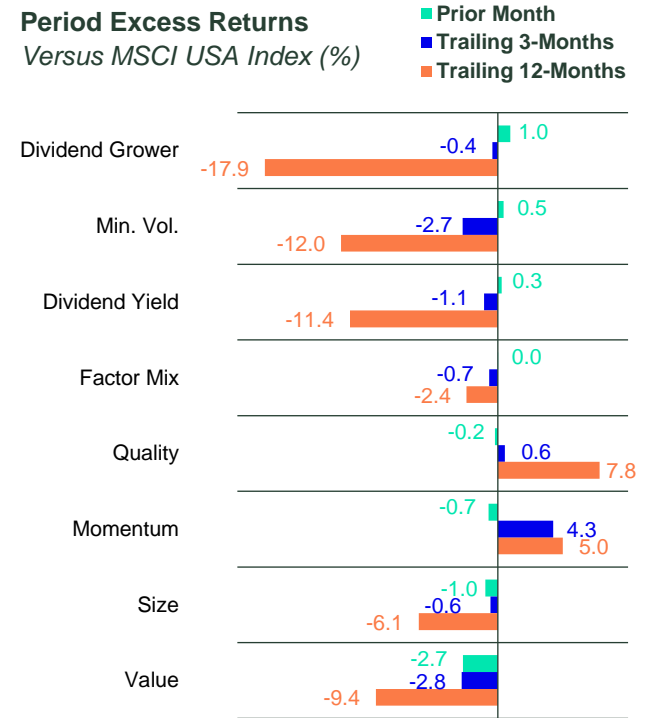
# US Factor Trends

Defensive factors — Min. Vol. and Dividend Yield — outperformed last month amid the risk-off sentiment, although they are laggards over longer periods

**MSCI USA Factor Index Versus MSCI USA Index**  
Three-Year, Relative Performance, Base = 100



**Period Excess Returns**  
Versus MSCI USA Index (%)



Source: Bloomberg Finance, L.P., as of April 30, 2024. **Past performance is not a reliable indicator of future performance.** Min. Vol = MSCI USA Minimum Volatility Index | Value = MSCI USA Enhanced Value Index | Quality = MSCI USA Quality Index | Size = MSCI USA Equal Weighted Index | Dividend = MSCI USA High Dividend Yield Index | Momentum = MSCI USA Momentum Index | Factor Mix = MSCI USA Factor Mix A-Series Capped Index. Div. Grower = S&P High Yield Dividend Aristocrats Index. The indexes used above were compared to the MSCI USA Index. Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income as applicable. All the index performance results referred to are provided exclusively for comparison purposes only. It should not be assumed that they represent the performance of any particular investment.

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# 4. Sectors

# Sector Flows & Returns

While defensive sectors outperformed last month, cyclical sectors continue attracting inflows as economic and earnings fundamentals remain positive



	Positioning					Returns		
	Prior Month Flow (\$M)	Trailing Three-Months Flow (\$M)	Trailing 12-Months Flow (\$M)	Current Short Interest (%)	One-Month Prior Short Interest (%)	Prior Month Return (%)	3-Month Return (%)	12-Month Return (%)
Communications	-205	227	2,511	1.8	1.7	-2.07	8.00	41.31
Consumer Discretionary	-419	1,008	4,611	8.9	8.2	-4.33	4.11	24.33
Consumer Staples	-1,093	-1,709	-7,202	8.3	7.3	-0.89	4.95	2.55
Energy	1,158	429	-144	7.1	6.6	-0.76	13.24	12.98
Financial	1,216	-770	-3,239	14.3	10.5	-4.18	4.57	23.96
Health Care	-2,170	-1,943	-8,444	10.0	9.5	-5.08	0.30	6.90
Industrials	982	2,153	3,140	9.1	9.7	-3.58	7.96	23.57
Materials	-649	-50	-3,585	7.4	6.8	-4.59	8.18	12.34
Real Estate	-787	803	4,107	2.5	2.5	-8.50	-4.48	-0.67
Technology	2,514	8,588	19,325	2.5	2.9	-5.43	2.52	37.46
Utilities	-135	-1,511	-4,096	9.7	10.5	1.65	9.59	0.20

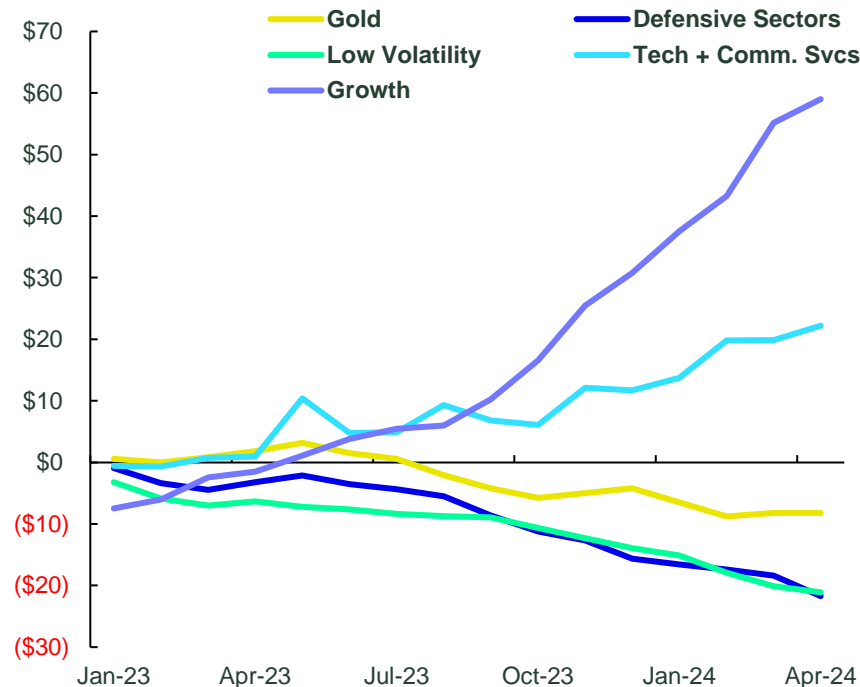
Source: State Street Global Advisors, Bloomberg Finance, L.P., as of April 30, 2024. **Past performance is not a reliable indicator of future performance.**

This information should not be considered a recommendation to invest in a particular sector shown. It is not known whether the sectors shown will be profitable in the future. Under Current Short Interest, Cells that are highlighted green have a lower Short Interest level than the Prior Month. Cells that are highlighted Red have a Short Interest higher than the prior month.

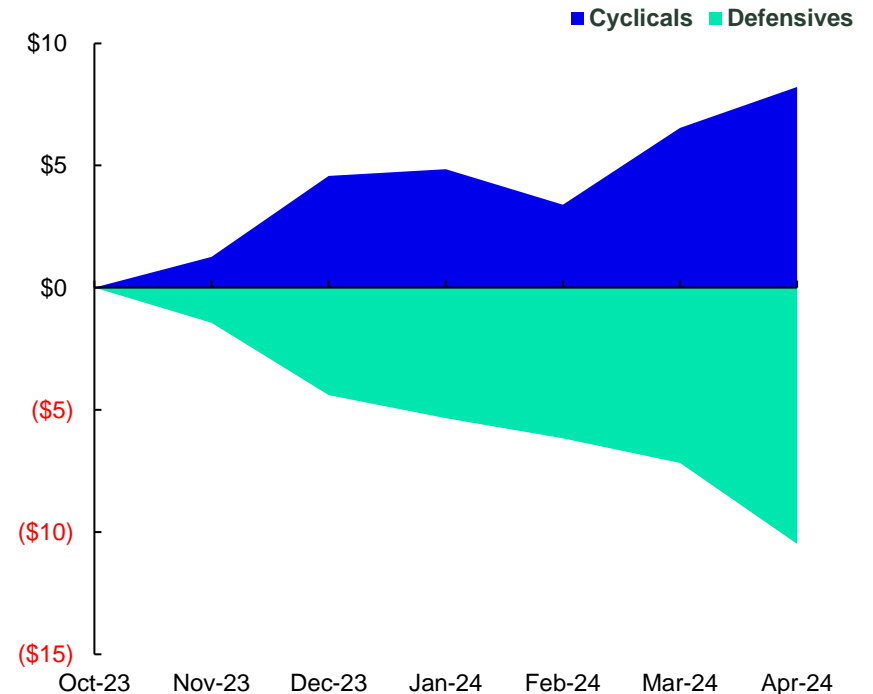
# Sector and Factor Flows

Growth, Cyclical Sectors, and Tech-related sectors continue to be favored over any defensive positions

**Cumulative Flows Since 2023**  
(\$ Billions)



**Cumulative Cyclical versus Defensive Flows Since October 2023**  
(\$ Billions)



Source: State Street Global Advisors, Bloomberg Finance, L.P., as of April 30, 2024, Sectors, asset classes and flows are as of the date indicated, are subject to change, and should not be relied upon as current thereafter. Cyclical sectors = Materials, Financials, Cons. Disc., Real Estate, Industrials, and Energy. Defensives = Health Care, Cons. Staples, and Utilities. This information should not be considered a recommendation to invest in a particular sector shown. It is not known whether the sectors shown will be profitable in the future.



# Sector Scorecard

Communication Services has shown stronger earnings sentiment and price momentum with less expensive valuations than Tech

	Sector Composite Z-Score*		
	Valuation Composite Score	Momentum Composite Score	Earnings Sentiment Composite Score
Communication Services	0.02	1.48	1.13
Consumer Discretionary	-0.30	-0.15	0.04
Consumer Staples	0.51	-0.74	0.29
Energy	0.62	-0.47	-0.71
Financials	-0.35	0.82	-0.08
Health Care	0.00	-0.30	0.13
Industrials	-0.76	0.48	0.04
Information Technology	-1.44	1.34	0.41
Materials	-0.15	-0.12	0.23
Real Estate	1.54	-1.20	-1.07
Utilities	0.70	-1.14	-0.41

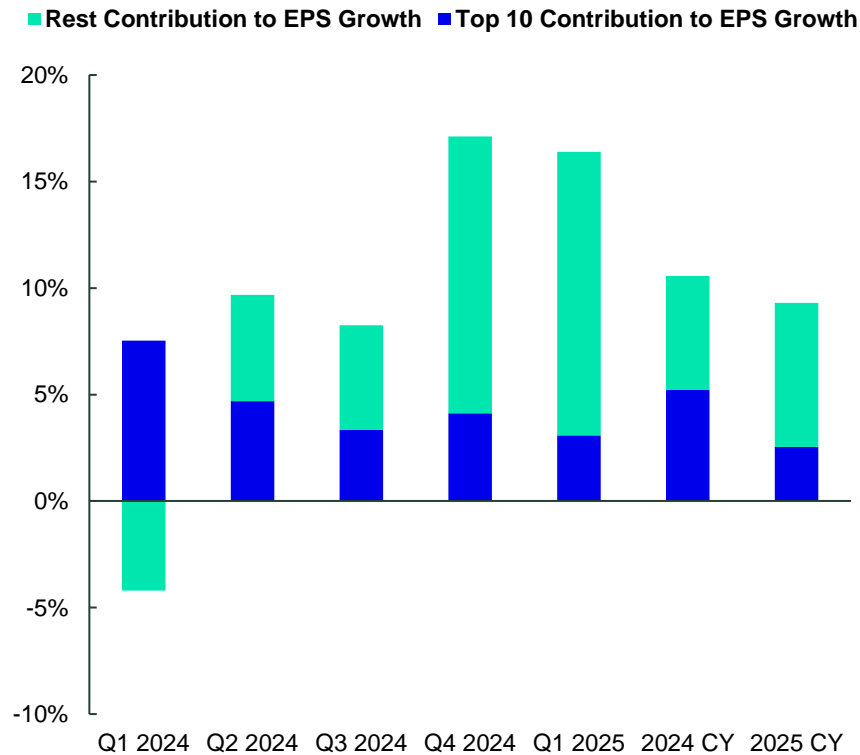
Source: State Street Global Advisors, FactSet, Bloomberg Finance, L.P., as of April 30, 2024. Green shading is top 3, red shading is bottom 3.

