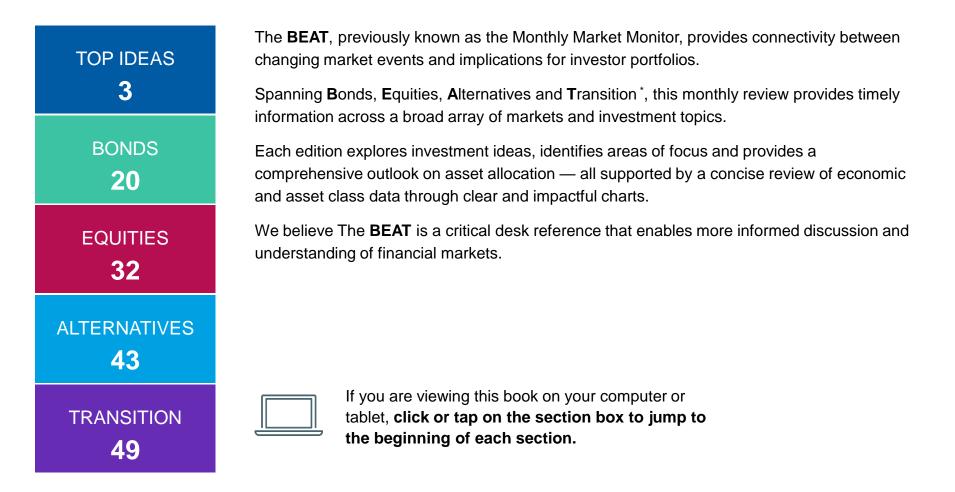


INVESTMENT MANAGEMENT

BONDS | EQUITIES | ALTERNATIVES | TRANSITION

February 2025

Previously known as the Monthly Market Monitor.



Data provided is for informational use only. See end of report for important additional information.

*Transition is an asset allocation view, which refers to cash, cash equivalents or liquid short-duration assets, such as short-dated Treasuries, that can be used to "transition" to other asset classes.

TOP IDEAS Key Themes for February 2025



At What Level Does Higher Bond Yields Break Equities?

The proverbial question. The answer is that it depends on 1) why yields are rising and 2) which ones. If yields are rising because the economy is growing faster than expected, inflation is remaining low and the yield curve is steepening to reflect higher productive growth, then equities and other risky assets can sustain higher bond yields. If yields are rising for more nefarious reasons, like deficit and credit concerns, or purposeful rate hikes to slow growth and inflation, then higher yields can be a problem. Context matters. There is no magic level, but when yields stop rising and plateau at a level that competes with equity returns, this is substantive. But yields need to stop rising first.

The Yield Curve Tells Us Where Yields Are Going

No trouble with the curve. The question on many people's minds is where bond yields are headed, and we can use the yield curve to determine this. As supply chains normalize along with the U.S. economy, so should the yield curve. A normal slope of the 2s -10s U.S. Treasury (UST) yield curve is 50-75 basis points (bps). So, if the UST 2-yr stays anchored around 4.25%, consistent with pricing of 1-2 Fed cuts this year, then we think the UST 10-yr yield will be rangebound between 4.75 and 5%. If you think the Fed cuts 0-1 times, then the 10-yr yield could peak in the 5 - 5.25% range, and so forth. The bottom line is that term premia on the curve is reestablishing itself for many reasons, including deficits, tariffs and inflation expectations. As such, we should expect a more normal yield curve shape.



Fiscal Policy Super Bowl: Taxes, Tariffs, Deregulation

Fiscal policy vs. monetary policy. Markets will remain responsive to announcements on tariffs, taxes, deregulation, immigration and fiscal spending. Should these policies carry inflationary implications, they may shift expectations for the path of monetary policy. Which side wins will depend on how financial markets react and the corresponding impact on financial conditions. This is likely to set the narrative for 1Q 2025. As we see it, President Trump will pay close attention to market reactions, particularly within equities, and might adjust his rhetoric accordingly. As such, much like how some think about a Fed-put, we should also think about a Trump-put.

PMIs, Manufacturing Recovery, Cyclicals

A global story. As we move into 2025, perhaps the most powerful fundamental theme is a recovery in manufacturing PMIs. For the past three years, most PMIs have been below 50 and have struggled to break out. However, while ex-U.S. manufacturing remains challenged, leading indicators in the U.S. suggest a recovery may be forthcoming. We think this is important because a recovery in PMIs is highly correlated with a recovery in cyclical sectors that we call cap-ex beneficiaries. If we couple this with the possibility for deregulation in the U.S. and the necessity for higher investment and growth in the rest of the world (RoW), this should bolster cyclical market sectors. After all, many countries are onshoring and trying to reduce external vulnerabilities and dependencies. Effectively, more investment and capital expenditure (CapEx) increases the velocity of the already high level of global money supply, which may lead to an increase in economic activity.

The views and opinions expressed are those of the Portfolio Solutions Group at the time of writing of this presentation and are subject to change at any time due to market, economic, or other conditions, and may not necessarily come to pass. Not to be construed as an investment or research recommendation.

The Portfolio Solutions Group – Our Top 4 Ideas

Duration: Friend or Foe?

Neutral, but shaded slightly to UW. We are close to, but just shy of, index levels of duration. We would consider going long duration if UST 10-yr yields move toward 5% and going UW more decisively if they fall below 4.25%. Between 4.25% - 5% we are currently likely to stay neutral. Meanwhile, duration exposure may be more beneficial in European markets where the ECB is more likely to keep cutting rates.

Adding Equity Exposure Selectively – Mid-Caps

Buying dips. We still maintain an optimistic outlook for U.S. equities despite two back-to-back strong years. Why? Because we think there are opportunities to be selective in broader markets and cyclical sectors. Core to this view is a global recovery in PMIs. Materials, industrials and even technology are CapEx beneficiaries. We continue to hold a positive view on the mid-cap segment of the market, while maintaining our neutral stance toward large-cap tech.

Hold OW on European Banks

Go shopping in Europe. We continue to hold a constructive view on European banks, which are more insulated from trade-related headwinds than other European cyclicals. While the potential for ECB rate cuts in 2025 presents a headwind to earnings, much of the downside has already been built into current forecasts. Capital returns are attractive, and valuations remain reasonable despite recent outperformance. It may pay to go shopping for deals in Europe.

U.S. Materials: Anticipating the Rebound

Turn of the tide. Materials underperformed broader equity indexes by a significant margin in both 2023 and 2024. Post-pandemic manufacturing weakness, high geopolitical volatility, structural growth challenges in China and consequent earnings weakness all served as headwinds. Looking ahead to 2025, we see risks skewed toward a favorable turn in fortunes for the sector, with a rebound in manufacturing PMIs a key catalyst.

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Leading Indicators Suggest a Continued Moderation in Shelter Inflation

The shelter component of U.S. CPI has remained elevated during 2024, ending the year at ~4.6%. Various leading indicators have historically led the headline data by roughly one year, and recent trends suggest that headline shelter inflation should continue lower in 2025.

Leading Indicators of Rental Prices Have Historically Led Headline Shelter Inflation by About One Year

Leading indicators of shelter inflation (LH) and U.S. CPI shelter component (RH)



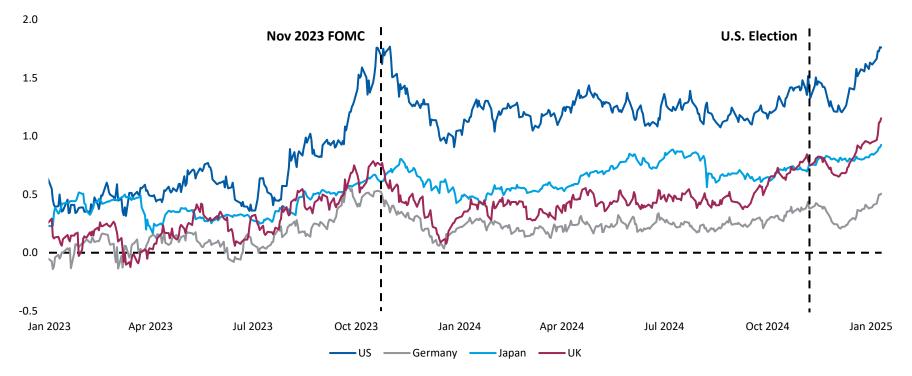
Source: Macrobond, MSIM. As of December 31, 2024. The views and opinions expressed are those of the Portfolio Solutions Group at the time of writing/of this presentation and are subject to change at any time due to market, economic, or other conditions, and may not necessarily come to pass. Forecasts/estimates are based on current market conditions, subject to change, and may not necessarily come to pass. **Past performance is no guarantee of future results.**

Term Premia is Reestablishing Itself Globally

With the recent strength in economic growth, growing concerns surrounding tariffs and inflation and robust government spending, term premiums have started to expand once again since the start of the new year. While this trend is most clearly seen in the U.S., we have witnessed a similar theme in most major developed economies ex-U.S. as well.

Term Premiums Across Developed Markets (DM) Have Increased in the Aftermath of the U.S. Election

Developed Markets 10-year term premiums (%) based on Piper Sandler's 4-factor term premium model



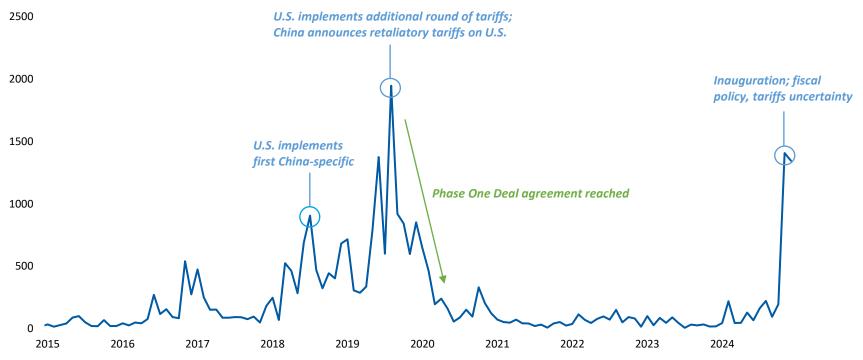
Source: Piper Sandler, MSIM. As of January 10, 2025. The views and opinions expressed are those of the Portfolio Solutions Group at the time of writing/of this presentation and are subject to change at any time due to market, economic, or other conditions, and may not necessarily come to pass. **Past performance is no guarantee of future results**.

Trade Policy Uncertainty Has Returned to Pre-Pandemic Levels

With President Trump's inauguration on January 20th, trade policy uncertainty has returned to levels last witnessed during the escalation of U.S./China trade tensions between 2018 and 2020. In our view, President Trump will pay close attention to market reactions to new policy and rhetoric and may act accordingly. As such, in the same way we think about a Fed-put, we should also consider the implications of a Trump-put.

U.S. Trade Policy Uncertainty Has Spiked to Levels Consistent with 2019 Episodes of U.S./China Trade War

U.S. Trade Policy Uncertainty Index



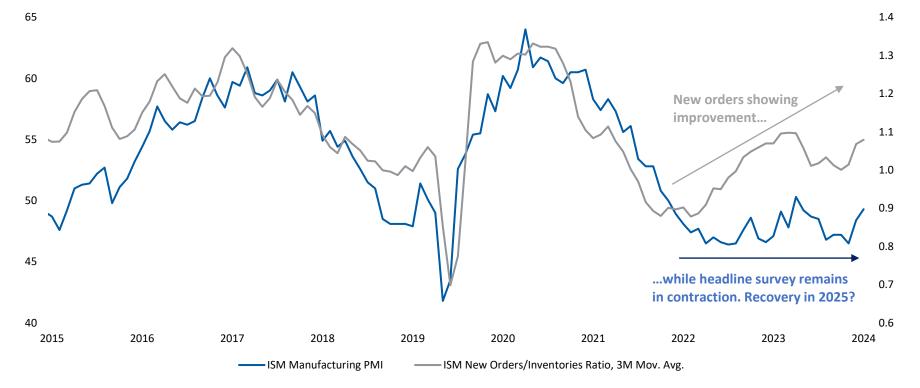
Source: Bloomberg, MSIM. As of December 31, 2024. The views and opinions expressed are those of the Portfolio Solutions Group at the time of writing/of this presentation and are subject to change at any time due to market, economic, or other conditions, and may not necessarily come to pass. Forecasts/estimates are based on current market conditions, subject to change, and may not necessarily come to pass. **Past performance is no guarantee of future results.**

New Orders/Inventories Ratio Signal Potential U.S. Manufacturing Recovery

While not yet visible ex-U.S., new orders have started to pick up in the U.S. as evidenced by the improvement in the ISM new orders/inventories ratio. Continued strength in new orders could suggest a gradual recovery in the headline manufacturing survey, which has been stuck below 50 for 25 of the past 26 months.

ISM New Orders/Inventories Ratio May Suggest a Gradual Improvement in Headline Manufacturing Survey

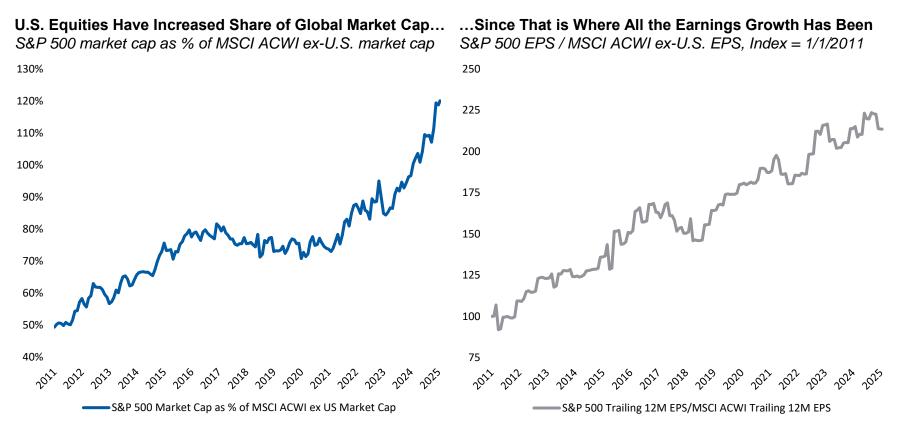
ISM manufacturing (LH), ISM new orders/inventory ratio 3-mo moving average (RH)



Source: Bloomberg, MSIM. As of December 31, 2024. The views and opinions expressed are those of the Portfolio Solutions Group at the time of writing/of this presentation and are subject to change at any time due to market, economic, or other conditions, and may not necessarily come to pass. **Past performance is no guarantee of future results.**

U.S. Exceptionalism Has Been a Persistent Theme, but for Good Reason

Over the past decade plus, U.S. equities have largely outperformed the rest of the world (RoW), with the S&P 500 expanding its share of global market cap during that time. However, there is fundamental basis for the outperformance, since earnings growth in the U.S. has consistently outpaced ex-U.S. regions over the same timeframe.

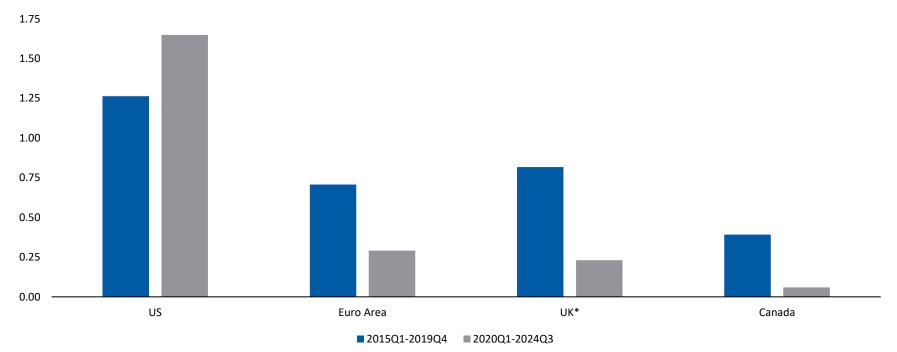


Source: Bloomberg, MSIM. As of January 21, 2025. The views and opinions expressed are those of the Portfolio Solutions Group at the time of writing/of this presentation and are subject to change at any time due to market, economic, or other conditions, and may not necessarily come to pass. **Past performance is no guarantee of future results.**

Regional Divergences in Labor Productivity Have Increased Since 2020

One of the key underlying drivers of U.S. exceptionalism has been the divergence in labor productivity growth between the U.S. and the RoW. This divergence has widened during the Covid/post-Covid era, serving as another fundamental basis for the outperformance in U.S. equities relative to the RoW.

U.S. Labor Productivity Growth Has Widened its Outperformance Relative to ex-U.S. in the Aftermath of the Pandemic Annualized labor productivity growth (%)



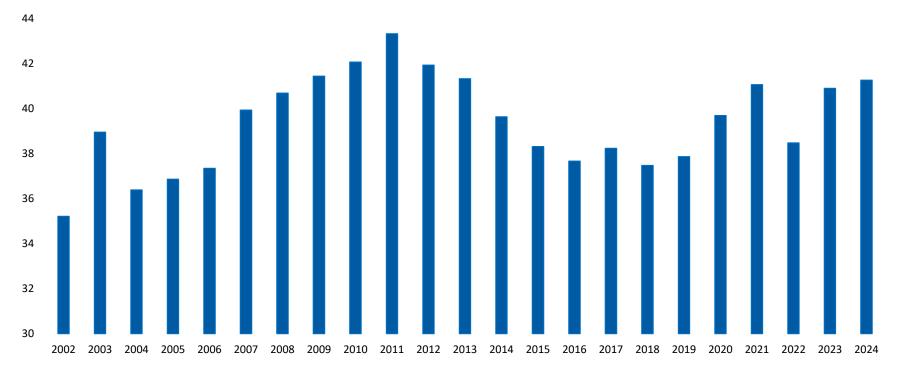
Note: Labor productivity is defined as total-economy real value-added per hour worked. *UK 2024Q3 productivity represents a GS forecast

Source: Goldman Sachs Investment Research, ISG, MSIM. As of September 30, 2024. The views and opinions expressed are those of the Portfolio Solutions Group at the time of writing/of this presentation and are subject to change at any time due to market, economic, or other conditions, and may not necessarily come to pass. Forecasts/estimates are based on current market conditions, subject to change, and may not necessarily come to pass. **Past performance is no guarantee of future results.**

Economic Growth in the Rest of the World Matters for the U.S.

While we continue to view U.S. equities as the "best in show," a substantial share of S&P 500 revenues are derived from foreign sources. As such, if a recession were to manifest itself in Europe, that, coupled with a continued slowdown in China, would pose a sizable negative impact on earnings for S&P 500 companies.

Roughly 41% of S&P 500 Revenues Come From Foreign Sources



% of S&P 500 revenue from outside of the U.S.

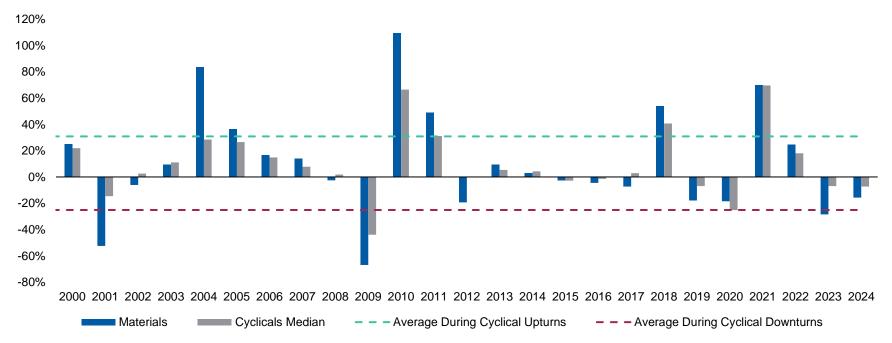
Source: Apollo, MSIM. As of December 31, 2024. The views and opinions expressed are those of the Portfolio Solutions Group at the time of writing/of this presentation and are subject to change at any time due to market, economic, or other conditions, and may not necessarily come to pass. **Past performance is no guarantee of future results**.

Materials Show Strong Earnings Growth During Years of Cyclical Upturns

A potential manufacturing recovery in 2025 can catalyze an earnings recovery in the more cyclically-exposed sectors of the equity market. Among cyclicals, Materials are the key beneficiaries from a recovery in manufacturing and have historically posted strong earnings growth during years of cyclical upturns. During years where the median earnings growth for cyclicals has been positive, Materials have historically outperformed, posting average real earnings growth of ~30%.

Materials Have Exhibited Strong Earnings Growth During Years of Cyclical Upturns

Materials real annual EPS growth and median EPS growth for cyclical sectors (materials, energy, financials, industrials)



Source: Bloomberg, MSIM. As of December 31, 2024. The views and opinions expressed are those of the Portfolio Solutions Group at the time of writing/of this presentation and are subject to change at any time due to market, economic, or other conditions, and may not necessarily come to pass. **Past performance is no guarantee of future results**.

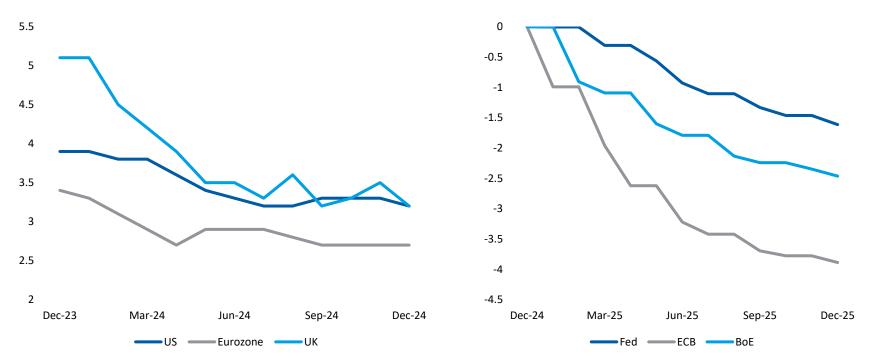
Eurozone Duration: Our Preferred Place To Be

Lackluster growth and a more convincing downtrend in Eurozone inflation should lead to deeper cuts by the ECB, compared to both the Fed and the BoE, resulting in more favorable dynamics for duration in the region.

Europe's Disinflationary Path Looks More Convincing...

YoY % change in core CPI

... Resulting in Expectations of Deeper ECB Cuts # of expected 25 basis point cuts



Source: Bloomberg, MSIM. As of January 20, 2025. The views and opinions expressed are those of the Portfolio Solutions Group at the time of writing/of this presentation and are subject to change at any time due to market, economic, or other conditions, and may not necessarily come to pass. Forecasts/estimates are based on current market conditions, subject to change, and may not necessarily come to pass. **Past performance is no guarantee of future results.**

Hold Overweight on European Banks

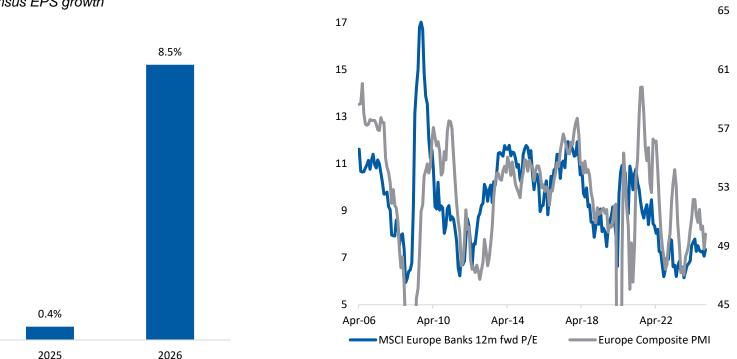
While the potential for ECB rate cuts in 2025 presents a headwind to earnings, much of the downside has already been built into current forecasts. Valuations remain reasonable despite recent outperformance and should be supported if activity levels in Europe start to rebound after a dismal two years. With attractive capital returns, one is paid to wait for a cyclical uptick.

Given Consensus EPS Growth Is Already Quite Cautious, We See This as Manageable for the Sector Provided the ECB Stops Cutting Around 2%

European banks consensus EPS growth

9.3%

Despite Improving Fundamentals, Valuations Have Failed to Rebound Due to Lack of Visibility on Growth European banks P/E ratio (LH) vs PMIs (RH)



Source: MSIM, Bloomberg. As January 20, 2025. The views and opinions expressed are those of the Portfolio Solutions Group at the time of writing/of this presentation and are subject to change at any time due to market, economic, or other conditions, and may not necessarily come to pass. Forecasts/estimates are based on current market conditions, subject to change, and may not necessarily come to pass. Past performance is no guarantee of future results.

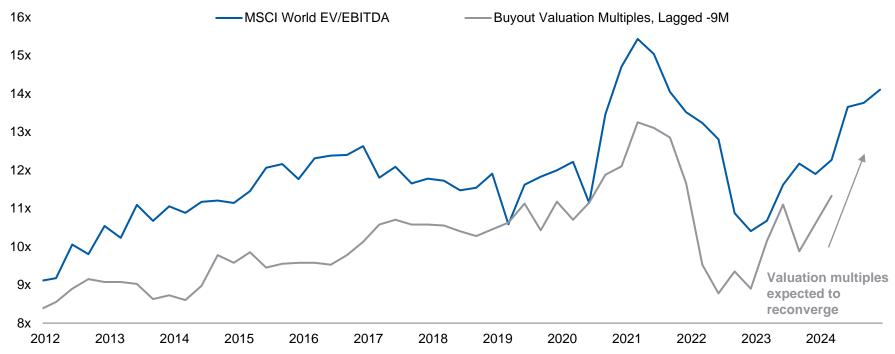
2024

Private Equity Remains Attractive Relative to Public Equity

Private equity market performance has historically lagged public equities by several quarters to a full year. Public equity valuation multiples continue to rally, with private equity following closely. We expect this trend to continue.

Private Equity Performance Has Lagged Public Equities by About One Year; We Expect the Rebound to Continue

MSCI World EV/EBITDA multiple and private equity buyout multiple (lagged by 9 months)



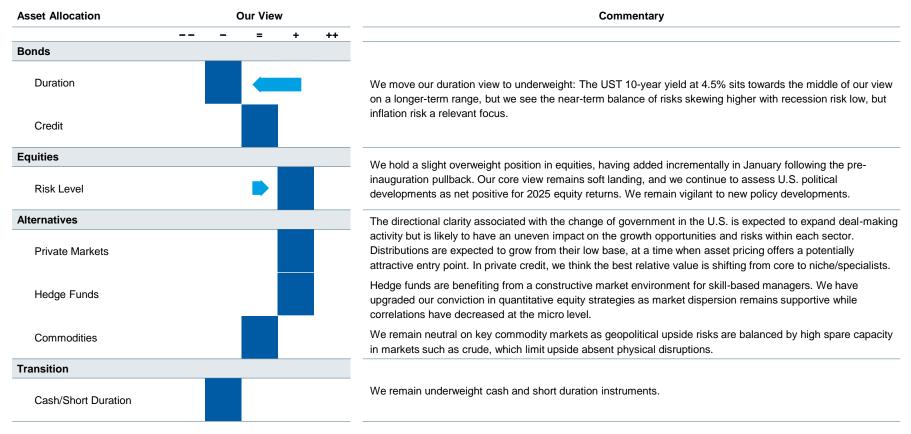
Source: Bloomberg, Preqin. As of December 31, 2024. This information reflects the views of the Portfolio Solutions Group as of the date hereof and not of any future date and are subject to change without notice in response to changing circumstances and market conditions. Senior Debt are loans secured by collateral that must be paid off before other debts when a company goes into default. Subordinated Debt are loans which rank after other debts (e.g. Senior Debt) if a company falls into default and therefore carries more risk for the lender. EBITDA stands for Earnings Before Interest, Taxes, Depreciation and Amortization, a reflection a firm's short-term operational efficiency. A lower debt/EBITDA ratio generally reflects a healthier company from a financial standpoint, representing a higher level of cash from earnings to cover debt payments, viewed as less risky for an investor. **Past performance is no guarantee of future results.**

Capital Markets Investment Framework

Representative Allocations from the Portfolio Solutions Group

Current allocation

- High conviction underweight
- Underweight
- = Neutral
- + Overweight
- ++ High conviction overweight



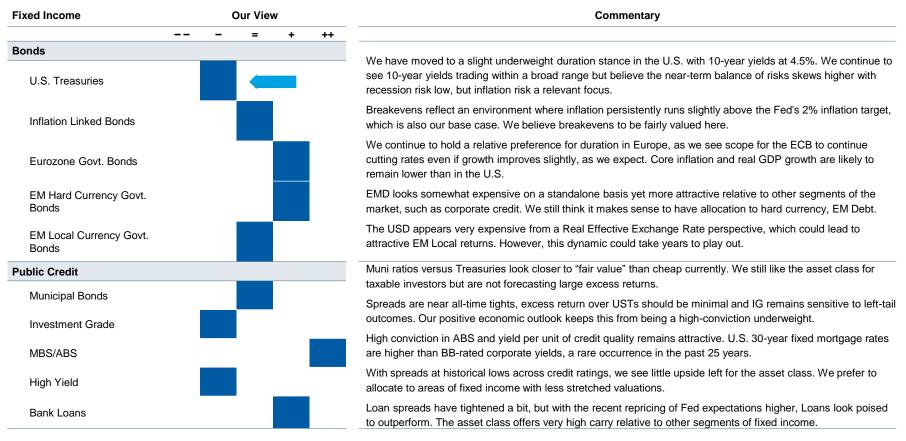
For informational purposes and does not constitute an offer or a recommendation to buy or sell any particular security or to adopt any specific investment strategy. The tactical views expressed above are a broad reflection of our team's views and implementations, expressed for client communication purposes. Individual team allocations may differ. The information herein does not contend to address the financial objectives, situation or specific needs of any individual investor. The signals represent the Portfolio Solutions Group view on each asset class.