\* The scorecard uses z-score for each metric to standardize numbers across sectors and show relativeness among sectors. Composite score is calculated by equally weighting each metric in the same category. Z-score indicates how many standard deviations an element is from the mean. A z-score can be calculated from the following formula.  $z = (X - \mu) / \sigma$  where X is the value of the sector.  $\mu$  is the mean of the eleven sectors.  $\sigma$  is the standard deviation of eleven sectors. S&P 500 sector indices are used to calculate sector scores. Please refer to Appendix C for the metrics used to measure valuation, momentum and earnings sentiment. Volatility score is not available for the communication services sector due to data availability.

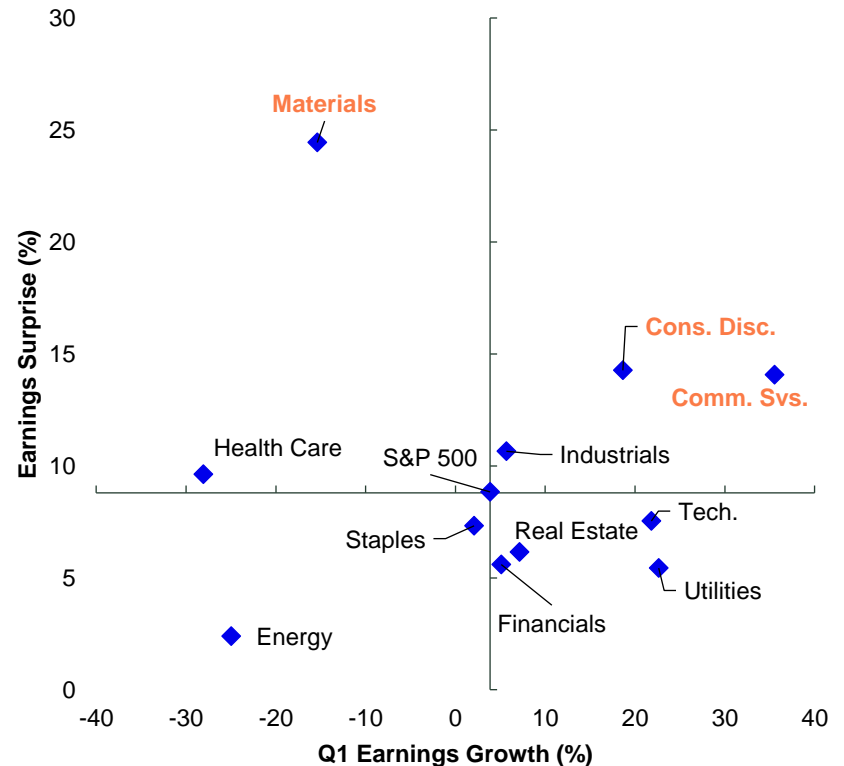
# Sector Earnings

Consensus estimates indicate growth broadening out of the top 10 for the rest of the year. Materials, Cons. Disc., and Comm. Svcs. have had the largest beats in Q1

S&P 500 Earnings: Top 10 by Market Cap vs. The Rest of S&P 500



Q1 2024 Earnings Result

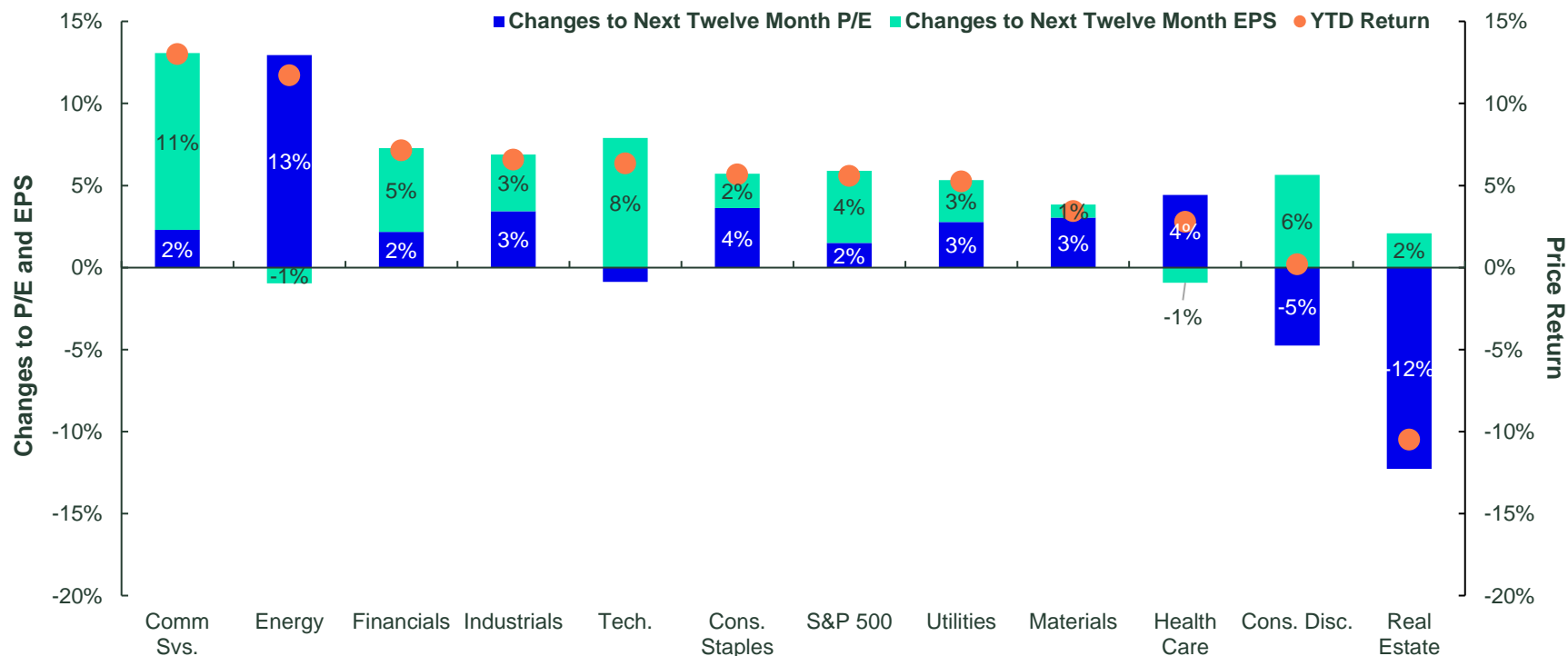


Source: FactSet, as of April 30, 2024. Top 10 holdings of the S&P 500 as of March 31, 2024, which include Apple Inc., Microsoft Corporation, Amazon.com, Inc., NVIDIA Corporation, Alphabet Inc. Class A, Meta Platforms Inc Class A, Alphabet Inc. Class C, Berkshire Hathaway Inc. Class B, Broadcom Inc., Eli Lilly and Company

# Sector Trends

After valuations adjusted to rate expectations last month, earnings prospects became the key driver of most sectors' 2024 returns

S&P 500 Sector YTD Return Decomposition



Source: FactSet, as of April 30, 2024. Characteristics are as of the date indicated, are subject to change, and should not be relied upon as current thereafter. EPS growth estimates are based on Consensus Analyst Estimates compiled by FactSet. Projected characteristics are based upon estimates and reflect subjective judgments and assumptions. There can be no assurance that developments will transpire as forecasted and that the estimates are accurate.

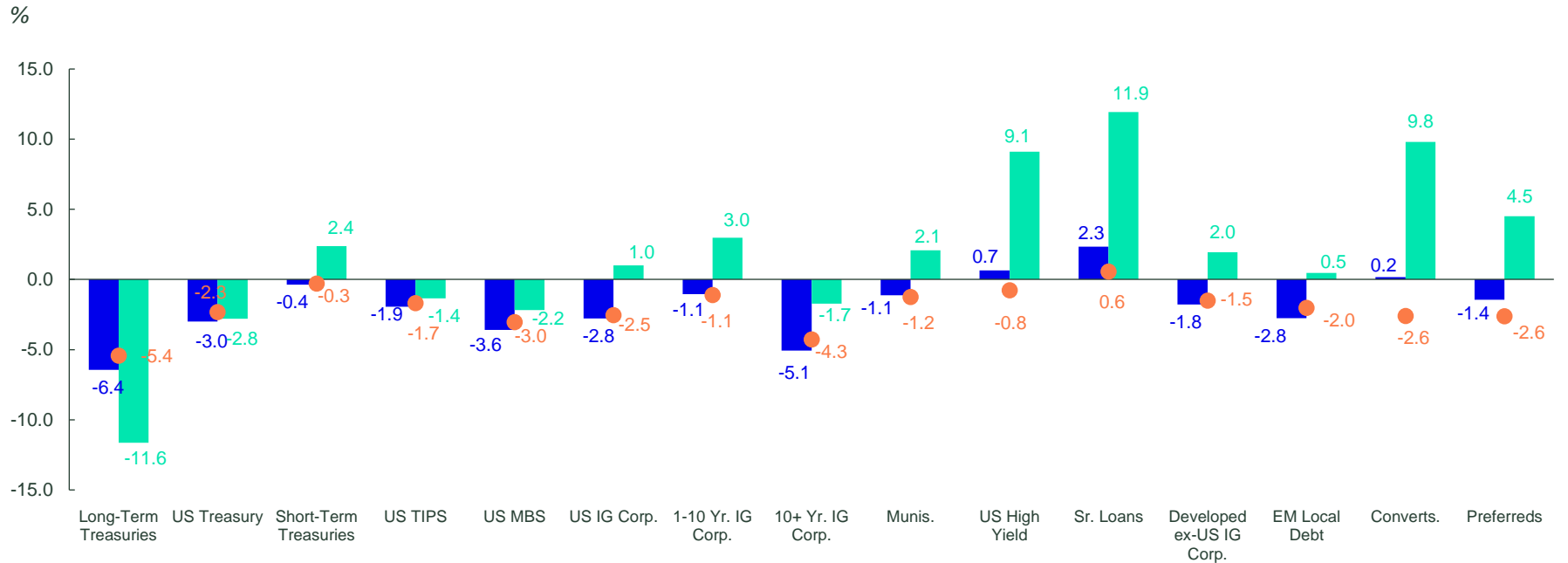
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# 5. Fixed Income

# Fixed Income Sector

As yields continue to creep up due to uncertainty over the first Fed Rate cut, returns for longer term bonds have been impacted the most

## Fixed Income Segment Performance



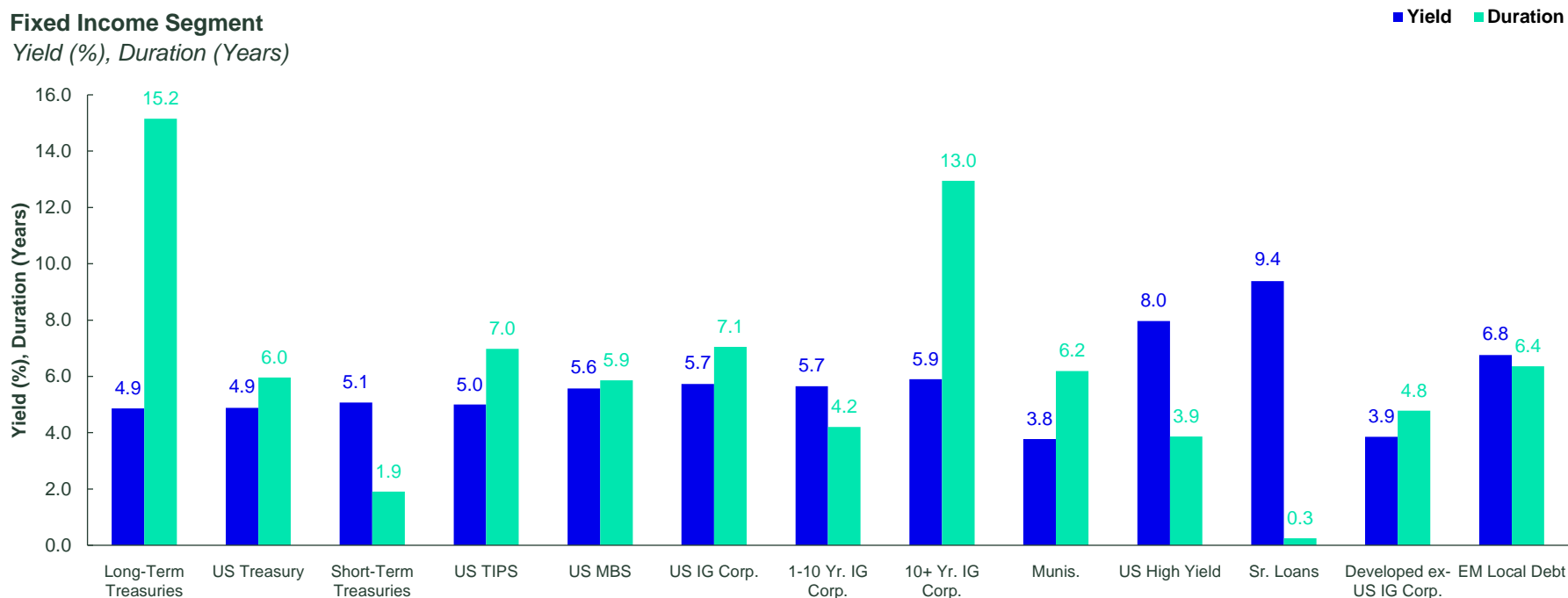
Source: Bloomberg Finance, L.P., as of April 30, 2024. **Past performance is not a reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income. All the index performance results referred to are provided exclusively for comparison purposes only. It should not be assumed that they represent the performance of any particular investment. Performance returns for periods of less than one year are not annualized. US Agg = Bloomberg US Aggregate Index | US Govies = Bloomberg US Treasury Index | Short-Term Govies = Bloomberg U.S. Treasury: 1-3 Year Index | Long-Term Govies = Bloomberg US Long Treasury Index | US TIPS = Bloomberg Global Inflation-Linked: U.S. TIPS Index | US MBS = Bloomberg US MBS Index | US IG Corp. = Bloomberg US Corporate Index | 1-10 Yr IG Corp. = Bloomberg Intermediate Corporate Index | 10 Yr+ IG Corp. = Bloomberg Long U.S. Corporate Index | US High Yield = Bloomberg VLI: High Index | Sr. Loans = S&P/LSTA Leveraged Loan Index | Developed Ex-US Sovereign Bonds = Bloomberg Global Treasury ex-U.S. Index | EM Hard Currency Debt = J.P. Morgan EMBI Global Core Index | EM Local Debt = Bloomberg EM Local Currency Govt Diversified Index. | Convertibles = Bloomberg U.S. Convertibles Liquid Bond Index. | Preferreds = ICE Exchange-Listed Fixed & Adjustable Rate Preferred Securities Index.

# Fixed Income Sector (Continued)

With Fed policy still evolving, investors should be cautious about the uneven balance in some sectors' yield and duration

## Fixed Income Segment

Yield (%), Duration (Years)



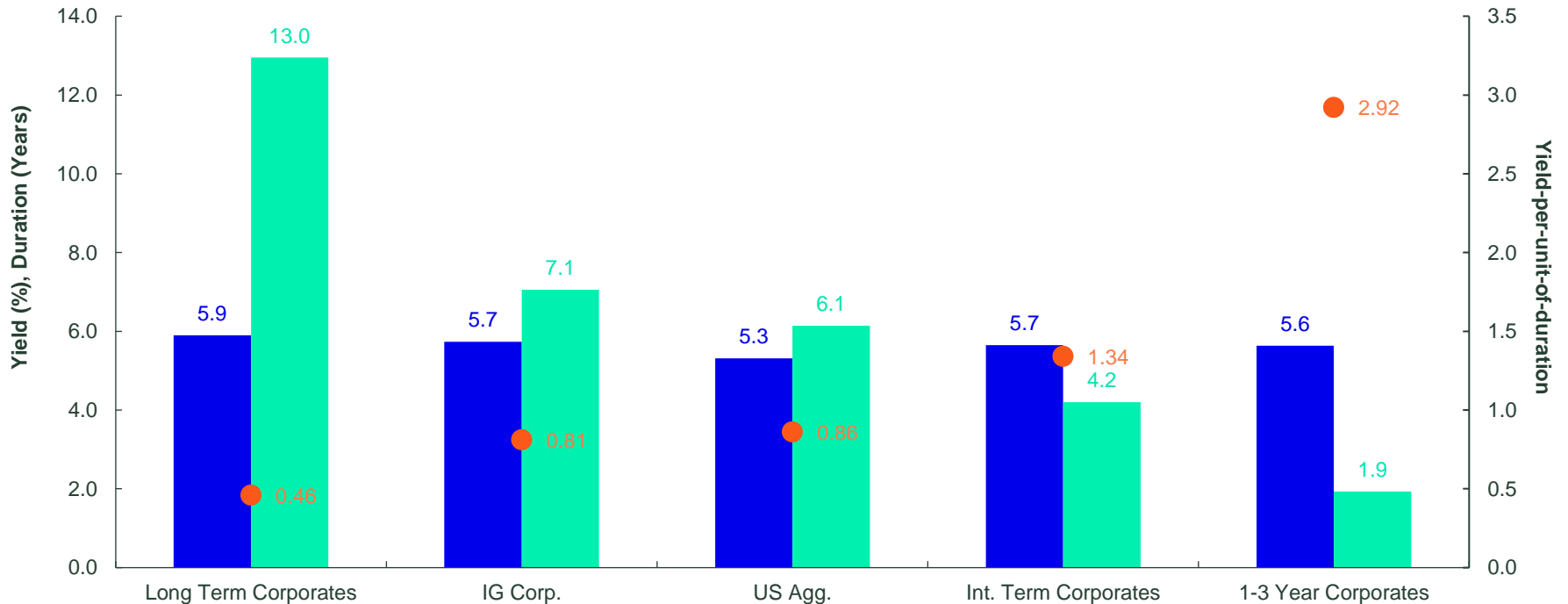
Source: Bloomberg Finance, L.P., as of April 30, 2024. **Past performance is not a reliable indicator of future performance.** Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income. All the index performance results referred to are provided exclusively for comparison purposes only. It should not be assumed that they represent the performance of any particular investment. Performance returns for periods of less than one year are not annualized. US Agg = Bloomberg US Aggregate Index | US Govies = Bloomberg US Treasury Index | Short-Term Govies = Bloomberg U.S. Treasury: 1-3 Year Index | Long-Term Govies = Bloomberg US Long Treasury Index | US TIPS = Bloomberg Global Inflation-Linked: U.S. TIPS Index | US MBS = Bloomberg US MBS Index | US IG Corp. = Bloomberg US Corporate Index | 1-10 Yr IG Corp. = Bloomberg Intermediate Corporate Index | 10 Yr+ IG Corp. = Bloomberg Long U.S. Corporate Index | US High Yield = Bloomberg VLI: High Index | Sr. Loans = S&P/LSTA Leveraged Loan Index | Developed Ex-US Sovereign Bonds = Bloomberg Global Treasury ex-U.S. Index | EM Hard Currency Debt = J.P. Morgan EMBI Global Core Index | EM Local Debt = Bloomberg EM Local Currency Govt Diversified Index. | Convertibles = Bloomberg U.S. Convertibles Liquid Bond Index.

# Bond Market Opportunities

Potentially attractive high-quality yield-per-duration profiles can be found within intermediate-and-short-term corporate bond sectors

Intermediate Investment- Grade Corporate Bonds Strike a Strong Balance Between Yield and Duration

■ Yield to Worst ■ Duration ● Yield per Unit of Duration

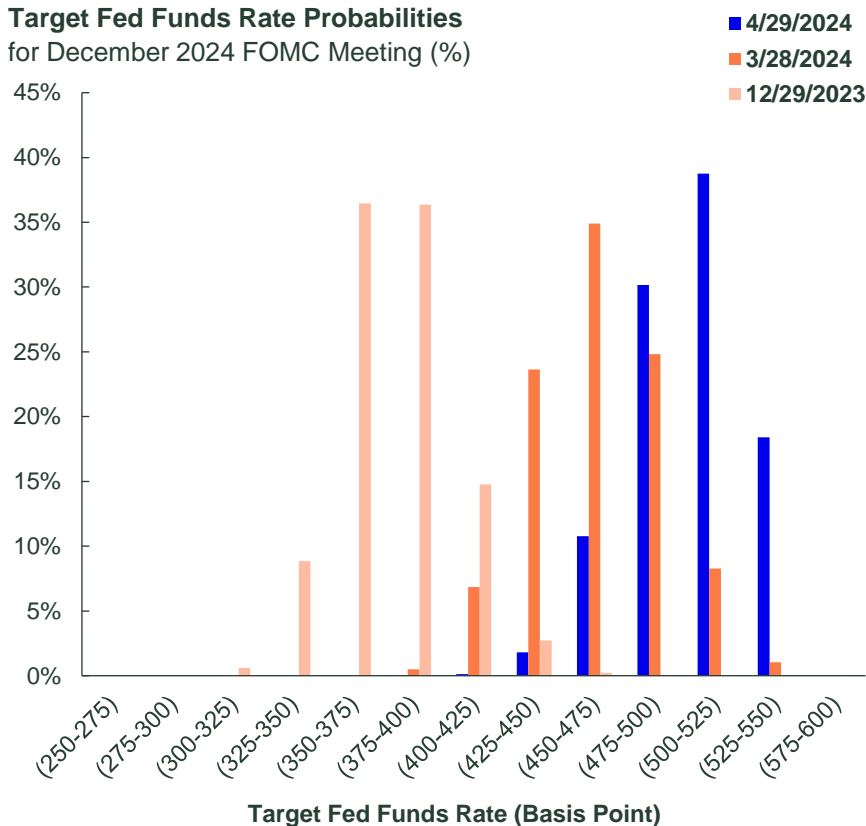


Source: Bloomberg Finance L.P. as of April 30, 2024. Long Term Corporates = Bloomberg Long U.S. Corporate Index | IG Corp. = Bloomberg US Corporate Index | US Agg. = Bloomberg US Agg Index | Int. Term Corporates = Bloomberg Intermediate Corporate Index | 1-3 Year Corporates = Bloomberg US Corporate 1-3 Yr Index.  
Past performance is not reliable indicator of future performance.