Global Fixed Income

Representative Positioning from Portfolio Solutions Group



- High conviction underweight
- Underweight
- Neutral
- + Overweight
- ++ High conviction overweight



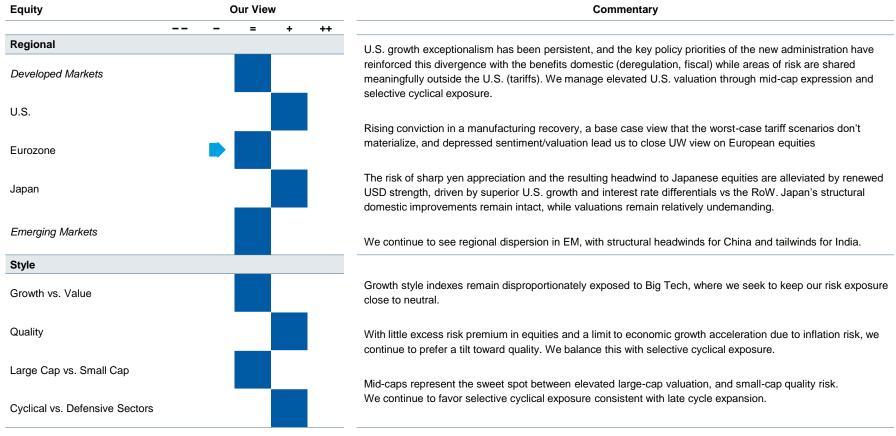
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Global Equity

Representative Positioning from Portfolio Solutions Group



- High conviction underweight
- Underweight
- = Neutral
- + Overweight
- ++ High conviction overweight



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Alternatives

Representative Positioning from Portfolio Solutions Group

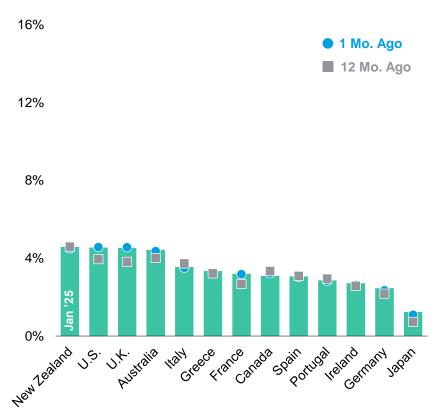
Alternative Assets	Commentary
Private Markets	
Private Equity	We expect investor cash flows to recover due to increasing market activity, and asset pricing to offer an attractive entry point. While a key discipline in private equity investing is to limit exposure to exogenous risks, the directional clarity associated with the change of government in the U.S. is expected to expand deal-making activity but is likely to have an uneven impact on the growth opportunities and risks within each sector. The prospect of deregulation will potentially lead to increased opportunities in Financials and Healthcare and reduced anti-trust intervention could spark additional M&A more broadly. However, growth policies have the potential to add to inflation, so we continue to focus on middle-market strategies that rely less on leverage and are well-placed to deliver asset management initiatives to drive margin expansion and real earnings growth.
	Commercial real estate is working through its debt maturity wall and pockets of elevated supply, leading to increased transaction volumes at more attractive entry valuations. These reset valuations and retreat of bank lending have created interesting opportunities for commercial real estate lenders. At the same time, fundamentals are constructive, as debt liquidity improves and the future supply in key sectors is materially lower, setting up an attractive opportunity set for commercial real estate equity as well - particularly in secularly growing sectors including industrial, residential and net lease.
Private Real Assets	Private infrastructure continues to participate in the investable opportunities relating to the mega trends of digitization and power generation. These themes converge where data services require power, and generative Artificial Intelligence (AI) is highlighting the fact that the current power mix is insufficient in terms of volume, density and reliability. Private investors are playing a key role in supplying this enabling infrastructure with attractive growth prospects. Infrastructure deal volume is also expanding across sectors, with transportation becoming more active as the utilization track records of airports and toll roads recover after the mobility shock caused by COVID-19. In the U.S., investors must be selective to ensure investment activity is aligned with forward-looking policy adjustments. While we believe cost competitive onshore wind and solar investment has irreversible momentum, support for earlier stage and subsidized initiatives such as offshore wind and hydrogen is under threat in favor of expanding conventional oil and gas production. To date we have observed bipartisan support for nuclear power generation and expansion in access to broadband, but policy will need to be considered carefully as details emerge.
Private Credit	Within corporate lending, the opportunity continues to skew further out the risk spectrum to special situation lenders, who can capitalize on many of the challenges facing direct lenders. Stress is not yet at a level that causes us to turn bullish on the cyclically-sensitive prospects for distressed debt. More broadly, niche/specialist strategies, which sit further from corporate lending, are showing some attractive signals and are becoming more attractive on a relative basis.
Liquid Alternatives	
Hedge Funds	Given the current market drivers, we prefer hedge fund specialist portfolio managers who are best positioned to analyze policy impacts on security prices and capture the potential opportunity in increased capital markets activity. We stress the need to incorporate highly liquid, responsive, macro convexity strategies within portfolios to capitalize on price volatility should consensus views prove incorrect, stoking periods of broader market volatility. In addition, our highest conviction sub-strategies are fixed income relative value and quantitative long / short equity to take advantage of decreasing correlations at the micro level.
Commodities	We remain neutral on key commodity markets as geopolitical upside risks are balanced by high spare capacity in markets such as crude, limiting upside absent physical disruptions.

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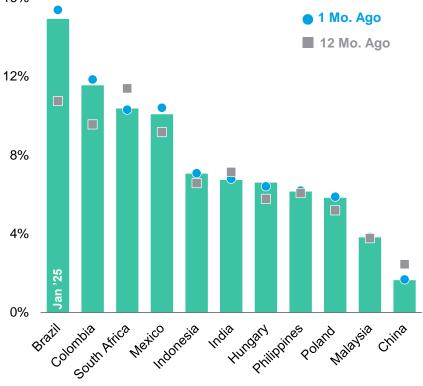
Sovereign Bond Yields

Developed Markets

(10 yr. Yield)







Past performance is no guarantee of future results. It is not possible to invest directly in an index. Source: Factset as of 1/31/25. Data provided is for informational use only. See end of report for important additional information.

Key Rates (%)

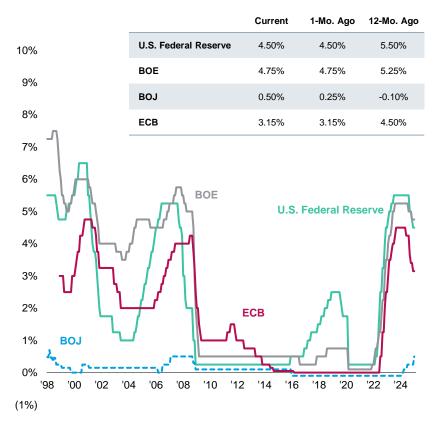
Security	Current	12-Mo. Ago	Average	Minimum	Maximum
1-Week SIFMA	2.25	3.74	3.37	2.25	4.35
Secured Overnight Financing Rate	4.38	5.32	5.07	4.27	5.40
1-Mo SOFR	4.31	5.33	5.03	4.30	5.35
3-Mo SOFR	4.30	5.32	4.97	4.29	5.35
2-Yr Treasury	4.20	4.22	4.38	3.54	5.03
5-Yr Treasury	4.33	3.86	4.16	3.41	4.71
10-Yr Treasury	4.55	3.95	4.25	3.62	4.79
30-Yr Treasury	4.80	4.19	4.46	3.93	4.98
2-Yr Japan	0.72	0.08	0.38	0.08	0.72
10-Yr Japan	1.23	0.73	0.94	0.68	1.25
2-Yr German Bund	2.12	2.51	2.53	1.91	3.11
10-Yr German Bund	2.46	2.18	2.37	2.03	2.67
2-Yr UK Gilt	4.21	4.24	4.22	3.53	4.63
10-Yr UK Gilt	4.53	3.82	4.19	3.74	4.89
Bloomberg US Agg	4.86	4.59	4.78	4.10	5.31
Bloomberg Global Agg	3.66	3.59	3.70	3.26	4.06
Bloomberg US Corporate	5.30	5.11	5.24	4.64	5.75
Bloomberg US Long Corporate	5.80	5.32	5.55	5.07	6.01
Bloomberg US Municipal	3.68	3.37	3.57	3.28	3.93
Bloomberg US Long Municipal	4.35	4.13	4.20	3.94	4.54
US High Yield	7.17	7.84	7.57	6.98	8.32
US Loans	8.37	10.10	9.43	8.36	10.10

Past performance is no guarantee of future results.

It is not possible to invest directly in an index. Source: Bloomberg, Leveraged Commentary & Data (LCD), and Factset as of 1/31/25. Current represents most recent month. Average, minimum, and maximum measure a 12-month period ending most recent month. Data provided is for informational use only. US High Yield is represented by ICE BofA US High Yield Index. US Loans is represented by Morningstar LSTA U.S. Leveraged Loan Index. Bloomberg indices and ICE BofA US HY index using yield to worst. Morningstar LSTA U.S. Leveraged Loan Index using yield to maturity. SOFR is the Secured Overnight Financing Rate, a broad measure of secured overnight U.S. Treasury repo rates. See end of report for important additional information.

Monetary Policy

Central Bank Policy Rates



Market Expectations for Future Central Bank Rates



Source: Bloomberg, Factset as of 1/31/25. Data provided is for informational use only. See end of report for important additional information. Forecasts/estimates are based on current market conditions, subject to change, and may not necessarily come to pass.

U.S. Treasury Yields

U.S. Treasury Yield Curves



Source: Factset, Morningstar as of 1/31/25. Data provided is for informational use only. Past Performance is not a reliable indicator of future results. See end of report for important additional information.

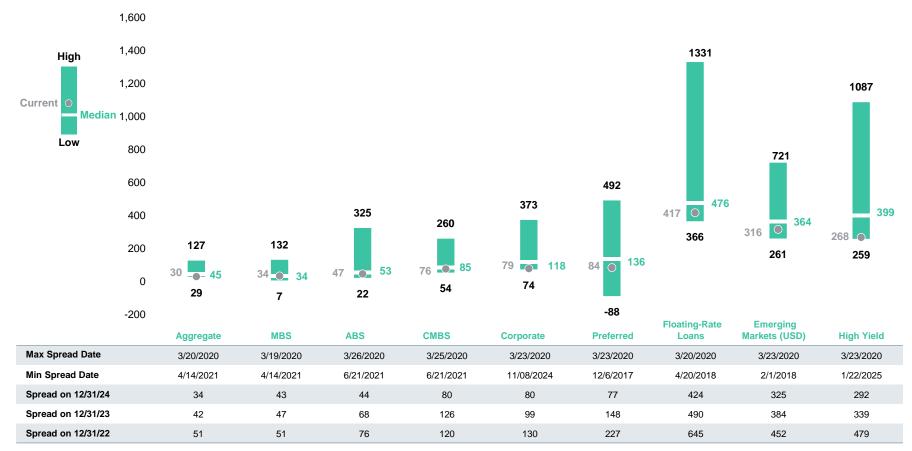
The **BEAT** | February 2025

Characteristics and Performance Analysis

			Avera	iges		Total Returns (%)							
Index	Coupon (%)	Price (\$)	Yield to Worst (%)	Spread (bps)	Maturity (yrs.)	Duration (yrs.)	1-Mo.	3-Mo.	YTD	1Y	3Y	5Y	10Y
U.S. High Grade													
Bloomberg U.S. Aggregate Index	3.45	90.7	4.86	30	8.4	6.1	0.53	-0.07	0.53	2.07	-1.52	-0.60	1.19
U.S. Treasury	3.02	90.9	4.42	-	7.6	5.8	0.52	-0.26	0.52	1.38	-2.09	-1.06	0.62
U.S. Mortgage Backed Securities	3.34	88.2	5.19	34	8.1	6.2	0.51	0.17	0.51	2.19	-1.47	-0.77	0.87
U.S. Asset Backed Securities	4.80	99.4	4.73	47	3.6	2.6	0.32	0.98	0.32	4.86	2.29	1.88	2.06
U.S. Commercial Mortgage Backed Securities	3.34	93.0	5.12	76	4.6	4.1	0.72	1.09	0.72	4.67	0.20	0.64	2.03
U.S. Corp. Investment Grade	4.30	92.1	5.30	79	10.5	6.8	0.55	-0.07	0.55	2.86	-0.96	-0.05	2.18
Bloomberg Municipal Bond Index	4.59	101.8	3.68	-	13.5	6.3	0.50	0.75	0.50	2.08	0.54	0.73	2.12
Bloomberg Taxable Municipal Bond Index	4.37	91.3	5.20	-	14.2	7.7	0.47	-0.36	0.47	2.11	-2.28	-0.53	2.26
ICE BofA US Inflation-Linked Treasury Index	1.04	92.6	1.86	-	7.6	4.7	1.28	0.08	1.28	2.90	-1.42	1.57	2.02
ICE BofA Preferred Index (Fixed Rate)	5.31	91.3	5.88	84	-	5.8	0.63	-1.32	0.63	4.80	1.47	1.91	4.06
U.S. High Yield													
ICE BofA US High Yield Index	6.43	96.3	7.17	268	4.7	3.1	1.38	2.10	1.38	9.67	4.35	4.33	5.15
Morningstar LSTA U.S. Leveraged Loan Index	S+3.38	97.6	8.37	417	4.5	-	0.69	2.10	0.69	8.97	7.12	5.88	5.19
Emerging Markets													
J.P. Morgan EM Bond Index (EMBI) Global Diversified	5.40	86.5	7.74	316	-	6.5	1.44	1.21	1.44	9.18	0.53	0.10	3.18
J.P. Morgan Corp. EM Bond Index (CEMBI) Broad Diversified	5.30	94.6	6.53	207	-	4.3	0.80	0.85	0.80	7.85	1.83	2.03	4.05
J.P. Morgan Govt. Bond Index-EM (GBI-EM) Global Diversified	5.62	-	6.33	-	-	5.3	2.05	-0.48	2.05	1.16	-0.28	-1.20	0.60
Global Developed Markets													
Bloomberg Global Aggregate Ex-U.S. Index	2.29	96.5	2.62	30	8.6	7.0	0.59	-2.26	0.59	-1.40	-5.47	-3.40	-0.66
FTSE World Government Bond Index	2.52	-	3.37	-	-	7.0	0.46	-1.59	0.46	-0.88	-5.01	-3.30	-0.48
ICE BofA European Union Government Bond Index	2.12	94.3	2.77	45	8.9	7.2	0.30	-3.58	0.30	-2.18	-5.96	-3.87	-1.01
ICE BofA Developed Mkts HY Ex-Sub Fincl Index (USD Hedged)	6.18	96.6	6.84	295	3.6	3.0	1.24	2.10	1.24	9.68	4.64	4.40	5.26
Bloomberg Euro-Aggregate Corporates (EUR)	2.50	97.3	3.15	91	5.0	4.4	0.44	1.63	0.44	5.06	-0.13	-0.22	1.04
Bloomberg Pan-European High Yield Euro (EUR)	4.76	98.1	5.67	294	3.7	3.1	0.63	1.86	0.63	8.10	3.46	2.87	3.72

Past performance is no guarantee of future results. It is not possible to invest directly in an index. Source: Bloomberg, J.P. Morgan, ICE BofA Data Indices, LLC, Factset, and Leveraged Commentary & Data (LCD), as of 1/31/25. Data provided is for informational use only. See end of report for important additional information. Yield to maturity is shown for the Morningstar LSTA U.S. Leveraged Loan Index and the FTSE World Government Bond Index. S+ refers to SOFR (Secured Overnight Financing Rate) as the base rate. Loan Index spread represents the three-year discounted spread over SOFR. Returns of the ICE BofA Developed Mtks HY Ex-Sub Financial Index are USD Hedged. The averages for the index are unhedged. Returns and averages for the Bloomberg Euro-Agg Corps and Bloomberg Pan-Euro HY indices are in EUR (unhedged).