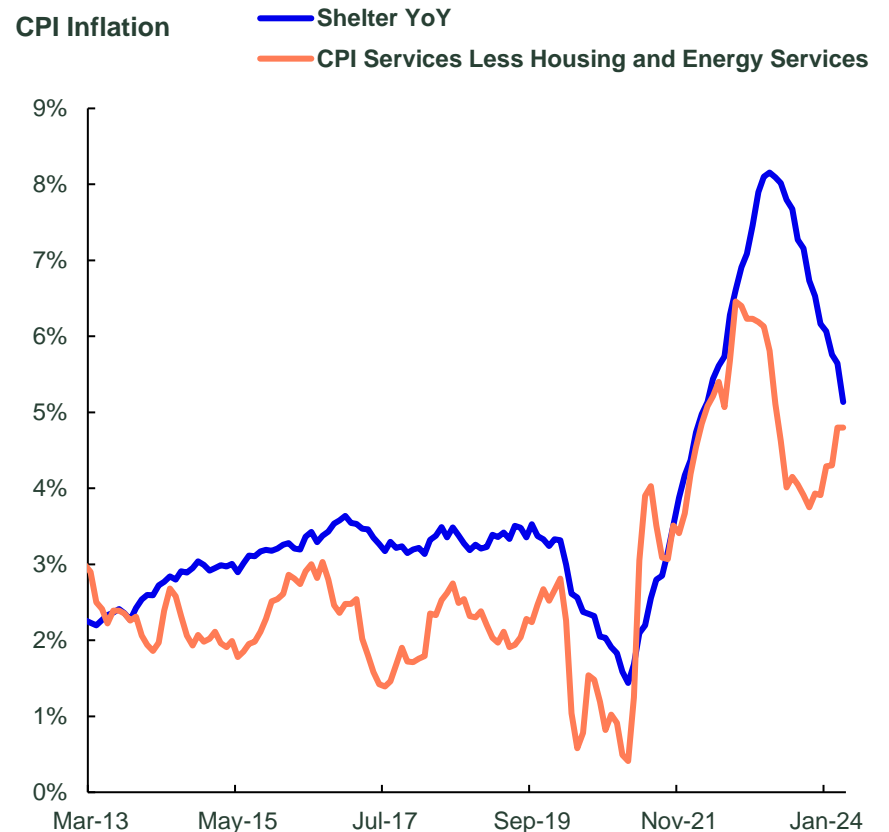
# Rates and Inflation Trends

Elevated shelter, and the rebound in core services, inflation dampened optimism for rate cuts. Expectations and magnitude of cuts has decreased as a result

**Target Fed Funds Rate Probabilities**  
for December 2024 FOMC Meeting (%)



**CPI Inflation**



Source: CME FedWatch Tool, and Bloomberg Finance L.P., as of April 30, 2024.

The above targets are estimates based on certain assumptions and analysis made by the Federal Reserve. There is no guarantee that the estimates will be achieved.

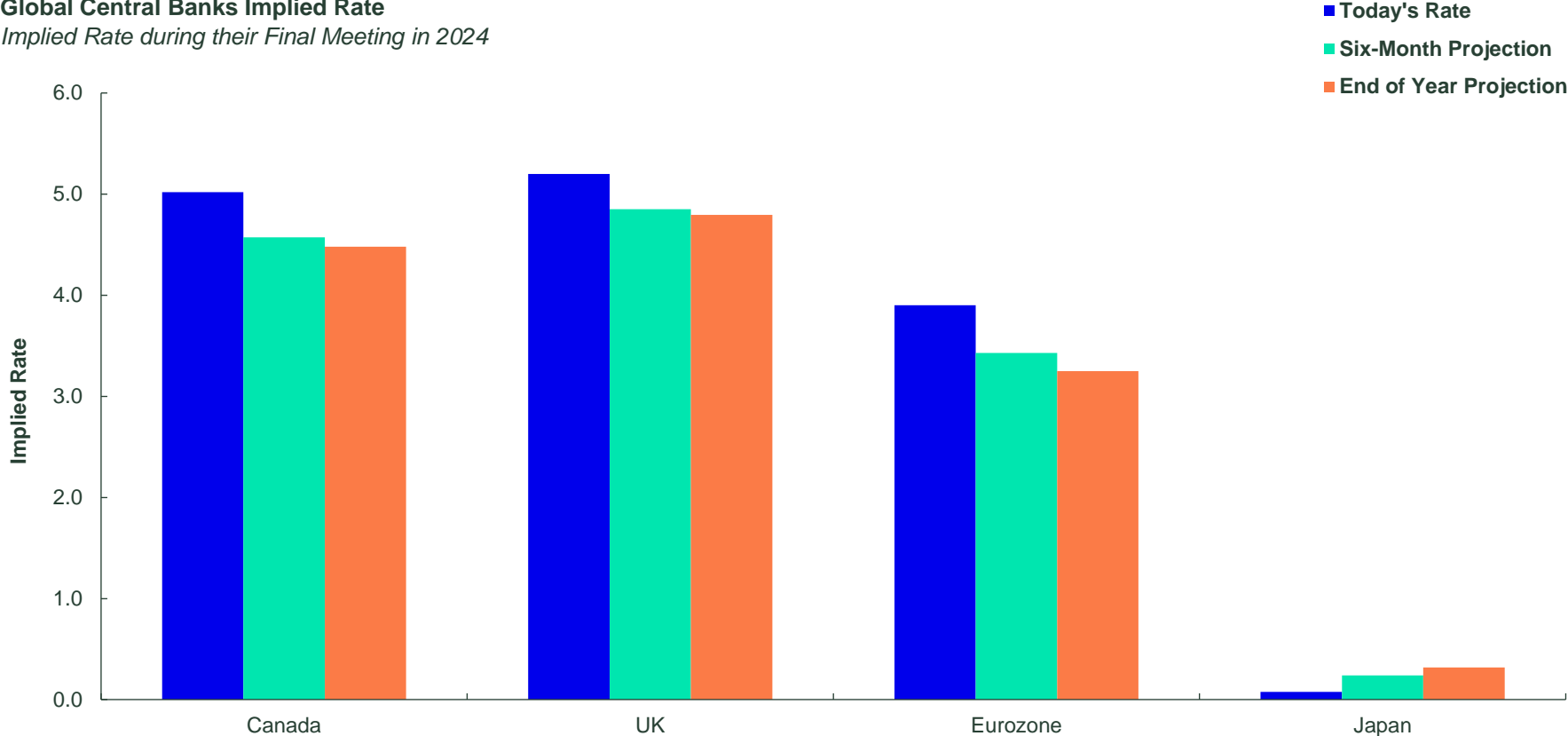


# Global Central Banks

Lower rates, however, may still be a trend outside the US, as other central banks are projected to cut rates by the end of 2024 — except for Japan

## Global Central Banks Implied Rate

*Implied Rate during their Final Meeting in 2024*



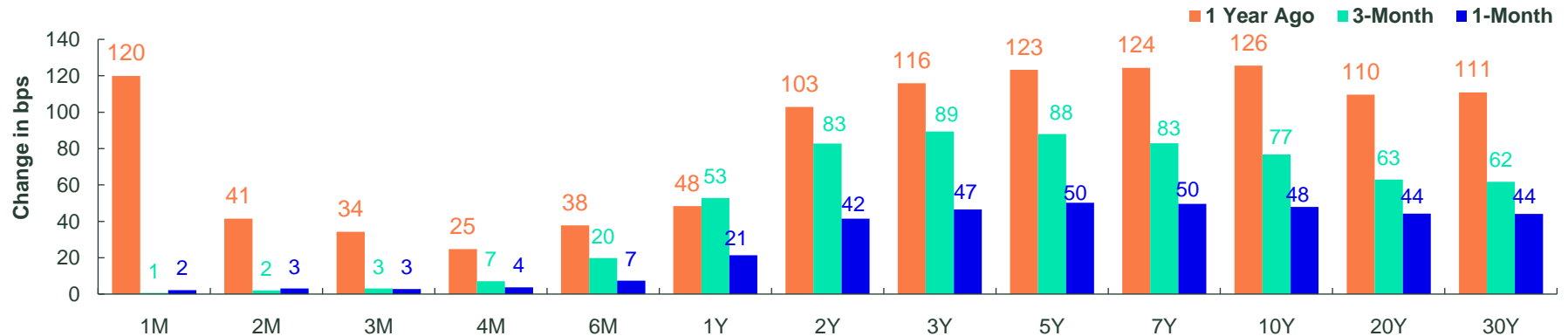
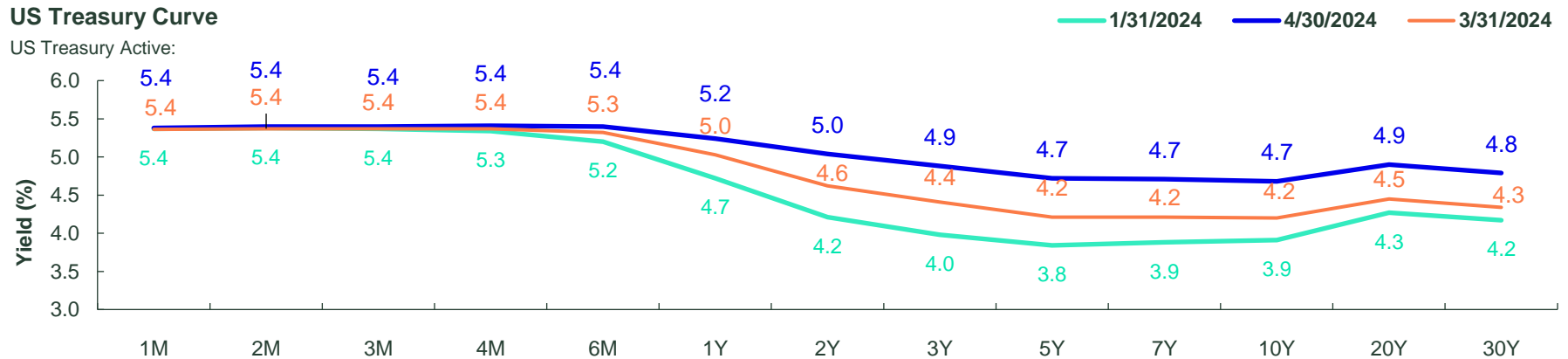
Source: FactSet, Bloomberg Finance L.P., as of April 30, 2024.

# Yield Curve

The long-end and belly of the curve jumped up last month, as traders embraced a higher-for-longer environment driven by strong economic growth and sticky inflation

## US Treasury Curve

US Treasury Active:

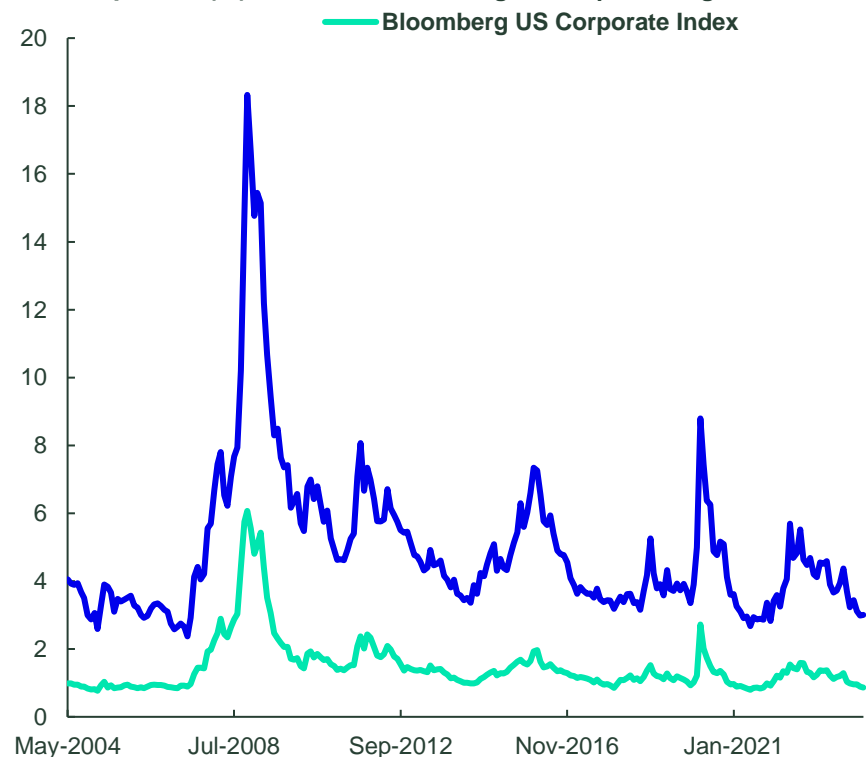


Source: Bloomberg Finance, L.P., as of April 30, 2024. Past performance is not a reliable indicator of future performance.

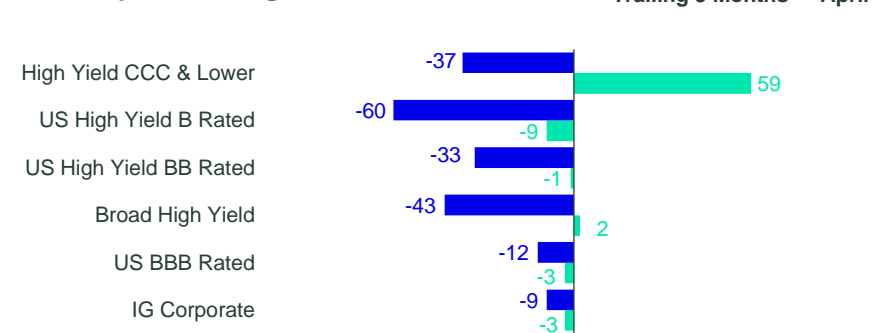
# Credit Spread Trends

Credit spreads were little changed in April, except for the lowest-rated HY bonds as positive earnings growth and a resilient economy support credit fundamentals

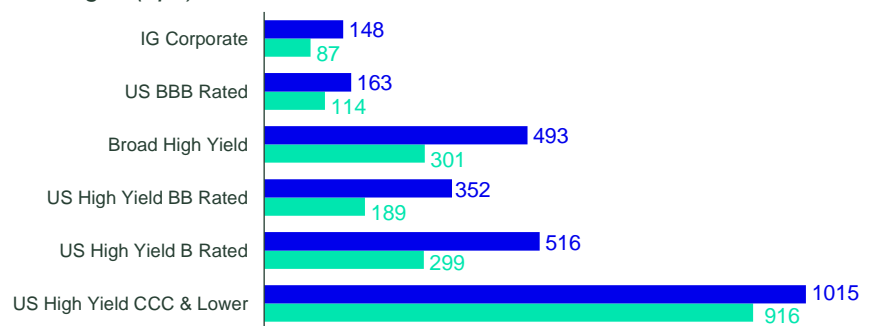
Credit Spreads (%)



Credit Spread Changes in Basis Points



Credit Spread Current versus 20-Year Averages (bps)



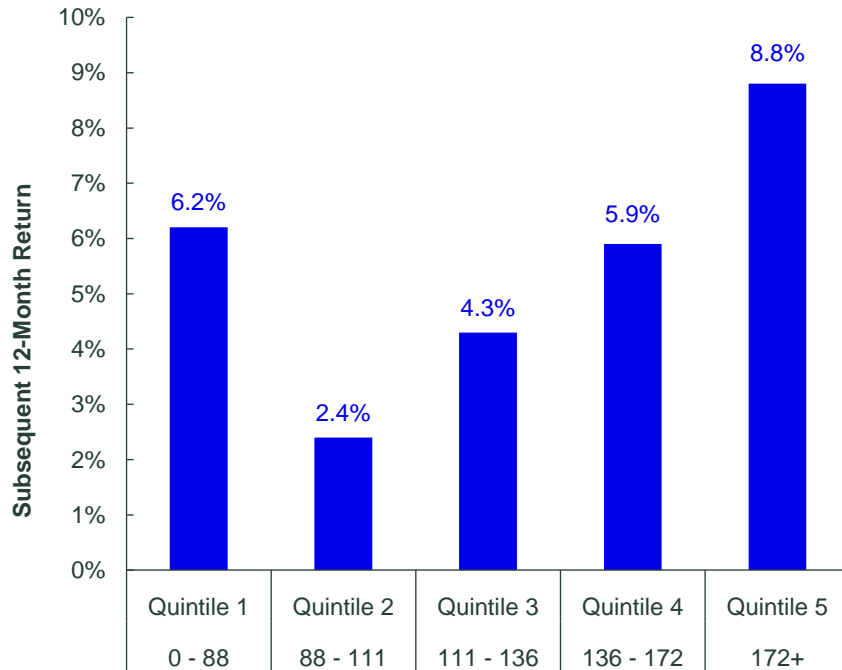
Source: Bloomberg Finance, L.P., BofA Merrill Lynch, as of April 30, 2024. US High Yield CCC & Lower = BofA ML US High Yield CCC & Lower Rated Index. US High Yield B Rated = BofAML US High Yield B Rated Index. BBB Rated = BofA ML US Investment Grade BBB Rated Index. Broad high yield = Bloomberg US Corporate High Yield Index. IG Corporate = Bloomberg US Corporate Index. **Past performance is not a reliable indicator of future performance. Performance of an index is not illustrative of any particular investment. It is not possible to invest directly in an index.**

# Credit Spread Levels versus Returns

Tight credit spreads do not indicate weak subsequent future returns, however. Economic resilience may continue to reward credit, even with tight spreads

## Investment Grade Corporates

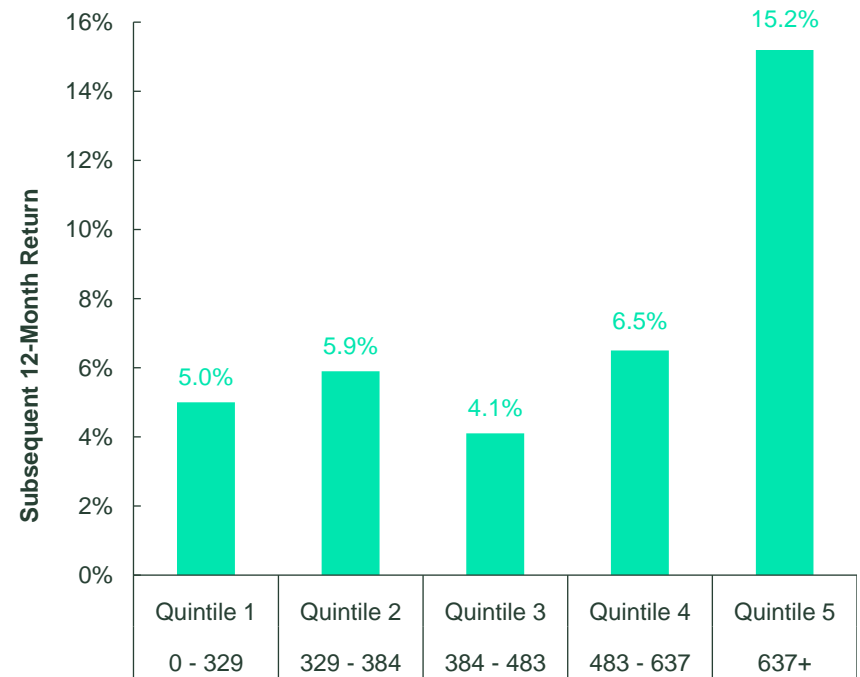
Starting Spread and Subsequent Twelve-Month Return, Avg. (%)



Starting Spread Level Quintile

## High Yield

Starting Spread and Subsequent Twelve-Month Return, Avg. (%)