Spread Analysis (bps)



Past performance is no guarantee of future results. It is not possible to invest directly in an index. Source: Factset and Leveraged Commentary & Data (LCD) as of 1/31/25. Spread history measures past 10 years. Data provided is for informational use only. See end of report for important additional information. All fixed-income spreads are in basis points and measure option-adjusted yield spread relative to comparable maturity U.S. Treasuries using daily data. Aggregate represented by Bloomberg US Aggregate Index. MBS represented by Bloomberg U.S. Mortgage Backed Securities (MBS) Index. ABS represented by Bloomberg U.S. Asset Backed Securities (ABS) Index. Corporate represented by Bloomberg U.S. Corporate Investment Grade Index. Preferred represented by ICE BofA Fixed Rate Preferred Securities Index. Floating-Rate Loans represented by Morningstar LSTA U.S. Leveraged Loan Index. Loan Index spread represents the three-year discounted spread over SOFR (Secured Overnight Financing Rate). Emerging Markets(USD) represented by J.P. Morgan Emerging Markets Bond Index (EMBI) Global Diversified. High Yield represented by ICE BofA US High Yield Index.

Corporate Bond Market Update

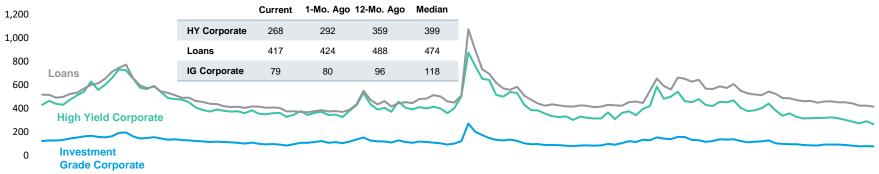
		Total Returns (%)											
	Coupon (%)	Price (\$)	Yield to Worst (%)	Spread (bps)	Maturity (yrs.)	Duration (yrs.)	1-Mo.	3-Mo.	YTD	1Y	3Y	5Y	
J.S. High Grade													
Bloomberg U.S. Corp. Investment Grade Index	4.30	92.1	5.30	79	10.5	6.8	0.55	-0.07	0.55	2.86	-0.96	-0.05	2
AAA Index	3.31	81.2	4.97	32	17.4	10.2	0.23	-1.83	0.23	-1.04	-4.31	-2.40	
AA Index	3.65	88.4	4.97	43	12.4	7.6	0.48	-0.53	0.48	1.35	-2.56	-1.30	
A Index	4.18	92.3	5.18	67	10.3	6.8	0.54	-0.26	0.54	2.41	-1.19	-0.31	
BBB Index	4.54	92.8	5.48	96	10.3	6.6	0.58	0.20	0.58	3.60	-0.41	0.44	:
.S. High Yield													
ICE BofA U.S. High Yield Index	6.43	96.3	7.17	268	4.7	3.1	1.38	2.10	1.38	9.67	4.35	4.33	Ę
BB Index	5.80	97.9	6.17	166	4.9	3.3	1.29	1.69	1.29	7.57	3.52	3.95	Ę
B Index	7.07	98.5	7.22	271	4.5	2.8	1.42	2.22	1.42	9.01	4.36	3.92	4
CCC Index	7.19	85.2	11.32	699	4.2	2.8	1.64	3.49	1.64	20.58	7.23	6.65	6
Morningstar LSTA U.S. Leveraged Loan Index	S+3.38	97.6	8.37	417	4.5	-	0.69	2.10	0.69	8.97	7.12	5.88	ę
BBB Index	S+1.89	100.2	6.18	182	5.1	-	0.61	1.83	0.61	7.77	6.59	4.69	4
BB Index	S+2.55	100.2	6.85	249	5.0	-	0.66	2.16	0.66	8.30	7.16	5.02	4
B Index	S+3.67	98.6	8.46	420	4.4	-	0.67	2.16	0.67	9.55	7.58	6.29	į
CCC Index	S+4.67	81.2	17.86	1346	3.4	-	0.96	1.09	0.96	8.04	4.08	5.60	(
D Index	-	50.0	-	-	-	-	2.28	3.77	2.28	-15.19	-28.53	-22.28	-17

Past performance is no guarantee of future results.

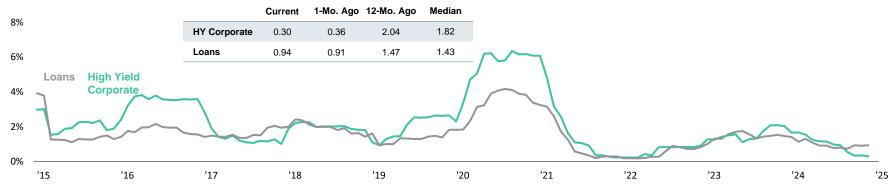
It is not possible to invest directly in an index. Source: Bloomberg, J.P. Morgan, ICE BofA Data Indices, LLC, Factset, and Leveraged Commentary & Data (LCD), as of 1/31/25. Data provided is for informational use only. See end of report for important additional information. Yield to maturity is shown for the Morningstar LSTA U.S. Leveraged Loan Index. S+ refers to SOFR (Secured Overnight Financing Rate) as the base rate. Loan Index spread represents the three-year discounted spread over SOFR.

Corporate Bond Market Update

Average Spread (bps)



Annual Default Rate



Past performance is no guarantee of future results.

It is not possible to invest directly in an index. Source: J.P. Morgan and Leveraged Commentary & Data (LCD), as of 1/31/25. Data provided is for informational use only. See end of report for important additional information. Corporate spreads are in basis points and measure option-adjusted yield spread relative to comparable maturity U.S. Treasuries. Loan Index spread represents the three-year discounted spread over SOFR (Secured Overnight Financing Rate).

BONDS Municipal Bond Market Update

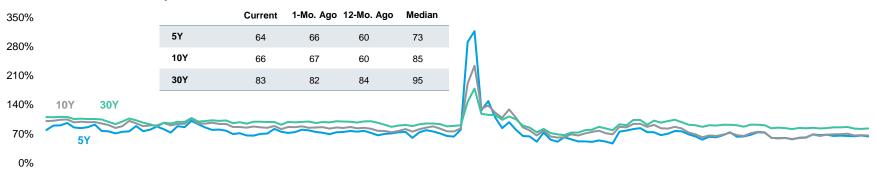
			Averages		Total Returns (%)								
-	Coupon (%)	Price (\$)	Yield To Worst (%)	Maturity (yrs.)	Duration (yrs.)	1-Mo.	3-Мо.	YTD	1Y	3Y	5Y	10Y	
Bloomberg Municipal Bond Index	4.59	101.8	3.68	13.5	6.3	0.50	0.75	0.50	2.08	0.54	0.73	2.12	
AAA Index	4.52	102.6	3.52	13.0	6.4	0.56	0.80	0.56	1.55	0.36	0.49	1.71	
AA Index	4.61	102.7	3.56	13.1	6.1	0.41	0.70	0.41	1.72	0.46	0.59	1.92	
A Index	4.59	100.3	3.92	13.9	6.3	0.61	0.83	0.61	2.81	0.89	1.10	2.53	
BBB Index	4.62	97.0	4.40	17.5	7.2	0.80	0.73	0.80	4.22	0.94	1.35	3.20	
5-Year Index	4.73	105.4	3.18	5.0	3.7	0.64	0.64	0.64	2.14	1.03	0.79	1.59	
10-Year Index	4.57	104.9	3.43	9.9	5.8	0.82	1.15	0.82	0.99	0.75	0.77	2.20	
22+ Year Index	4.62	97.5	4.35	26.6	9.9	0.08	0.38	0.08	2.40	-0.97	0.05	2.37	
Bloomberg High Yield Municipal Bond Index	4.67	65.6	5.45	19.6	6.8	0.76	1.21	0.76	7.62	1.51	2.32	4.18	
Hospital	5.30	76.5	5.77	20.4	6.0	0.85	1.91	0.85	13.22	1.09	1.45	3.66	
IDR/PCR	4.05	36.5	5.82	20.1	7.0	0.69	0.75	0.69	5.15	0.81	2.29	5.02	
Tobacco	2.27	19.0	6.28	27.9	10.4	1.55	1.39	1.55	3.26	0.19	2.63	6.51	
Puerto Rico	3.57	55.8	4.64	19.0	7.0	1.03	0.93	1.03	4.84	2.08	3.10	4.65	

Past performance is no guarantee of future results.

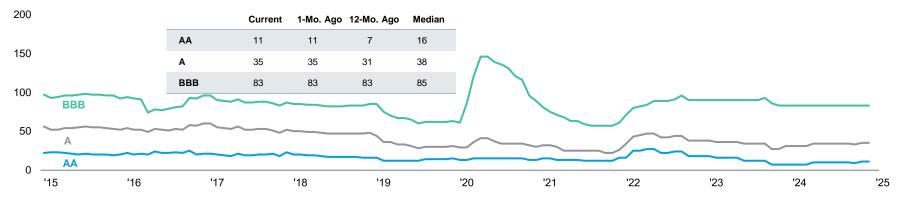
It is not possible to invest directly in an index. Source: Bloomberg, Morningstar as of 1/31/25. Coupon and Yield To Worst figures are based on average market prices while Price is based on an average of par value. Data provided is for informational use only. See end of report for important additional information.

Municipal Bond Market Update

AAA Muni-to-Treasury Yield Ratios



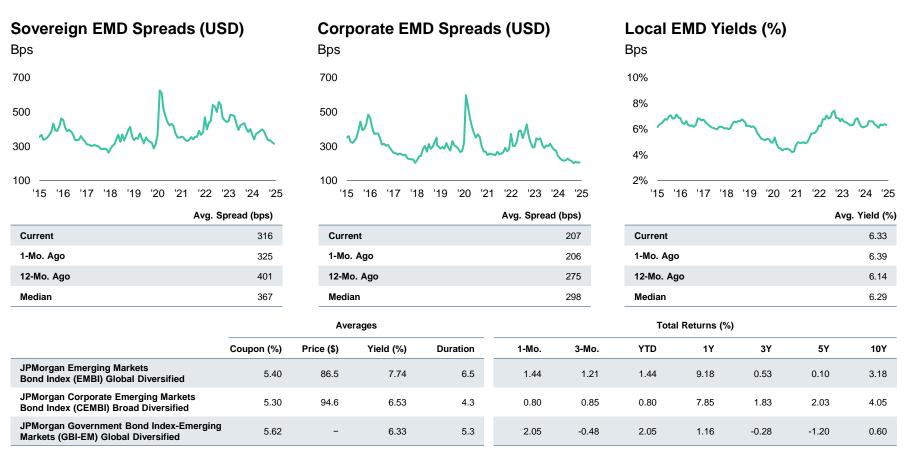
Credit Quality Spreads vs. AAA (bps)



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It is not possible to invest directly in an index. Source: Bloomberg as of 1/31/25. Data provided is for informational use only. See end of report for important additional information. All spreads are in basis points and measure option-adjusted yield spread relative to comparable maturity U.S. Treasuries.

Emerging Markets Bond Market Update



Past performance is no guarantee of future results.

It is not possible to invest directly in an index. Source: J.P. Morgan, Morningstar as of 1/31/25. Data provided is for informational use only. See end of report for important additional information. All spreads are in basis points and measure option-adjusted yield spread relative to comparable maturity U.S. Treasuries.