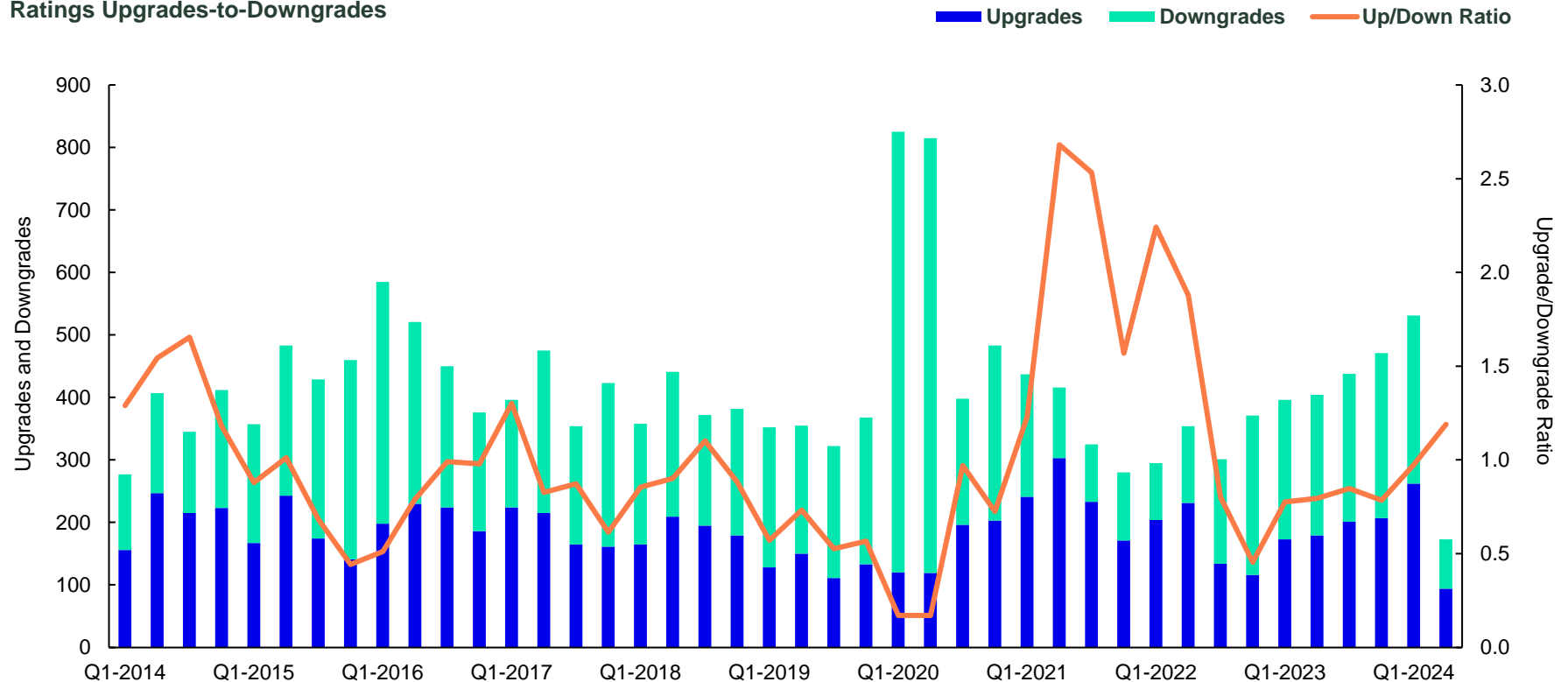
Starting Spread Level Quintile

Source: Bloomberg Finance, L.P., as of April 30, 2024. High Yield = Bloomberg US Corporate High Yield Index | Investment Grade Corporates = Bloomberg US Corporate Index. Thirty-year period used, from 04/30/1994-04/30/2024. Performance of an index is not illustrative of any particular investment. It is not possible to invest directly in an index. Past performance is not a reliable indicator of future performance.

# Rating Trends Within Credit

More upgrades relative to downgrades indicate positive ratings momentum, helping to support credit dynamics

Ratings Upgrades-to-Downgrades



Source: Bloomberg Finance, L.P., as of April 30, 2024. Rating actions for North American investment grade and high yield issuers per S&P ratings

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# Appendix

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A [Fund Flow Summary](#)

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B [Asset Class Forecast](#)

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C [SPDR Sector Scorecard](#)

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D [Definitions](#)

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E [Important Disclosures](#)

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Appendix A

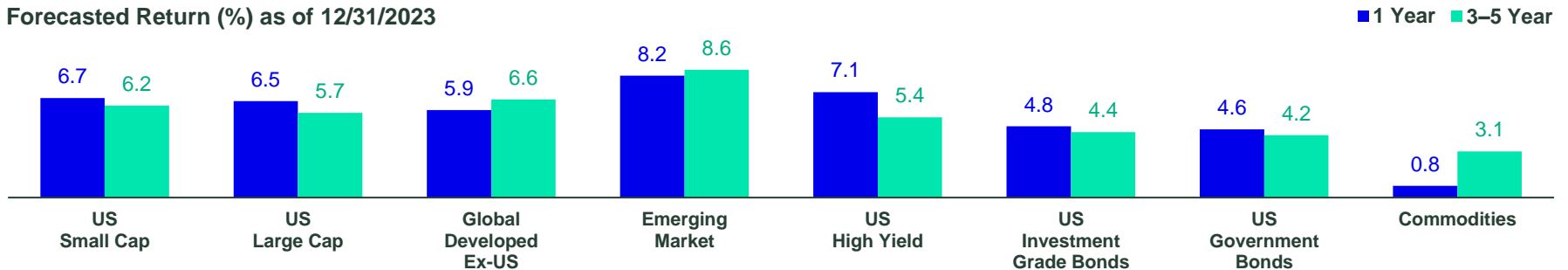
# Fund Flow Summary

		Prior Month (\$M)	Year to Date	Trailing 3 Months (\$M)	Trailing 12 Months (\$M)
Equity Region	U.S.	14,235	124,657	112,719	421,122
	Global	-1,335	615	328	6,145
	Global-Ex Thematic	-795	1,904	1,642	8,253
	International-Developed	4,790	16,817	13,618	52,413
	International-Emerging Markets	-1,461	2,800	1,980	8,705
	International-Region	880	3,134	3,121	-3,187
	International-Single Country	827	4,350	3,318	11,230
	Currency Hedged	868	4,990	4,226	7,846
US Size & Style	Broad Market	5,281	15,300	12,118	43,114
	Large-Cap	7,734	86,125	78,457	314,400
	Mid-Cap	2,269	7,960	7,703	17,838
	Small-Cap	-2,425	4,842	6,050	36,109
	Growth	3,814	30,871	23,733	68,927
	Value	3,114	16,129	16,420	38,452
Fixed Income Sectors	Aggregate	11,600	34,856	27,575	85,674
	Government	3,900	11,489	9,632	67,675
	Short Term	1,816	-3,567	-2,562	10,962
	Intermediate	2,093	11,156	8,224	24,612
	Long Term (>10 yr)	-9	3,899	3,970	32,101
	Inflation Protected	-455	-2,536	-2,022	-14,039
	Mortgage Backed	2,017	3,776	2,990	11,967
	IG Corporate	-2,622	11,247	2,223	21,304
	High Yield Corp.	-2,538	-1,000	-2,860	6,911
	Bank Loans	1,813	6,775	5,582	12,852
	EM Bond	1,154	-859	-433	349
	Preferred	-97	805	810	1,364
	Convertible	-54	123	47	397
Municipal	974	1,687	2,124	17,015	

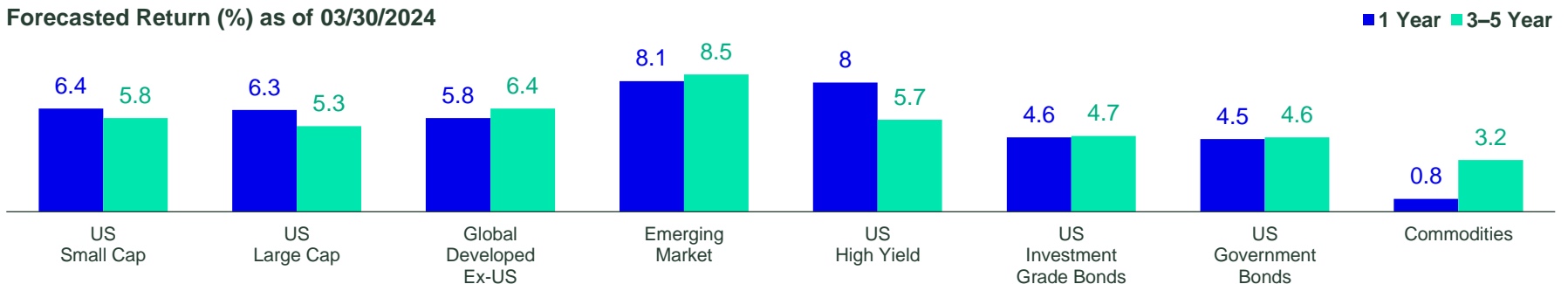
Source: State Street Global Advisors, Bloomberg Finance, L.P. As of April 30, 2024. Segments with top 3 inflows in each category are shaded in green. Segments with bottom 3 flows in each category are shaded in orange. Sectors, asset classes and flows are as of the date indicated, are subject to change, and should not be relied upon as current thereafter.

# Asset Class Forecast

Forecasted Return (%) as of 12/31/2023



Forecasted Return (%) as of 03/30/2024



Source: State Street Global Advisors Investment Solutions Group. The forecasted returns are based on SSGA's Investment Solutions Group's Forecasted returns and long-term standard deviations as of 03/31/2024. The forecasted performance data is reported on a gross of fees basis. Additional fees, such as the advisory fee, would reduce the return. For example, if an annualized gross return of 10% was achieved over a 5-year period and a management fee of 1% per year was charged and deducted annually, then the resulting return would be reduced from 61% to 54%. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in the local (or regional) currency presented. It does not take into consideration currency effects. **The forecasted performance is not necessarily indicative of future performance, which could differ substantially.** Please reference Appendix B (continued) for the assumptions used by SSGA Investment Solutions Group to create asset class forecasts.



# Asset Class Forecast: Assumptions

<b>Fixed Income</b>	Our return forecasts for fixed income derive from current yield conditions together with expectations as to how real and nominal yield curves could evolve relative to historical averages. For corporate bonds, we also analyze credit spreads and their term structures, with separate assessments of investment-grade and high-yield bonds.
<b>Equities</b>	Our long-term equity forecasts begin with expectations for developed market large capitalization stocks. The foundation for these forecasts are estimates of real return potential, derived from current dividend yields, forecast real earnings growth rates, and potential for expansion or contraction of valuation multiples. Our forecasting method incorporates long run estimates of potential economic growth based on forecast labor and capital inputs to estimate real earning growth.
<b>Commodities</b>	Our long-term commodity forecast is based on the level of world GDP, as a proxy for consumption demand, as well as on our inflation outlook. Additional factors affecting the returns to a commodities investor include how commodities are held (e.g., physically, synthetically, or via futures) and the various construction methodologies of different commodity benchmarks.

All assumptions are based upon current market conditions as of the date of this presentation and are subject to change.  
**Past performance is not a reliable indicator of future performance.** All investments involve risk including the loss of principal.  
All material presented herein are obtained from sources believed to be reliable, but accuracy cannot be guaranteed.

# SPDR Sector Scorecard

Composite Score	Metrics
Valuation	<b>Relative Valuation</b> (P/B, P/E, NTM P/E, P/S)
	<b>Absolute Valuation</b> (P/B, P/E, NTM P/E, P/S)
Earnings Sentiment	<b>Earnings Revision</b> (Changes to EPS Estimates, Upgrade to Downgrade Ratio)
	<b>Earnings Surprise</b> (The Magnitude and Breadth of Earnings Surprise)
Momentum	<b>Price Returns</b> 3-Months, 6-Months, 12-Months

The metrics shown are z-scores, which are calculated using the mean and standard deviation of the relevant metrics within S&P 500 sectors. Using Z-scores to standardize results across all sectors allows for easier relative assessment. Sectors with cheaper valuation, higher price momentum, higher sentiment and higher volatility will have higher z-scores.