Asset Class Return Analysis (%)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	YTD 2025
Higher ▲	Municipal 3.30	High Yield 17.49	EMD (Local Currency) 15.21	Municipal 1.28	Investment Grade 14.54	Global Agg Ex-U.S. 10.11	High Yield 5.36	Bank Loan -0.77	High Yield 13.46	Bank Loan 8.59	EMD (Local Currency) 2.05
	MBS 1.51	EMD (Hard Currency) 10.19	Global Agg Ex-U.S. 10.51	MBS 0.99	EMD (Hard Currency) 14.42	Investment Grade 9.89	Bank Loan 5.20	Municipal -8.53	Bank Loan 13.32	High Yield 8.20	EMD (Hard Currency) 1.44
	EMD (Corp. Bonds) 1.30	Bank Loan 10.16	EMD (Hard Currency) 9.32	Treasury 0.86	High Yield 14.41	Treasury 8.00	Municipal 1.52	High Yield -11.22	EMD (Local Currency) 12.70	EMD (Corp. Bonds) 7.63	High Yield 1.38
	EMD (Hard Currency) 1.23	EMD (Local Currency) 9.94	EMD (Corp. Bonds) 7.96	Bank Loan 0.44	EMD (Local Currency) 13.47	EMD (Corp. Bonds) 7.13	EMD (Corp. Bonds) 0.91	EMD (Local Currency) -11.69	EMD (Hard Currency) 11.09	EMD (Hard Currency) 6.54	EMD (Corp. Bonds) 0.80
	Treasury 0.84	EMD (Corp. Bonds) 9.65	High Yield 7.48	EMD (Corp. Bonds) -1.65	EMD (Corp. Bonds) 13.09	High Yield 6.17	Investment Grade -1.04	MBS -11.81	EMD (Corp. Bonds) 9.08	Investment Grade 2.13	Bank Loan 0.69
	Investment Grade -0.68	Investment Grade 6.11	Investment Grade 6.42	Global Agg Ex-U.S. -2.15	Bank Loan 8.64	EMD (Hard Currency) 5.88	MBS -1.04	EMD (Corp. Bonds) -12.26	Investment Grade 8.52	MBS 1.20	Global Agg Ex-U.S. 0.59
	Bank Loan -0.69	MBS 1.67	Municipal 5.45	High Yield -2.26	Municipal 7.54	Municipal 5.21	EMD (Hard Currency) -1.51	Treasury -12.46	Municipal 6.40	Municipal 1.05	Investment Grade 0.55
	High Yield -4.64	Global Agg Ex-U.S. 1.49	Bank Loan 4.12	Investment Grade -2.51	Treasury 6.86	MBS 3.87	Treasury -2.32	Investment Grade -15.76	Global Agg Ex-U.S. 5.72	Treasury 0.58	Treasury 0.52
	Global Agg Ex-U.S. -6.02	Treasury 1.04	MBS 2.47	EMD (Hard Currency) -4.61	MBS 6.35	Bank Loan 3.12	Global Agg Ex-U.S. -7.05	EMD (Hard Currency) -16.45	MBS 5.05	EMD (Local Currency) -2.38	MBS 0.51
↓ Lower	EMD (Local Currency) -14.92	Municipal 0.25	Treasury 2.31	EMD (Local Currency) -6.21	Global Agg Ex-U.S. 5.09	EMD (Local Currency) 2.69	EMD (Local Currency) -8.75	Global Agg Ex-U.S. -18.70	Treasury 4.05	Global Agg Ex-U.S. -4.22	Municipal 0.50

Past performance is no guarantee of future results. It is not possible to invest directly in an index. In general, fixed income investments are subject to credit and interest rate risks. High yield investments may have a higher degree of credit and liquidity risk. Foreign securities are subject to currency, political, economic and market risks. Investors should carefully review the risks of each asset class prior to investing. Source: Morningstar as of 1/31/25. Data provided is for informational use only. See end of report for important additional information. Investment Grade represented by Bloomberg U.S. Corporate Index. MBS represented by Bloomberg U.S. Mortgage Backed Securities (MBS) Index. Treasury represented by Bloomberg U.S. Treasury Index. High Yield represented by ICE BofA US High Yield Index. Municipal represented by Bloomberg Municipal Bond Index. Bank Loan represented by Morningstar LSTA U.S. Leveraged Loan Index. Global Agg Ex-U.S. represented by Bloomberg Global Aggregate Ex-USD Index. EMD (Local Currency) represented by J.P. Morgan Government Bond Index-Emerging Markets (GBI-EM) Global Diversified. EMD (Hard Currency) represented by J.P. Morgan Corporate Emerging Market Bond Index (CEMBI) Broad Diversified.

Performance: Market Barometer (%)

	1-Month Returns						1-Year Returns							3-Year I	Returns	5			
	Value	Cor	e	Grow	/th	Va	lue	Co	ore	Grov	Growth		Value	Co	re	Growth			
Large Cap	4.63	3.1	8	1.9	В	19	.54 26.7		26.71		26.71 32.68		68			11.	69	14.5	7
Mid Cap	3.51	4.2	5	6.3	6.38		19.18 21.9		21.99		30.60		6.63		7.96		1		
Small Cap	2.05	2.6	2	3.1	6	15	5.52	19.	19.09		22.73		4.71		6.23		3		
< -20																			
-20 to -1	3.	bal 36	U. 2.	.S. 78			Glo l 20. ⁻		U 26	.S. .38				obal .41		.S. .91			
-10 to 0 0 to 10	Interna	ational 26	Eme Mar	rging kets			Interna 8.6	uonai Mai		Emerging Markets				ational .12	Emerging Markets				
10 to 20	5.	20	1.	79			8.0	00	14	.75			5	. 12	-0	.71			

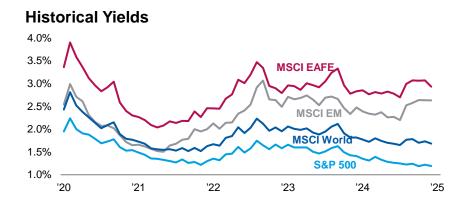
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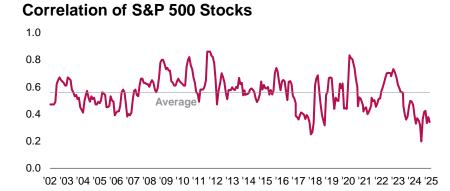
It is not possible to invest directly in an index. Source: Morningstar as of 1/31/25. Data provided is for informational use only. See end of report for important additional information. Returns over 1 year are annualized. Large Cap Value represented by Russell 1000 Value Index. Large Cap Core represented by Russell 1000 Index. Large Cap Growth represented by Russell 1000 Growth Index. Mid Cap Value represented by Russell Mid Cap Value Index. Mid Cap Core represented by Russell Mid Cap Index. Mid Cap Growth represented by Russell 2000 Value Index. Small Cap Core represented by Russell 2000 Index. Small Cap Growth represented by Russell 2000 Value Index. Small Cap Core represented by Russell 2000 Index. Small Cap Growth represented by Russell 2000 Growth Index. Global represented by MSCI ACWI Index. US represented by S&P 500 Index. International represented by MSCI EAFE Index. Emerging Markets represented by MSCI Emerging Markets Index.

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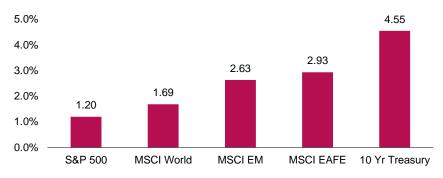
EQUITIES

Dividend Yields and Volatility Analysis

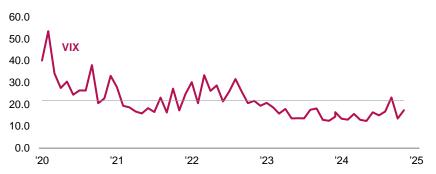




Current Yields



CBOE Market Volatility Index (VIX)

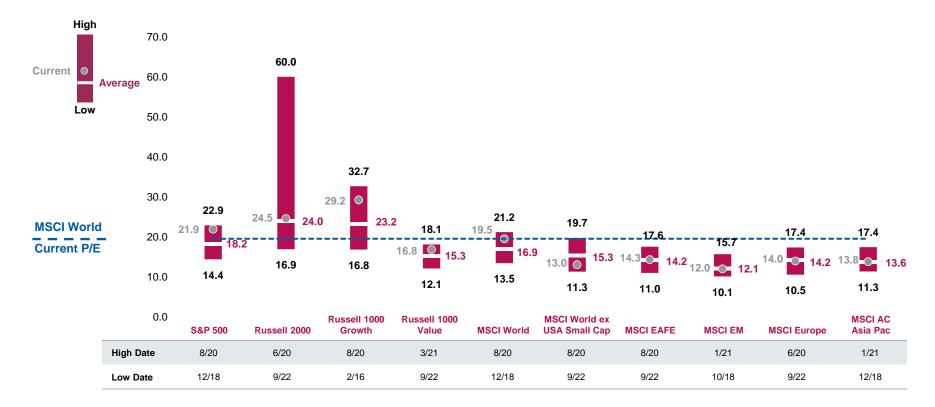


Past performance is no guarantee of future results.

It is not possible to invest directly in an index. Source: FactSet and Ned Davis Research as of 1/31/25. Correlation of S&P 500 Stocks is measured by the median 63-day rolling correlation of one day returns data provided is for informational use only. See end of report for important additional information.

Valuation Analysis

Regions/Styles: Current NTM P/E vs. 10-Year High, Low, Average



Source: FactSet as of 1/31/25. NTM P/E is market price per share divided by expected earnings per share over the next twelve months. Data provided is for informational use only. See end of report for important additional information. Forecasts/estimates are based on current market conditions, subject to change, and may not necessarily come to pass.

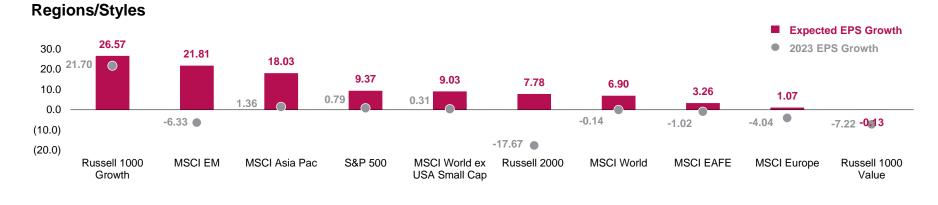
Valuation Analysis

S&P 500 Sectors: Current NTM P/E vs. 10-Year High, Low, Average

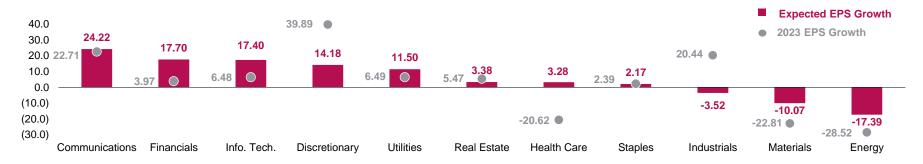


Source: FactSet as of 1/31/25. NTM P/E is market price per share divided by expected earnings per share over the next twelve months. The Real Estate sector is excluded from this 10year chart since the sector was created on August 31, 2016. Data provided is for informational use only. See end of report for important additional information. Forecasts/estimates are based on current market conditions, subject to change, and may not necessarily come to pass.

Corporate Earnings Growth



S&P 500 Sectors

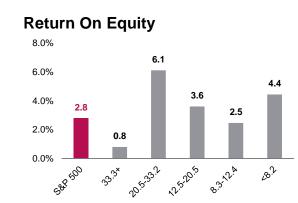


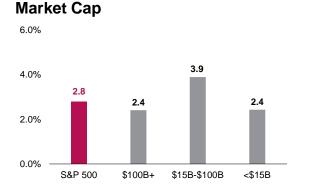
Source: FactSet as of 1/31/25. Expected EPS Growth is defined as the expected % change in the EPS growth from the beginning of the current calendar year though the end of the calendar year. 2023 EPS Growth is defined as the % change in EPS from the beginning of the year through the end of the year. Data provided is for informational use only. See end of report for important additional information. Forecasts/estimates are based on current market conditions, subject to change, and may not necessarily come to pass.

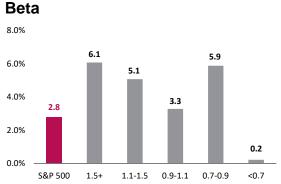
S&P 500 Index: 1-Month Return Analysis



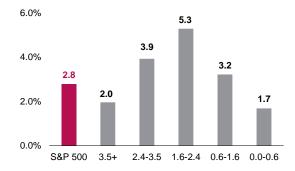
Trailing 12 Month P/E 8.0% 7.1 6.0% 4.9 4.2 4.0% 2.8 2.0% 1.0 0.5 0.0% 22^{3,728^{3,9}} 1^{40.021.00} 58R 500 28.340.5 40^{.9×} L14.A







Dividend Yield



Past performance is no guarantee of future results.

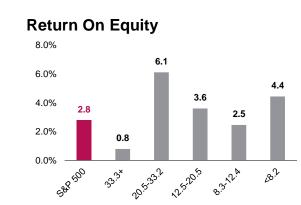
It is not possible to invest directly in an index. Source: FactSet as of 1/31/25. Data provided is for informational use only. See end of report for important additional information.

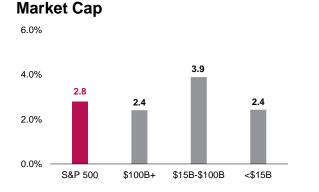
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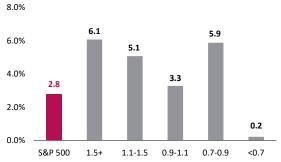
S&P 500 Index: YTD Analysis

3-5 Year Earnings Growth 6.0% 5.6 3.9 4.0% 3.2 2.8 2.0% 1.1 0.5 0.0% Sargo 10.2.1A.S. 1,510,2 ×,_{5,1}, 2A.2 1,4.0×

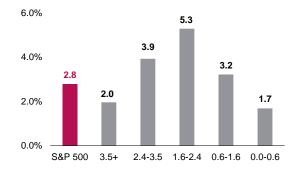
Trailing 12 Month P/E 8.0% 7.1 6.0% 4.9 4.2 4.0% 2.8 2.0% 1.0 0.5 0.0% AN. CA. 28.340.5 2^{2,22},28^{2,3} 58R 500 40^{,6×} L14.A







Dividend Yield

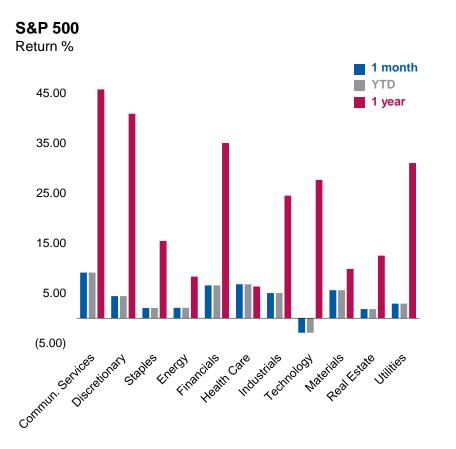


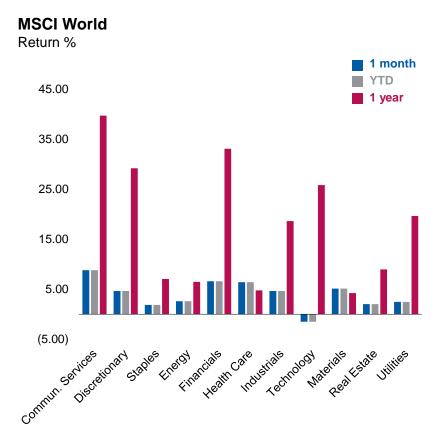
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Beta

Index Sectors: Return Analysis



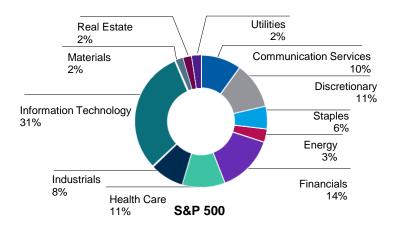


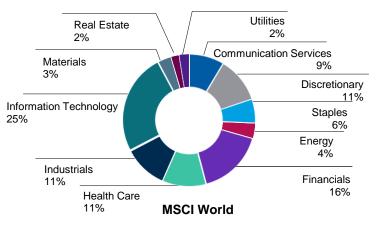
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Current Characteristics and Sector Weights

	S&P 500	R2000	R1000G	R1000V	MSCI World	MSCI World ex USA Small Cap	MSCI EAFE	MSCI EM	MSCI Europe	MSCI Asia Pac
Number of Holdings	504	1960	395	870	1396	2246	722	1251	414	1303
Maximum Market Cap	\$3,545.21B	\$15.86B	\$3,545.21B	\$1,010.43B	\$3,612.35B	\$13.39B	\$294.57B	\$854.37B	\$294.57B	\$854.37B
Minimum Market Cap	\$6.96B	\$0.00B	\$0.95B	\$0.34B	\$1.75B	\$0.12B	\$1.94B	\$0.12B	\$1.94B	\$0.12B
Dividend Yield	1.20	1.24	0.52	1.95	1.69	2.99	2.93	2.63	3.06	2.42
NTM PE	21.92	24.54	29.22	16.83	19.53	13.02	14.31	12.01	13.96	13.78
Price to Book	5.14	2.13	13.87	2.78	3.63	1.37	1.95	1.84	2.16	1.75
Price to Cash Flow	18.31	16.20	28.14	12.61	14.90	8.53	9.48	8.27	8.38	10.39
Price to Sales	3.12	1.33	6.04	1.85	2.39	0.88	1.40	1.45	1.41	1.43
Est 3-5 Yr EPS Growth	11.96	11.37	14.27	9.52	11.55	11.00	9.54	12.92	10.06	11.14
5Yr. Div Growth Rate	5.16	7.93	4.82	3.55	4.47	5.45	3.80	1.42	4.48	0.46





Source: FactSet as of 1/31/25. Data provided is for informational use only. See end of report for important additional information. Forecasts/estimates are based on current market conditions, subject to change, and may not necessarily come to pass.

Asset Class Return Analysis (%)

		1-Mo.	3-Mo.	YTD	1Y	3Y	5Y	10Y	2024	2023	2022	2021	2020
	S&P 500	2.78	6.22	2.78	26.38	11.91	15.17	13.76	25.02	26.29	-18.11	28.71	18.40
	Russell 1000 Defensive	2.76	4.89	2.76	19.40	9.16	11.85	12.45	18.55	20.23	-16.43	26.93	13.93
	Russell 1000 Dynamic	3.59	8.59	3.59	34.28	14.17	17.91	14.44	30.63	33.34	-21.94	25.57	27.69
U.S.	Russell 2500	3.54	5.16	3.54	19.08	6.63	9.98	9.45	12.00	17.42	-18.37	18.18	19.99
Equities	Russell 1000 Growth	1.98	9.55	1.98	32.68	14.57	18.90	17.18	33.36	42.68	-29.14	27.60	38.49
Equilies	Russell 1000 Value	4.63	3.70	4.63	19.54	8.08	10.15	9.42	14.37	11.46	-7.54	25.16	2.80
	Russell Mid Cap	4.25	5.47	4.25	21.99	7.96	11.02	10.26	15.34	17.23	-17.32	22.58	17.10
	Russell 2000	2.62	4.47	2.62	19.09	5.62	8.67	8.45	11.54	16.93	-20.44	14.82	19.96
	CBOE S&P 500 Buywrite BXM	2.20	8.65	2.20	20.63	7.66	7.59	7.33	20.12	11.82	-11.37	20.47	-2.75
1													
	MSCI World	3.53	5.46	3.53	21.40	9.54	12.08	10.53	18.67	23.79	-18.14	21.82	15.90
	MSCI EAFE	5.26	2.28	5.26	8.65	5.12	6.25	5.69	3.82	18.24	-14.45	11.26	7.82
	MSCI EM	1.79	-2.00	1.79	14.75	-0.71	3.04	3.76	7.50	9.83	-20.09	-2.54	18.31
	MSCI AC Asia Pac	1.44	-0.81	1.44	13.03	2.34	4.48	5.20	9.56	11.45	-17.22	-1.46	19.71
	MSCI ACWI	3.36	4.68	3.36	20.72	8.41	11.04	9.77	17.49	22.20	-18.36	18.54	16.25
Global	MSCI Europe	6.89	2.52	6.89	8.92	5.10	6.85	5.68	1.79	19.89	-15.06	16.30	5.38
Equities	MSCI World Small Cap	3.47	3.58	3.47	15.09	4.42	7.76	7.98	8.15	15.76	-18.76	15.75	15.96
	MSCI World Ex USA Small Cap	3.18	0.83	3.18	7.87	0.59	4.13	5.91	2.76	12.62	-20.59	11.14	12.78
	FTSE 100	5.36	3.96	5.36	15.09	6.42	6.10	4.56	7.73	14.38	-7.01	17.36	-8.73
	FTSE All Small	-0.39	-2.21	-0.39	10.22	-0.55	5.11	5.75	8.62	12.57	-23.06	22.15	10.77
	STOXX Europe 600	6.77	2.51	6.77	9.13	4.90	6.83	5.79	1.97	19.87	-16.14	16.09	6.83
	Nikkei 225 Average	0.68	-0.28	0.68	4.40	4.60	5.21	7.08	8.45	22.05	-19.49	-4.69	23.99
1	S&P 500 Comm. Services	9.12	16.53	9.12	45.70	15.18	16.37	12.29	40.23	55.80	-39.89	21.57	23.61
			21.17						40.23 30.14				
	S&P 500 Cons Disc S&P 500 Cons Staples	4.41 2.04	1.56	4.41 2.04	40.85 15.44	10.49 5.89	14.96 8.92	14.46 8.77	14.87	42.41 0.52	-37.03 -0.62	24.43 18.63	33.30
													10.75
	S&P 500 Energy	2.07	-1.19	2.07	8.32	14.00	15.27	5.64	5.72	-1.33	65.72	54.64	-33.68
Castana	S&P 500 Financials	6.56	11.13	6.56	35.01	11.74	13.72	12.95	30.56	12.15	-10.53	35.04	-1.69
Sectors	S&P 500 Health Care	6.79	0.44	6.79	6.34	5.54	10.02	9.73	2.58	2.06	-1.95	26.13	13.45
	S&P 500 Industrials	5.03	3.94	5.03	24.48	13.08	13.23	11.70	17.47	18.13	-5.48	21.12	11.06
	S&P 500 Info Tech	-2.90	2.79	-2.90	27.60	17.31	22.86	22.47	36.61	57.84	-28.19	34.53	43.89
	S&P 500 Materials	5.59	-4.19	5.59	9.84	3.81	11.29	8.67	-0.04	12.55	-12.27	27.28	20.73
	S&P 500 Real Estate	1.84	-3.07	1.84	12.50	-0.94	4.64	6.17	5.23	12.36	-26.13	46.19	-2.17
	S&P 500 Utilities	2.93	-1.74	2.93	31.00	7.42	5.86	8.49	23.43	-7.08	1.57	17.67	0.48

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Asset Class Return Analysis (%)



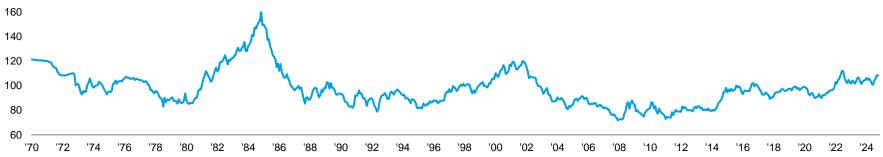
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It is not possible to invest directly in an index. In general, Foreign securities are subject to currency, political, economic and market risks. The risks of investing in emerging market countries are greater than investments in foreign developed countries. Investors should carefully review the risks of each asset class prior to investing. Source: Morningstar as of 1/31/25. Data provided is for informational use only. See end of report for important additional information. Small-Cap represented by Russell 2000 Index. Emerging Markets represented by MSCI Emerging Markets Index. Value represented by Russell 1000 Value Index. Mid-Cap represented by Russell Midcap Index. Global represented by MSCI ACWI Index. Growth represented by Russell 1000 Growth Index. International represented by MSCI EAFE Index. International Small-Cap represented by MSCI World Ex USA Small Cap Index.

Developed Market Currency Performance and Yields

	Spot Returns vs. USD (%)						Spot Ret	urns vs. EUI	R (%)		Local Interest Rates (%)
Currency	1-Mo.	YTD	1Y	3Ү	5Y	1-Mo.	YTD	1Y	3Y	5Y	1Y
U.S. Dollar (USD)	-	-	-	-	-	-0.39	-0.39	4.49	2.55	1.29	4.18
Euro (EUR) *	0.39	0.39	-4.30	-2.48	-1.27	-	-	-	-	-	2.05
British Pound (GBP)	-0.79	-0.79	-2.43	-2.53	-1.18	-1.17	-1.17	1.96	-0.04	0.10	3.63
Japanese Yen (JPY)	1.49	1.49	-5.60	-9.38	-6.89	1.10	1.10	-1.36	-7.08	-5.69	0.71
Australian Dollar (AUD)	0.74	0.74	-5.64	-3.98	-1.40	0.35	0.35	-1.40	-1.53	-0.14	3.82
Canadian Dollar (CAD)	-0.69	-0.69	-7.75	-4.24	-1.80	-1.08	-1.08	-3.60	-1.80	-0.54	2.63
New Zealand Dollar (NZD)	0.91	0.91	-8.16	-4.87	-2.67	0.52	0.52	-4.03	-2.45	-1.41	3.51
Norwegian Krone (NOK)	0.47	0.47	-7.50	-7.61	-4.00	0.08	0.08	-3.34	-5.25	-2.76	4.16
Swedish Krona (SEK)	-0.09	-0.09	-6.57	-5.50	-2.71	-0.48	-0.48	-2.38	-3.09	-1.46	1.97
Danish Krone (DKK)	0.33	0.33	-4.41	-2.58	-1.24	-0.06	-0.06	-0.11	-0.10	0.03	1.86
Swiss Franc (CHF)	-0.20	-0.20	-5.53	0.84	1.21	-0.59	-0.59	-1.28	3.40	2.52	0.00

U.S. Dollar Index



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Emerging Market Currency Performance and Yields

		Spot Ret	urns vs. US	D (%)			Spot Returns vs. EUR (%)				Local Interest Rates (%)
Currency	1-Mo.	YTD	1Y	3Y	5Y	1-Mo.	YTD	1Y	3Y	5Y	1Y
Asia, excluding Japan											
Chinese Renminbi (CNY)	0.48	0.48	-1.17	-4.31	-0.94	0.09	0.09	3.27	-1.87	0.34	1.24
Malaysian Ringgit (MYR)	0.31	0.31	6.11	-2.08	-1.67	-0.08	-0.08	10.88	0.42	-0.40	3.18
Indian Rupee (INR)	-1.16	-1.16	-4.12	-4.85	-3.80	-1.54	-1.54	0.18	-2.42	-2.56	6.57
Indonesian Rupiah (IDR)	-1.26	-1.26	-3.19	-4.09	-3.48	-1.64	-1.64	1.16	-1.64	-2.24	6.54
Philippine Peso (PHP)	-0.90	-0.90	-3.56	-4.42	-2.73	-1.29	-1.29	0.77	-1.98	-1.48	5.58
Singapore Dollar (SGD)	0.66	0.66	-1.40	-0.08	0.14	0.26	0.26	3.03	2.47	1.43	2.77
South Korean Won (KRW)	1.32	1.32	-8.15	-6.03	-3.88	0.92	0.92	-4.02	-3.64	-2.65	2.66
Taiwanese Dollar (TWD)	0.17	0.17	-4.36	-5.28	-1.59	-0.22	-0.22	-0.07	-2.87	-0.32	1.34
Thai Baht (THB)	1.25	1.25	5.35	-0.38	-1.53	0.85	0.85	10.09	2.16	-0.27	2.62
Latin America											
Brazilian Real (BRL)	5.76	5.76	-15.41	-3.13	-6.06	5.35	5.35	-11.61	-0.66	-4.85	14.51
Chilean Peso (CLP)	1.29	1.29	-5.07	-6.65	-4.00	0.90	0.90	-0.81	-4.28	-2.76	5.07
Colombian Peso (COP)	5.18	5.18	-6.63	-2.00	-3.95	4.77	4.77	-2.43	0.49	-2.71	8.45
Mexican Peso (MXN)	0.73	0.73	-16.79	0.01	-1.73	0.34	0.34	-13.05	2.56	-0.46	9.55
Peruvian New Sol (PEN)	0.98	0.98	2.23	1.04	-1.93	0.59	0.59	6.82	3.61	-0.67	4.16

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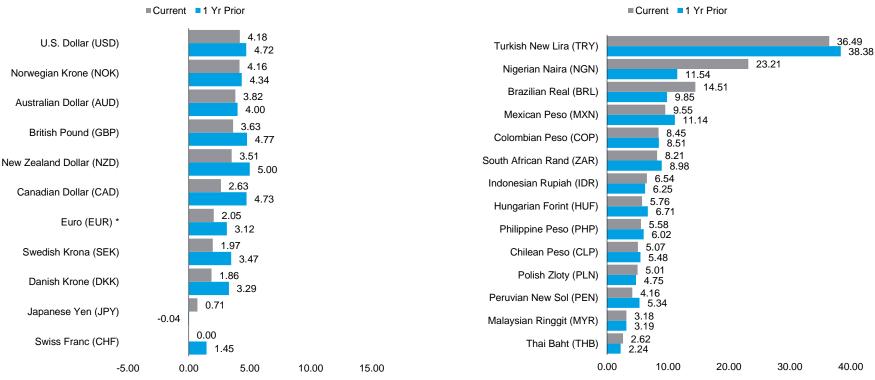
Emerging Market Currency Performance and Yields

Spot Returns vs. USD (%)							Spot Ret	urns vs. EU	IR (%)		Local Interest Rates (%)
Currency	1-Mo.	YTD	1Y	3Y	5Y	1-Mo.	YTD	1Y	3Y	5Y	1Y
Europe											
Czech Koruna (CZK)	0.34	0.34	-5.41	-3.64	-1.28	-0.05	-0.05	-1.16	-1.19	0.00	3.19
Hungarian Forint (HUF)	1.31	1.31	-9.91	-6.79	-4.92	0.92	0.92	-5.86	-4.42	-3.70	5.76
Polish Zloty (PLN)	1.87	1.87	-1.76	0.32	-0.88	1.48	1.48	2.65	2.88	0.39	5.01
Romanian Leu (RON)	0.37	0.37	-4.31	-2.68	-2.06	-0.02	-0.02	-0.02	-0.20	-0.80	6.86
Russian Ruble (RUB)	11.00	11.00	-9.23	-7.83	-8.36	10.57	10.57	-5.15	-5.48	-7.18	
Turkish New Lira (TRY)	-1.38	-1.38	-15.37	-27.94	-30.10	-1.76	-1.76	-11.57	-26.11	-29.20	36.49
Middle East and Africa											
Ghanaian Cedi (GHS)	-4.23	-4.23	-19.77	-25.78	-18.62	-4.61	-4.61	-16.17	-23.89	-17.57	17.90
Israeli Shekel (ILS)	1.96	1.96	1.80	-3.84	-0.71	1.57	1.57	6.37	-1.39	0.57	4.19
Kenyan Shilling (KES)	0.12	0.12	24.23	-4.20	-4.94	-0.27	-0.27	29.81	-1.76	-3.71	11.31
Moroccan Dirham (MAD)	0.98	0.98	-0.36	-2.05	-0.88	0.58	0.58	4.11	0.44	0.39	2.44
Nigerian Naira (NGN)	3.97	3.97	-25.89	-34.58	-24.53	3.57	3.57	-22.56	-32.92	-23.56	23.21
South African Rand (ZAR)	1.07	1.07	-0.38	-6.07	-4.28	0.68	0.68	4.09	-3.68	-3.05	8.21
Ugandan Shilling (UGX)	0.60	0.60	3.86	-1.56	0.04	0.21	0.21	8.53	0.95	1.33	15.50
Zambian Kwacha (ZMK)	-0.56	-0.56	-3.25	-13.53	-12.01	-0.94	-0.94	1.09	-11.33	-10.88	15.50