We calculate a composite score by equally weighting each metric z-score in the same category.

The scorecard does not represent the investment views of State Street. Metrics used in the scorecard have not been backtested for any sector strategies by State Street. These are for illustrative and educational purposes as we seek to bring greater transparency to the sector investing landscape and the due diligence required to build sophisticated portfolios to meet specific client objectives.

Source: SPDR America Research.

# Definitions

**Basis Point:** One hundredth of one percent, or 0.01%.

**Bloomberg Commodity Index:** Bloomberg Commodity Index (BCOM) is calculated on an excess return basis and reflects commodity futures price movements. The index rebalances annually weighted 2/3 by trading volume and 1/3 by world production and weight-caps are applied at the commodity, sector and group level for diversification.

**Bloomberg EM USD Aggregate Index:** The index is a hard currency emerging markets debt benchmark that includes US dollar-denominated debt from sovereign, quasi-sovereign, and corporate issuers in the developing markets.

**Bloomberg EM Hard Currency Index:** The Bloomberg Emerging Markets Hard Currency Aggregate Index is a flagship hard currency Emerging Markets debt benchmark that includes USD-denominated debt from sovereign, quasi-sovereign, and corporate EM issuers.

**Bloomberg Global Aggregate Bond Index:** A benchmark that provides a broad-based measure of the global investment-grade fixed income markets. The three major components of this index are the US Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian government, agency and corporate securities, and USD investment-grade 144A securities.

**Bloomberg Municipal Bond Index:** Index that covers the USD-denominated long-term tax-exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds and prerefunded bonds.

**Bloomberg U.S. Aggregate Index:** A benchmark that provides a measure of the performance of the US dollar denominated investment grade bond market, which includes investment grade government bonds, investment grade corporate bonds, mortgage pass through securities, commercial mortgage backed securities and asset backed securities that are publicly for sale in the US.

**Bloomberg U.S. Corporate 1–3 Year Index:** The Index includes publicly issued US dollar denominated corporate issues that have a remaining maturity of greater than or equal to 1 year and less than 3 years, are rated investment grade.

**Bloomberg U.S. Corporate Bond Index:** The Bloomberg U.S. Corporate Bond Index measures the investment grade, US dollar-denominated, fixed-rate, taxable corporate and government related bond markets. It is composed of the US Corporate Index and a non-corporate component that includes foreign agencies, sovereigns, supranationals and local authorities.

**Bloomberg U.S. Corporate High Yield Index:** The index consists of fixed rate, high yield, USD-denominated, taxable securities issued by US corporate issuers.

**Bloomberg U.S. Mortgage Backed Securities Index:** The index consists of US Mortgage Backed Securities.

**Bloomberg U.S. Treasury Index:** Measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury.

**Bloomberg U.S. Treasury 1–3 Year Index:** The Index is designed to measure the performance of short term (1–3 years) public obligations of the US Treasury.

**Bloomberg U.S. Treasury Bill 1–3 Months Index:** The Bloomberg 1–3 Month U.S. Treasury Bill Index (the “Index”) is designed to measure the performance of public obligations of the US Treasury that have a remaining maturity of greater than or equal to 1 month and less than 3 months.

**Bloomberg U.S. FRN < 5yr Index:** The Bloomberg US Dollar Floating Rate Note < 5 Years Index consists of debt instruments that pay a variable coupon rate, a majority of which are based on the 3-month LIBOR, with a fixed spread.

**Bloomberg U.S. MBS Index** (the “MBS Index”) measures the performance of the US agency mortgage pass-through segment of the US investment grade bond market.

**Bloomberg U.S. High Yield Index:** The Bloomberg USD High Yield Corporate Bond Index is a rules-based, market-value weighted index engineered to measure publicly issued non-investment grade USD fixed-rate, taxable, corporate bonds. To be included in the index a security must have a minimum par amount of 250MM.

**Bloomberg U.S. Treasury Index:** The Bloomberg US Treasury Bond Index is a rules-based, market-value weighted index engineered to measure the performance and characteristics of fixed rate coupon US Treasuries which have a maturity greater than 12 months. To be included in the index a security must have a minimum par amount of 1,000MM.

**Bloomberg US Pure Value Index:** The return of the top quintile less the bottom quintile value stocks.

**Breakeven Inflation Rate:** It is a market based measure of expected inflation. It is the difference between the yield of a nominal bond and an inflation linked bond of the same maturity.

# Definitions

**CBOE VIX Index:** The Chicago Board Options Exchange (CBOE) Volatility Index shows the market's expectation of 30-day volatility. It is constructed using the implied volatilities of a wide range of S&P 500 index options.

**Citigroup Economic Surprise Index:** The Citi Economic Surprise Indices measure data surprises relative to market expectations. A positive reading means that data releases have been stronger than expected and a negative reading means that data releases have been worse than expected.

**Credit Spread:** A credit spread is the difference in yield between a US Treasury bond and a debt security with the same maturity but of lesser quality.

**Current Short Interest (%):** The percentage of tradable outstanding shares which have been shorted. Used as a measure of investor sentiment.

**Convexity:** Convexity is a measure of the curvature in the relationship between bond prices and bond yields. Bond with negative convexity, prices decrease as interest rate fall. Since many high yields bonds are callable, the price of the callable bonds might drop in the event of falling yields because the bond could be called.

**DXY Dollar Index:** The DXY Dollar Index tracks the performance of a basket of foreign currencies issued by US major trade partners, including Eurozone, Japan, UK Canada, Sweden and Switzerland, versus the US Dollar.

**Euro STOXX 50 Index:** Europe's leading blue-chip index for the Eurozone, provides a blue-chip representation of super-sector leaders in the Eurozone. The index covers 50 stocks from 12 Eurozone countries.

**EBITDA:** Earnings before Interest Taxes Depreciation and Amortization.

**Excess Returns:** A security's return minus the return from another security in the same time period.

**Global Industry Classification Standard (GICS):** An industry taxonomy developed in 1999 by MSCI and Standard & Poor's (S&P) for use by the global financial community. The GICS structure consists of 10 sectors, 24 industry groups, 67 industries and 156 sub-industries [1] into which S&P has categorized all major public companies.

**Implied Volatility:** The estimated volatility of a security's price. In general, implied volatility increases when the market is bearish and decreases when the market is bullish. This is due to the common belief that bearish markets are more risky than bullish markets.

**LBMA Gold Price Index:** Provides the price platform and methodology as well as the overall administration and governance for the LBMA Gold Price.

**Minimum Volatility Factor:** A category of stocks that are characterized by relatively less movement in share price than many other equities.

**Momentum Factor:** The tendency for a security to maintain a certain direction of price trajectory. This tendency is well documented in academic research, which has made "momentum" one of the six smart beta factors that are systematically being isolated in new-generation strategic indexes.

**MSCI Brazil Index:** An equities benchmark that captures large- and mid-cap representation in Brazil.

**MSCI Canada Index:** An equities benchmark that captures large- and mid-cap representation in Canada.

**MSCI China Index:** A benchmark that captures large and mid cap representation across China A shares, H shares, B shares, Red chips, P chips and foreign listings (e.g., ADRs).

**MSCI China On Shore:** A benchmark that captures large and mid cap representation across China securities listed on the Shanghai and Shenzhen exchanges.

**Nasdaq Golden Dragon China Index** is a modified market capitalization weighted index comprised of companies whose common stock is publicly traded in the United States and the majority of whose business is conducted within the People's Republic of China.

**MSCI EAFE Index:** An equities benchmark that captures large- and mid-cap representation across developed market countries around the world, excluding the US and Canada.

**MSCI Emerging Market Index:** The MSCI Emerging Markets Index captures large and mid-cap representation across 23 emerging markets countries. With 834 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI Europe Index:** The MSCI Europe Index is a free-float weighted equity index designed to measure the equity market performance of the developed markets in Europe.

**MSCI France Index:** An equities benchmark that captures large- and mid-cap representation in France.

**MSCI Germany Index:** An equities benchmark that captures large- and mid-cap representation in Germany.

**MSCI India Index:** An equities benchmark that captures large- and mid-cap representation in India.

# Definitions

**MSCI Japan Index:** The MSCI Europe Index is a free-float weighted equity index designed to measure the equity market performance of the developed markets in Japan.

**MSCI Russia Index:** An equities benchmark that captures large- and mid-cap representation in Russia.

**MSCI UK Index:** An equities benchmark that captures large- and mid-cap representation in UK.

**MSCI USA Enhanced Value Weighted Index:** The MSCI USA Enhanced Value Weighted Index captures large and mid-cap representation across the US equity markets exhibiting overall value style characteristics. The index is designed to represent the performance of securities that exhibit higher value characteristics relative to their peers within the corresponding GICS® sector.

**MSCI USA Equal Weighted Index:** The MSCI USA Equal Weighted Index represents an alternative weighting scheme to its market cap weighted parent index, the MSCI USA Index. At each quarterly rebalance date, all index constituents are weighted equally, effectively removing the influence of each constituent's current price (high or low).

**MSCI USA High Dividend Yield Index:** The MSCI World High Dividend Yield Index is based on the MSCI USA Index, its parent index, and includes large and mid cap stocks. The index is designed to reflect the performance of equities in the parent index (excluding REITs) with higher dividend income and quality characteristics than average dividend yields that are both sustainable and persistent. The index also applies quality screens and reviews 12-month past performance to omit stocks with potentially deteriorating fundamentals that could force them to cut or reduce dividends.

**MSCI USA Index:** The MSCI World Index, which is part of The Modern Index Strategy, is a broad global equity benchmark that represents large and mid-cap equity performance across 23 developed markets countries. It covers approximately 85% of the free float-adjusted market capitalization in each country and MSCI World benchmark does not offer exposure to emerging markets.

**MSCI USA Minimum Volatility Index:** The MSCI USA Minimum Volatility (USD) Index aims to reflect the performance characteristics of a minimum variance strategy applied to the MSCI large and mid cap equity universe. The index is calculated by optimizing the MSCI USA Index, its parent index, for the lowest absolute risk (within a given set of constraints). Historically, the index has shown lower beta and volatility characteristics relative to the MSCI World Index.

**Price-earnings ratio (P/E Ratio):** The price-earnings ratio (P/E Ratio) is the ratio for valuing a company that measures its current share price relative to its per-share earnings. The price-earnings ratio can be calculated as: Market Value per Share/Earnings per Share.

**Price-to-book ratio (P/B Ratio):** The price-to-book ratio (P/B Ratio) is a ratio used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share. Also known as the "price-equity ratio."