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Local Sovereign Currency Yields

Developed Market Local Interest Rates % (1 Year)



Emerging Market Local Interest Rates % (1 Year)

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Commodities Return Analysis (%)

Index	1 -M o.	3-Mo.	YTD	1Y	3Y	5Y
Bloomberg Commodity Index	3.95	5.44	3.95	9.11	2.49	9.25
Bloomberg Sub Agriculture	4.83	8.10	4.83	1.77	1.67	11.63
Coffee	18.60	55.62	18.60	114.43	27.80	32.33
Corn	5.51	15.33	5.51	-1.73	-3.38	7.98
Cotton	-3.33	-7.34	-3.33	-23.18	-12.22	4.20
Soybean	3.49	5.28	3.49	-11.77	-0.47	11.42
Soybean Oil	14.66	2.82	14.66	1.55	-2.92	16.26
Sugar	0.84	-13.95	0.84	-13.02	12.46	11.31
Wheat	1.82	-3.51	1.82	-13.52	-15.80	-5.66
Bloomberg Sub Energy	1.76	12.32	1.76	0.17	-3.42	2.36
Brent Crude	2.90	6.99	2.90	6.87	11.28	15.45
Heating Oil	4.87	8.28	4.87	-6.64	18.97	19.09
Natural Gas	-1.38	23.67	-1.38	-19.78	-39.64	-23.49
Unleaded Gas	1.83	5.18	1.83	3.67	15.13	18.31
WTI Crude Oil	2.17	7.46	2.17	9.54	6.53	5.95

Index	1-Mo.	3-Mo.	YTD	1Y	3Y	5Y
Bloomberg Sub Industrial Metals	1.38	-2.86	1.38	6.99	-3.31	8.77
Aluminum	2.40	-0.08	2.40	12.95	-5.65	6.69
Copper	6.66	-1.48	6.66	11.56	1.70	12.12
Nickel	-0.89	-3.49	-0.89	-7.16	-12.00	3.39
Zinc	-8.33	-9.62	-8.33	8.24	-5.26	6.21
Bloomberg Sub Precious Metals	7.61	1.26	7.61	36.55	14.86	11.07
Gold	6.66	2.29	6.66	36.01	15.52	10.99
Platinum	15.05	4.22	15.05	12.27	2.48	2.09
Silver	10.74	-1.88	10.74	38.14	12.52	11.16
Bloomberg Sub Livestock	4.91	3.96	4.91	15.96	8.86	4.42
Lean Hogs	3.88	-3.39	3.88	13.64	2.10	4.76
Live Cattle	5.46	8.26	5.46	19.19	13.29	4.84

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Morgan Stanley | INVESTMENT MANAGEMENT

ALTERNATIVES

Asset Class Return Analysis (%)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
her	Managed Futures 18.37	Multi-Strategy 3.84	MLP 18.31	Long/Short Equity 13.41	Fixed Income Arbitrage 1.10	Long/Short Equity 12.17	Convertible Arbitrage 10.25	MLP 40.17	MLP 30.92	MLP 26.56	MLP 24.41
	Multi-Strategy 6.09	Long/Short Equity 3.55	Commodity 11.77	Currency 11.54	Global Macro -0.11	Global Macro 10.38	Long/Short Equity 7.86	Commodity 27.11	Managed Futures 19.12	Long/Short Equity 10.93	Long/Short Equity 14.78
	Long/Short Equity 5.55	Equity Market Neutral 1.69	Convertible Arbitrage 6.60	Equity Market Neutral 8.45	Multi-Strategy -1.05	Managed Futures 9.01	Event Driven 6.95	Event Driven 12.92	Commodity 16.09	Event Driven 9.30	Event Driven 13.03
	MLP 4.80	Convertible Arbitrage 0.81	Multi-Strategy 4.41	Multi-Strategy 6.83	Convertible Arbitrage -2.26	Event Driven 8.22	Global Macro 6.53	Global Macro 9.60	Global Macro 15.89	Currency 8.44	Multi-Strategy 8.66
	Fixed Income Arbitrage 4.37	Fixed Income Arbitrage 0.59	Fixed Income Arbitrage 4.29	Fixed Income Arbitrage 6.52	Currency -3.33	Convertible Arbitrage 8.15	Multi-Strategy 5.60	Long/Short Equity 8.35	Equity Market Neutral 1.71	Multi-Strategy 8.04	Fixed Income Arbitrage 8.49
	Global Macro 3.11	Global Macro 0.18	Global Macro 3.58	Event Driven 6.30	Event Driven -3.95	Commodity 7.69	Fixed Income Arbitrage 3.64	Managed Futures 8.19	Multi-Strategy 1.27	Fixed Income Arbitrage 7.71	Equity Market Neutral 8.05
	Event Driven 1.57	Managed Futures -0.93	Currency 3.54	Convertible Arbitrage 5.01	Long/Short Equity -4.62	Multi-Strategy 7.25	Managed Futures 1.86	Multi-Strategy 6.97	Fixed Income Arbitrage -0.97	Equity Market Neutral 6.73	Convertible Arbitrage 7.35
	Equity Market Neutral -1.19	Event Driven -6.29	Event Driven 2.68	Managed Futures 3.29	Equity Market Neutral -5.00	MLP 6.56	Currency 1.73	Convertible Arbitrage 6.33	Convertible Arbitrage -3.32	Convertible Arbitrage 4.04	Global Macro 5.52
	Convertible Arbitrage -1.68	Currency -7.61	Long/Short Equity -3.43	Global Macro 2.14	Managed Futures -6.67	Fixed Income Arbitrage 6.10	Equity Market Neutral 1.69	Equity Market Neutral 6.16	Long/Short Equity -5.77	Managed Futures -2.78	Commodity 5.38
	Currency -7.03	Commodity -24.66	Equity Market Neutral -4.58	Commodity 1.70	Commodity -11.25	Currency 5.20	Commodity -3.12	Fixed Income Arbitrage 5.22	Event Driven -6.80	Global Macro -5.19	Managed Futures 2.87
er	Commodity -17.01	MLP -32.59	Managed Futures -6.84	MLP -6.52	MLP -12.42	Equity Market Neutral 1.58	MLP -28.69	Currency -3.09	Currency -7.14	Commodity -7.91	Currency -1.08

Past performance is no guarantee of future results. It is not possible to invest directly in an index. Source: Morningstar as of 12/31/24. *Data is on a 1-month lag. Data provided is for informational use only. Alternative investments often are speculative and include a high degree of risk. See end of report for important additional information. Global Macro represented by Credit Suisse Global Macro Index. MLP represented by Alerian MLP Index. Event Driven represented by Credit Suisse Event Driven Index. Multi-Strategy represented by Credit Suisse Multi-Strategy Index. Long/Short Equity represented by Credit Suisse Long/Short Equity Index. Convertible Arbitrage represented by Credit Suisse Convertible Arbitrage Index. Currency represented by J.P. Morgan EMLI+ Index. Equity Market Neutral represented by Credit Suisse Equity Market Neutral Index. Fixed Income Arbitrage represented by Credit Suisse Fixed Income Arbitrage Index. Managed Futures represented by Credit Suisse Managed Futures Index. Commodity represented by Bloomberg Commodity Index.

TRANSITION

Major Asset Classes Correlation Table

	S&P 500	International	Emerging Markets	Small Cap	U.S. Aggregate	Municipal	High Yield	Bank Loan	Commodities
S&P 500	1.00	0.87	0.69	0.86	0.39	0.40	0.80	0.60	0.40
International	0.88	1.00	0.79	0.77	0.42	0.46	0.80	0.60	0.45
Emerging Markets	0.69	0.79	1.00	0.61	0.39	0.43	0.70	0.56	0.49
Small Cap	0.86	0.82	0.67	1.00	0.30	0.33	0.77	0.64	0.37
U.S. Aggregate	0.57	0.60	0.57	0.49	1.00	0.85	0.49	0.15	-0.06
Municipal	0.59	0.65	0.64	0.54	0.85	1.00	0.55	0.28	0.03
High Yield	0.83	0.82	0.72	0.82	0.61	0.70	1.00	0.80	0.50
Bank Loan	0.61	0.61	0.62	0.66	0.22	0.38	0.81	1.00	0.49
Commodities	0.42	0.47	0.46	0.38	0.01	0.13	0.49	0.50	1.00

5 Years ended January 31, 2025

10 Years ended January 31, 2025

Past performance is no guarantee of future results.

It is not possible to invest directly in an index. Source: Morningstar as of 1/31/25. The table above shows the return correlation between various asset classes (represented by market indices as defined in this disclosure) over the past five and ten years. Data provided is for informational use only. See end of report for important additional information. S&P 500 is represented by the S&P 500 Index. International is represented by MSCI EAFE Index. Emerging Markets is represented by MSCI Emerging Markets Index. Small-Cap is represented by Russell 2000 Index. US Aggregate is represented by the Bloomberg Barclays Capital US Aggregate Bond Index. Municipal is represented by Bloomberg Barclays Municipal Bond Index. High Yield is represented by ICE BofA US High Yield Index. Bank Loan is represented by Morningstar LSTA U.S. Leveraged Loan Index. Commodities is represented by Bloomberg Commodity Index.

TRANSITION

Fund and ETF Flows by Category

Top 10 Open-End Mutual Fund Categories by Monthly Flows (\$MM)

	1 Mo.	3 Mo.	12 Mo.
Intermediate Core Bond	6,790	23,415	78,652
Foreign Large Blend	5,478	14,977	8,896
Ultrashort Bond	3,206	5,667	6,553
Global Bond-USD Hedged	3,124	5,826	19,912
Multisector Bond	1,642	11,005	43,355
Real Estate	1,015	2,350	549
Nontraditional Bond	779	2,762	10,034
Bank Loan	528	1,002	-746
Short-Term Inflation-Protected Bond	487	425	4,658
Inflation-Protected Bond	411	8,822	4,263

Bottom 10 Open-End Mutual Fund Categories by Monthly Flows (\$MM)

	1 Mo.	3 Mo.	12 Mo.
Small Growth	-1,793	-3,637	-15,455
Global Large-Stock Blend	-1,869	-3,468	-11,363
Health	-2,505	-5,772	-15,016
Mid-Cap Growth	-2,963	-8,813	-31,715
Diversified Emerging Mkts	-3,618	-7,155	-10,440
Moderate Allocation	-4,269	-18,676	-46,654
Foreign Large Growth	-5,343	-12,897	-22,929
Large Value	-7,797	-20,997	-67,466
Large Growth	-8,553	-35,143	-122,585
Large Blend	-13,051	-59,232	-123,409

Top 10 Exchange-Traded Fund Categories by Monthly Flows (\$MM)

	1 Mo.	3 Mo.	12 Mo.
Large Blend	63,757	161,962	362,976
Large Value	15,902	27,991	53,234
Large Growth	13,070	34,397	98,565
Foreign Large Blend	10,331	19,701	60,975
Digital Assets	7,677	21,435	42,812
Ultrashort Bond	6,740	18,757	47,525
Intermediate Core Bond	6,220	18,381	56,798
Derivative Income	5,789	12,642	32,855
Mid-Cap Blend	3,749	13,265	30,274
Target Maturity	2,835	6,056	20,817

Bottom 10 Exchange-Traded Fund Categories by Monthly Flows (\$MM)

	1 Mo.	3 Mo.	12 Mo.
Long-Term Bond	-783	591	8,579
Commodities Focused	-1,018	1,067	1,382
Emerging Markets Bond	-1,141	-2,165	-1,068
Equity Energy	-1,149	-2,092	-8,102
Consumer Cyclical	-1,211	1,056	-713
Health	-1,534	-3,754	-7,633
Inflation-Protected Bond	-1,606	-3,926	-5,003
High Yield Bond	-1,713	1,516	11,566
Europe Stock	-3,107	-5,490	-5,108
Long Government	-7,085	-8,879	13,654

Source: Morningstar as of 12/31/24. Flow data is on a one-month lag. Data provided is for informational use only. See end of report for important additional information.