**Quality Factor:** One of the six widely recognized, research-based smart beta factors that refers to "quality" equities. Companies whose stocks qualify exhibit consistent profitability, stability of earnings, low financial leverage and other characteristics consistent with long-term reliability such as ethical corporate governance.

**Quintile Spread:** The spread between the top 20% of a data set and the bottom 20% of a data set.

**Risk on:** Used to describe investment sentiment when investors' risk tolerance increases.

**RSI:** The relative strength index (RSI) is a momentum indicator that measures the magnitude of recent price changes to evaluate overbought or oversold conditions in the price of a stock or other asset.

**Russell 1000 Growth Index:** The index is a style index designed to track the performance of stocks that exhibit the strongest growth characteristics by using a style-attractiveness-weighting scheme.

**Russell 1000 Value Index:** The index is a style-concentrated index designed to track the performance of stocks that exhibit the strongest value characteristics by using a style-attractiveness-weighting scheme.

**Russell 2000 Index:** A benchmark that measures the performance of the small-cap segment of the US equity universe.

**S&P/LSTA US Leveraged Loan 100 Index:** The S&P/LSTA US Leveraged Loan 100 Index is designed to reflect the largest facilities in the leveraged loan market.

# Definitions

**S&P 400 Index:** The S&P MidCap 400® provides investors with a benchmark for mid-sized companies. The index, which is distinct from the large-cap S&P 500®, is designed to measure the performance of 400 mid-sized companies, reflecting the distinctive risk and return characteristics of this market segment.

**S&P 500 Communication Services Sector Index:** The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® Communication Services sector.

**S&P 500 Consumer Discretionary Index:** The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® consumer discretionary sector.

**S&P 500 Consumer Staples Index:** The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® consumer staples sector.

**S&P 500 Financial Sector Index:** The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® financial sector.

**S&P 500 Health Care Sector Index:** The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® health care sector.

**S&P 500 High Dividend Index** is designed to measure the performance of the top 80 high dividend-yielding companies within the S&P 500® Index, based on dividend yield.

**S&P 500 High Yield Dividend Aristocrats** The S&P High Yield Dividend Aristocrats® index is designed to measure the performance of companies within the S&P Composite 1500® that have followed a managed-dividends policy of consistently increasing dividends every year for at least 20 years.

**S&P 500 Index:** A popular benchmark for US large-cap equities that includes 500 companies from leading industries and captures approximately 80% coverage of available market capitalization.

**S&P 500 Industrial Sector Index:** The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® industrial sector.

**S&P500 Information Technology Sector Index:** The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® information technology sector.

**S&P 500 Low Volatility Index:** The S&P 500® Low Volatility Index measures performance of the 100 least volatile stocks in the S&P 500. The index benchmarks low volatility or low variance strategies for the US stock market. Constituents are weighted relative to the inverse of their corresponding volatility, with the least volatile stocks receiving the highest weights.

**S&P 500 Materials Sector Index:** The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® materials sector.

**S&P 500 Pure Value Index:** Style-concentrated index designed to track the performance of stocks that exhibit the strongest value characteristics by using a style-attractiveness-weighting scheme.

**S&P 500 Quality Index:** The index is designed to track high quality stocks in the S&P 500 by quality score, which is calculated based on return on equity, accruals ratio and financial leverage ratio.

**S&P 500 Real Estate Sector Index:** The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® real estate sector.

**S&P 500 Utilities Index:** The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® utilities sector.

**Size Factor:** A smart beta factor based on the tendency of small-cap stocks to outperform their large-cap peers over long time periods.

**Spread Changes:** Changes in the spread between Treasury securities and non-Treasury securities that are identical in all respects except for quality rating.

**Standard Deviation:** Measures the historical dispersion of a security, fund or index around an average. Investors use standard deviation to measure expected risk or volatility, and a higher standard deviation means the security has tended to show higher volatility or price swings in the past.

# Definitions

**State Street Confidence Indexes:** Measures investor confidence or risk appetite quantitatively by analyzing the actual buying and selling patterns of institutional investors. The index assigns a precise meaning to changes in investor risk appetite: the greater the percentage allocation to equities, the higher risk appetite or confidence. A reading of 100 is neutral; it is the level at which investors are neither increasing nor decreasing their long-term allocations to risky assets. The results shown represent current results generated by State Street Investor Confidence Index. The results shown were achieved by means of a mathematical formula in addition to transactional market data, and are not indicative of actual future results which could differ substantially.

**Value Factor:** One of the basic elements of "style"-focused investing that focuses on companies that may be priced below intrinsic value. The most commonly used methodology to assess value is by examining price-to-book (P/B) ratios, which compare a company's total market value with its assessed book value.

**Yield:** The income produced by an investment, typically calculated as the interest received annually divided by the investment's price.

**Yield Curve:** A graph or line that plots the interest rates or yields of bonds with similar credit quality but different durations, typically from shortest to longest duration. When the yield curve is said to be flat, it means the difference in yields between bonds with shorter and longer durations is relatively narrow. When the yield curve is said to be steepened, it means the difference in yields between short term and long term bonds increases.

**Yield Factor:** A factor which screens for companies with a higher than average dividend yield relative to the broad market, and which have demonstrated dividend sustainability and persistence.

**Yield to Worst:** Yield to worst is an estimate of the lowest yield that you can expect to earn from a bond when holding to maturity, absent a default. It is a measure that is used in place of yield to maturity with callable bonds.

**Z-score:** It indicates how many standard deviations an element is from the mean. A z-score can be calculated from the following formula.  $z = (X - \mu) / \sigma$  where z is the z-score, X is the sector relative performance.  $\mu$  is the mean of the eleven sector relative performance, and  $\sigma$  is the standard deviation of sectors' relative performance.



# Important Disclosures

The views expressed in this material are the views of SPDR Americas Research Team through the period ended April 30, 2024 and are subject to change based on market and other conditions. This document contains certain statements that may be deemed forward-looking statements. Please note that any such statements are not guarantees of any future performance and actual results or developments may differ materially from those projected.

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**Bonds** generally present less short-term risk and volatility than stocks, but contain interest rate risk (as interest rates rise, bond prices usually fall); issuer default risk; issuer credit risk; liquidity risk; and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

The value of the **debt securities** may increase or decrease as a result of the following: market fluctuations, increases in interest rates, inability of issuers to repay principal and interest or illiquidity in the debt securities markets; the risk of low rates of return due to reinvestment of securities during periods of falling interest rates or repayment by issuers with higher coupon or interest rates; and/or the risk of low income due to falling interest rates. To the extent that interest rates rise, certain underlying obligations may be paid off substantially slower than originally anticipated and the value of those securities may fall sharply. This may result in a reduction in income from debt securities income.

**ETFs** trade like stocks, are subject to investment risk, fluctuate in market value and may

trade at prices above or below the ETFs net asset value. Brokerage commissions and ETF expenses will reduce returns.

**Equity securities** may fluctuate in value and can decline significantly in response to the activities of individual companies and general market and economic conditions.

Investments in **small-sized companies** may involve greater risks than in those of larger, better known companies.

Investments in **mid-sized companies** may involve greater risks than in those of larger, better known companies, but may be less volatile than investments in smaller companies.

Companies with **large market capitalizations** go in and out of favor based on market and economic conditions. Larger companies tend to be less volatile than companies with smaller market capitalizations. In exchange for this potentially lower risk, the value of the security may not rise as much as companies with smaller market capitalizations.

The value style of investing that emphasizes undervalued companies with characteristics for improved valuations, which may never improve and may actually have lower returns than other styles of investing or the overall stock market.

**Foreign investments** involve greater risks than US investments, including political and economic risks and the risk of currency fluctuations, all of which may be magnified in emerging markets.

Because of their narrow focus, **sector investing** tends to be more volatile than investments that diversify across many sectors and companies.

Investing in commodities entail significant risk and is not appropriate for all investors. Commodities investing entail significant risk as commodity prices can be extremely volatile due to wide range of factors. A few such factors include overall market movements, real or perceived inflationary trends, commodity index volatility, international, economic and political changes, change in interest and currency exchange rates.

Generally, among asset classes, stocks are more volatile than bonds or short-term instruments. Government bonds and corporate bonds generally have more moderate short-term price fluctuations than stocks, but provide lower potential long-term returns. U.S. Treasury Bills maintain a stable value if held to maturity, but returns are generally only slightly above the inflation rate.

Low volatility funds can exhibit relative low volatility and excess returns compared to the Index over the long term; both portfolio investments and returns may differ from those of the Index. The fund may not experience lower volatility or provide returns in excess of the Index and may provide lower returns in periods of a rapidly rising market. Active stock selection may lead to added risk in exchange for the potential outperformance relative to the Index.



# Important Disclosures

Investing in futures is highly risky. Futures positions are considered highly leveraged because the initial margins are significantly smaller than the cash value of the contracts. The smaller the value of the margin in comparison to the cash values of the futures contract, the higher the leverage. There are a number of risks associated with futures investing including but not limited to counterparty credit risk, basis risk, currency risk, derivatives risk, foreign issuer exposure risk, sector concentration risk, leveraging and liquidity risks.

There are risks associated with investing in Real Assets and the Real Assets sector, including real estate, precious metals and natural resources. Investments can be significantly affected by events relating to these industries.

Actively managed funds do not seek to replicate the performance of a specified index. The Strategy/fund is actively managed and may underperform its benchmarks. An investment in the strategy/Fund is not appropriate for all investors and is not intended to be a complete investment program. Investing in the strategy/Fund involves risks, including the risk that investors may receive little or no return on the investment or that investors may lose part or even all of the investment.

The Fund may emphasize a "growth" style of investing. The market values of growth stocks may be more volatile than other types of investments. The prices of growth stocks tend to reflect future expectations, and when those expectations change or are not met, share prices generally fall. The returns on "growth" securities may or may not move in tandem with the returns on other styles of investing or the overall stock market.

Investing in high yield fixed income securities, otherwise known as "junk bonds", is considered speculative and involves greater risk of loss of principal and interest than investing in investment grade fixed income securities. These Lower-quality debt securities involve greater risk of default or price changes due to potential changes in the credit quality of the issuer.

High-yield municipal bonds are subject to greater credit risk and are likely to be more sensitive to adverse economic changes or subject to greater risk of loss of income and principal than higher-rated securities.

The municipal market is volatile and can be significantly affected by adverse tax, legislative or political changes and the financial condition of the issuers of municipal securities. Interest rate increases can cause the price of a debt security to decrease. A portion of the dividends you receive may be subject to federal, state, or local income tax or may be subject to the federal alternative minimum tax.

International Government bonds and corporate bonds generally have more moderate short-term price fluctuations than stocks, but provide lower potential long-term returns.

Investments in Senior Loans are subject to credit risk and general investment risk. Credit risk refers to the possibility that the borrower of a Senior Loan will be unable and/or

unwilling to make timely interest payments and/or repay the principal on its obligation. Default in the payment of interest or principal on a Senior Loan will result in a reduction in the value of the Senior Loan and consequently a reduction in the value of the Portfolio's investments and a potential decrease in the net asset value ("NAV") of the Portfolio.

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