TRANSITION

Major Asset Class Return Analysis (%)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	YTD 2025
Higher ↑	Municipal 3.30	Small-Cap 21.31	Emerging Markets 37.28	Municipal 1.28	S&P 500 31.49	Small-Cap 19.96	S&P 500 28.71	Commodities 16.09	S&P 500 26.29	S&P 500 25 .02	International 5.26
	S&P 500 1.38	High Yield 17.49	International 25.03	Bank Loan 0.44	Small-Cap 25.52	S&P 500 18.40	Commodities 27.11	Bank Loan -0.77	International 18.24	Small-Cap 11.54	Commodities 3.95
	US Agg 0.55	S&P 500 11.96	S&P 500 21.83	US Agg 0.01	International 22.01	Emerging Markets 18.31	Small-Cap 14.82	Municipal -8.53	Small-Cap 16.93	Asset Allocation 9.76	S&P 500 2.78
	Bank Loan -0.69	Commodities 11.77	Small-Cap 14.65	High Yield - 2.26	Asset Allocation 18.70	Asset Allocation 11.95	Asset Allocation 11.43	High Yield -11.22	Asset Allocation 14.09	Bank Loan 8.95	Small-Cap 2.62
	International -0.81	Emerging Markets 11.19	Asset Allocation 14.02	S&P 500 - 4.38	Emerging Markets 18.42	International 7.82	International 11.26	US Agg -13.01	High Yield 13.46	High Yield 8.20	Asset Allocation 2.29
	Asset Allocation -2.03	Bank Loan 10.16	High Yield 7.48	Asset Allocation -5.40	High Yield 14.41	US Agg 7.51	High Yield 5.36	Asset Allocation -13.04	Bank Loan 13.32	Emerging Markets 7.50	Emerging Markets 1.79
	Small-Cap -4.41	Asset Allocation 8.61	Municipal 5.45	Small-Cap -11.01	US Agg 8.72	High Yield 6.17	Bank Loan 5.20	International -14.45	Emerging Markets 9.83	Commodities 5.38	High Yield 1.38
	High Yield -4.64	US Agg 2.65	Bank Loan 4.12	Commodities -11.25	Bank Loan 8.64	Municipal 5.21	Municipal 1.52	S&P 500 - 18.11	Municipal 6.40	International 3.82	Bank Loan 0.69
	Emerging Markets -14.92	International 1.00	US Agg 3.54	International -13.79	Commodities 7.69	Bank Loan 3.12	US Agg -1.54	Emerging Markets -20.09	US Agg 5.53	US Agg 1.25	US Agg 0.53
↓ Lower	Commodities -24.66	Municipal 0.25	Commodities 1.70	Emerging Markets -14.57	Municipal 7.54	Commodities -3.12	Emerging Markets -2.54	Small-Cap -20.44	Commodities -7.91	Municipal 1.05	Municipal 0.50

Past performance is no guarantee of future results. It is not possible to invest directly in an index. Source: Morningstar as of 1/31/25. Data provided is for informational use only. Investing involves risks including the possible loss of principal. Investors should carefully review the risks of each asset class prior to investing. See end of report for important additional information. S&P 500 represented by the S&P 500 Index. International represented by MSCI EAFE Index. Emerging Markets represented by MSCI Emerging Markets Index. Small-Cap represented by Russell 2000 Index. US Aggregate represented by the Bloomberg Capital US Aggregate Bond Index. Municipal represented by Bloomberg Municipal Bond Index. High Yield represented by ICE BofA US High Yield Index. Bank Loan represented by Morningstar LSTA U.S. Leveraged Loan Index. Commodity represented by Bloomberg Commodity Index. The Asset Allocation portfolio assumes the following weights: 25% in the S&P 500 Index, 15% in the MSCI EAFE Index, 5% in the MSCI Emerging Markets Index, 10% in the Russell 2000 Index, 25% in the Bloomberg Capital US Aggregate Bond Index, 5% in the Bloomberg Municipal Bond Index, 5% in the Bloomberg US Corporate High Yield Index, 5% in the Morningstar LSTA U.S. Leveraged Loan Index, and 5% in the Bloomberg Commodity Index.

Portfolio Solutions Group

The Portfolio Solutions Group provides top-down, macro analysis of equity, fixed income and alternative assets, designed to help clients capitalize on evolving economic dynamics and market dislocations globally. The team builds custom multi-asset investment solutions across a range of broadly-diversified to hyper-focused portfolios.



JIM CARON Chief Investment Officer Managing Director



EWA TUREK SEMMELROTH Executive Director



ERIC ZHANG Executive Director



SCHUYLER HOOPER Executive Director



GREG WATERMAN Vice President



UMAR MALIK Vice President



CHRIS CHIA Vice President



SACHIN RAGHAVAN Associate

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JUSTIN BOURGETTE Portfolio Manager Head of Investment Strategy for the High Yield Team

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STEVEN TURNER Head of Investment Selection, Portfolio Solutions Group

MARK VAN DER ZWAN Chief Investment Officer and Head of the AIP Hedge Fund Team

Index Definitions

Bloomberg Commodity Index is a broadly diversified index tracking futures contracts on physical commodities.

Bloomberg Euro-Aggregate Corporates Index consists of bonds issued in the euro or the legacy currencies of the 16 sovereign countries participating in the European Monetary Union (EMU)

Bloomberg Global Aggregate Ex-USD Index is a broad-based measure of global Investment Grade fixed-rate debt investments, excluding USD-denominated debt.

Bloomberg High Yield Municipal Bond Index is an unmanaged index of non-Investment Grade Municipal bonds traded in the U.S.

Bloomberg Municipal Bond Index is an unmanaged index of Municipal bonds traded in the U.S.

Bloomberg Pan-European High Yield Index covers the universe of fixed-rate, sub-investment-grade debt denominated in euros or other European currencies (except Swiss francs).

Bloomberg Taxable Municipal Bond Index is an unmanaged index of Taxable Municipal bonds traded in the U.S.

Bloomberg U.S. Agency Index measures agency securities issued by U.S government agencies, quasi-federal corporations, and corporate or foreign debt guaranteed by the U.S. government.

Bloomberg U.S. Aggregate Index is an unmanaged index of domestic investment-grade bonds, including corporate, government and mortgagebacked securities.

Bloomberg U.S. Asset Backed Securities (ABS) Index measures ABS with the following collateral type: credit and charge card, auto, and utility loans.

Bloomberg U.S. CMBS Index measures the market of conduit and fusion CMBS deals with a minimum current deal size of \$300mn.

Bloomberg U.S. Corporate Investment Grade Index is an unmanaged index that measures the performance of investment-grade corporate securities within the Barclays U.S. Aggregate Index.

Bloomberg U.S. Mortgage-Backed Securities (MBS) Index measures agency mortgage-backed pass-through securities issued by GNMA, FNMA, and FHLMC.

Bloomberg U.S. Treasury Index measures public debt instruments issued by the U.S. Treasury.

CBOE Volatility Index (VIX) tracks the implied volatilities of a wide range of S&P 500 Index options.

CBOE S&P 500 BuyWrite Index measures the performance of a hypothetical buy-write strategy on the S&P 500 Index.

ICE BofA US Inflation-Linked Treasury Index tracks the performance of USD denominated inflation linked sovereign debt publicly issued by the US government.

ICE BofA Fixed Rate Preferred Securities Index is an unmanaged index of fixed-rate, preferred securities issued in the U.S.

ICE BofA European Union Government Bond Index tracks the performance of sovereign debt publicly issued by countries that are members of the European Union.

ICE BofA U.S. High Yield Index is an unmanaged index of belowinvestment grade U.S. corporate bonds.

ICE BofA Developed Markets High Yield Ex-Subordinated Financial Index (Hedged) is an unmanaged index of global developed market below investment grade corporate bonds, USD hedged.

FTSE 100 Index is an unmanaged market-capitalization weighted index representing the performance of the 100 largest UK listed blue chip companies, which pass screening for size and liquidity.

FTSE All Small Index consists of all the companies in the FTSE SmallCap and FTSE Fledgling indices.

FTSE World Government Bond Index (WGBI) measures the performance of fixed-rate, local currency, investment-grade sovereign bonds.

J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI) Broad Diversified is an unmanaged index of USD-denominated emerging market corporate bonds.

J.P. Morgan Emerging Markets Bond Index (EMBI) Global Diversified is an unmanaged index of USD-denominated bonds with maturities of more than one year issued by emerging markets governments.

J.P. Morgan Government Bond Index-Emerging Markets (GBI-EM) Global Diversified is an unmanaged index of local-currency bonds with maturities of more than one year issued by emerging market governments.

Morgan Stanley Capital International (MSCI) Emerging Markets Index is an unmanaged index of emerging markets common stocks

MSCI EMU Index (European Economic and Monetary Union) captures large and mid cap representation across the 10 Developed Markets countries in the EMU. With 229 constituents, the index covers approximately 85% of the free float-adjusted market capitalization of the EMU. Morgan Stanley Capital International All Country Asia Pacific Index

(MSCI AC Asia Pac) is an unmanaged total return, capitalization-weighted index that measures the performance of stock markets in 15 Pacific region countries, including Australia, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, New Zealand, Pakistan, the Philippines, Singapore, Sri Lanka, Taiwan and Thailand.

Morgan Stanley Capital International (MSCI) Japan Index is an unmanaged index designed to measure the performance of the large and mid cap segments of the Japan market.

Morgan Stanley Capital International (MSCI) World Index is an unmanaged index of equity securities in the developed markets.

Morgan Stanley Capital International (MSCI) World ex USA Small Cap Index is an unmanaged index of small-cap equity securities in the developed markets, excluding the United States.

Morgan Stanley Capital International All Country World (MSCI AC World) Index is an unmanaged free float-adjusted market-capitalizationweighted index designed to measure the equity market performance of developed and emerging markets.

Morgan Stanley Capital International Europe (MSCI Europe) Index is an unmanaged free float-adjusted market-capitalization-weighted index designed to measure the equity market performance of the developed markets in Europe.

Morgan Stanley Capital International Europe, Australasia, Far East (MSCI EAFE) Index is an unmanaged index of equities in the developed markets, excluding the U.S. and Canada.

MSCI USA Index is designed to measure the performance of the large and mid cap segments of the US market. With 625 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the US.

MSCI China captures large and mid-cap representation across China Ashares, B-shares, H-shares, Red-chips and P-chips. It reflects the Mainland China and Hong Kong opportunity set from an international investor's perspective.

The **MSCI India Index** is designed to measure the performance of the large and mid cap segments of the Indian market.

The **MSCI World Index** is a free float adjusted market capitalization weighted index that is designed to measure the global equity market performance of developed markets. The term "free float" represents the portion of shares outstanding that are deemed to be available for purchase in the public equity markets by investors. The performance of the Index is listed in U.S. dollars and assumes reinvestment of net dividends.

Index Definitions, Terms and About Risk

The MSCI USA Health Care Index is designed to capture the large and mid cap segments of the US equity universe. All securities in the index are classified in the Health Care sector as per the Global Industry Classification Standard.

Morningstar LSTA U.S. Leveraged Loan Index is an unmanaged index of the institutional leveraged loan market. Prior to August 29, 2022, the index name was S&P/LSTA Leveraged Loan Index.

Nikkei 225 Stock Average Index is unmanaged price-weighted index of 225 top-rated Japanese companies listed in the First Section of the Tokyo Stock Exchange.

Russell 1000 Index is an unmanaged index of 1,000 U.S. large-cap stocks.

Russell 1000 Growth Index is an unmanaged index of 1,000 U.S. large-cap growth stocks.

Russell 1000 Value Index is an unmanaged index of 1,000 U.S. large-cap value stocks.

Russell 2000 Index is an unmanaged index of 2,000 U.S. small-cap stocks.

Russell 2500 Index is an unmanaged index of approximately 2,500 U.S. small- and mid-cap U.S. stocks.

Russell Midcap Index is an unmanaged index of U.S. mid-cap stocks.

Standard & Poor's 400 Index is designed to measure the performance of 400 mid-sized U.S. companies, reflecting the distinctive risk and return characteristics of this market segment.

Standard & Poor's 500 Index is an unmanaged index of large-cap stocks commonly used as a measure of U.S. stock market performance.

STOXX Europe 600 Index is a fixed component number index designed to provide a broad yet liquid representation of large, mid and small capitalization companies in Europe.

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Municipal-to-Treasury Yield Ratios are relative value indicators that measure the richness or cheapness of Municipal bond yields to comparable maturity Treasury bond yields.

Terms

Yield to Worst is a measure which reflects the lowest potential yield earned on a bond without the issuer defaulting. The yield to worst is calculated by making worst-case scenario assumptions by calculating the returns that would be received if provisions, including prepayment, call or sinking fund, are used by the issuer.

About Risk

Bank Loans - There can be no assurance that the liquidation of collateral securing an investment will satisfy the issuer's obligation in the event of non-payment or that collateral can be readily liquidated. The ability to realize the benefits of any collateral may be delayed or limited. Commodities - The value of commodities investments will generally be affected by overall market movements and factors specific to a particular industry or commodity including weather, embargoes, tariffs, or health, political, international and regulatory developments. Credit -Investments in income securities may be affected by changes in the creditworthiness of the issuer and are subject to the risk of non-payment of principal and interest. The value of income securities also may decline because of real or perceived concerns about the issuer's ability to make principal and interest payments. Duration -Securities with longer durations tend to be more sensitive to interest rate changes than securities with shorter durations. Equity - Equity investment values are sensitive to stock market volatility. Foreign - Investments in foreign instruments or currencies can involve greater risk and volatility than U.S. investments because of adverse market, economic, political, regulatory, geopolitical, or other conditions. In emerging countries, these risks may be more significant. Gov't Agency - While certain U.S. Government-sponsored agencies may be chartered or sponsored by acts of Congress, their securities are neither issued nor guaranteed by the U.S. Treasury. Income Market - An imbalance in supply and demand in the income market may result in valuation uncertainties and greater volatility, less liquidity, widening credit spreads and a lack of price transparency in the market. There generally is limited public information about Municipal issuers. Inflation-Linked - Interest payments on inflationlinked securities may vary widely and will fluctuate as principal and interest are adjusted for inflation. Investments in inflation-linked securities may lose value in the event that the actual rate of inflation is different than the rate of the inflation index. Interest Rate - As interest rates rise, the value of certain income investments is likely to decline.. Lower-Rated - Investments rated below Investment Grade (typically referred to as "junk") are generally subject to greater price volatility and illiquidity than higher rated investments. Maturity - Longer-term bonds typically are more sensitive to interest rate changes than shorter-term bonds. Preferred Stocks - When interest rates rise, the value of preferred stocks will generally decline. Prepayment - MBS - Mortgage-backed securities are subject to prepayment risk. Prepayment - Bank Loan - Bank Loans are subject to prepayment risk. Real Estate - Changes in real estate values or economic downturns can have a significant negative effect on issuers in the real estate industry, including REITs.

Risk Considerations

Diversification does not eliminate the risk of loss.

In general, equity securities' values also fluctuate in response to activities specific to a company. Investments in foreign markets entail special risks such as currency, political, economic, and market risks. The risks of investing in emerging market countries are greater than risks associated with investments in foreign developed countries. Fixed income securities are subject to the ability of an issuer to make timely principal and interest payments (credit risk), changes in interest rates (interestrate risk), the creditworthiness of the issuer and general market liquidity (market risk). In a rising interest-rate environment, bond prices may fall and may result in periods of volatility and increased portfolio redemptions. In a declining interest-rate environment, the portfolio may generate less income. Longer-term securities may be more sensitive to interest rate changes. Alternative investments are speculative, involve a high degree of risk, are highly illiquid, typically have higher fees than other investments, and may engage in the use of leverage, short sales, and derivatives, which may increase the risk of investment loss. These investments are designed for investors who understand and are willing to accept these risks. Performance may be volatile, and an investor could lose all or a substantial portion of its investment.

There is no guarantee that any investment strategy will work under all market conditions, and each investor should evaluate their ability to invest for the long-term, especially during periods of downturn in the market.

A separately managed account may not be appropriate for all investors. Separate accounts managed according to the Strategy include a number of securities and will not necessarily track the performance of any index. Please consider the investment objectives, risks and fees of the Strategy carefully before investing. A minimum asset level is required.

For important information about the investment managers, please refer to Form ADV Part 2.

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