Morgan Stanley

WEALTH MANAGEMENT

INVESTMENT STRATEGY

Portfolio Construction and Cross-Asset Strategy | January 30, 2024

Fixed Income Insights

Healthy Yield-Driven Demand Has Powered Investment Grade Corporates' Strength

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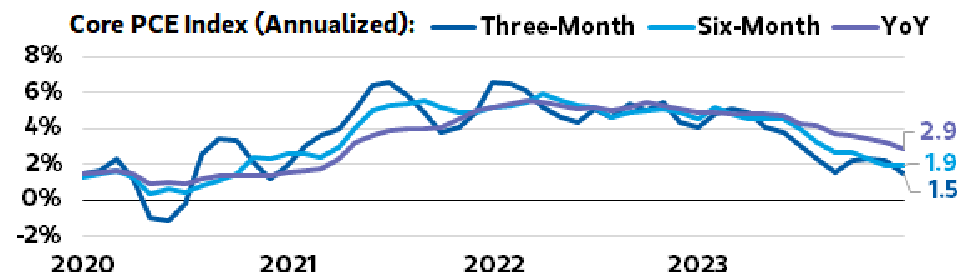
- Macro: The advance estimate for fourth-quarter US GDP (3.3% quarter-over-quarter vs. 2.0% expected) and S&P PMIs both surprised to the upside and affirmed resilient economic performance. Meanwhile, December's Core PCE—the Fed's preferred gauge of underlying inflation—increased 2.9% year-over-year, indicating that the disinflationary trend remains intact. Taken together, last week's data supported the soft-landing narrative. Next week, investors' attention will turn to the Fed's January FOMC meeting and the Treasury's Quarterly Refunding Announcement on Wednesday, and the January non-farm payrolls report on Friday.
- What's Inside: We review recent positive growth surprises and the net supply outlook across major fixed income sectors. Additionally, we highlight how robust yield-driven demand has allowed the investment grade corporate market to digest elevated supply and discuss the factors that have contributed to a flat spread curve.

As of 1/26/2024	US 2Y Treasury	US 10Y Treasury	10Y AAA Muni	Tax-Equivalent*	Muni/Tsy. Ratio	IG Corp. Spread	HY Corp. Spread	Agency MBS Spread
Last Level	4.35%	4.14%	2.53%	4.27%	61.5%	92 bp	325 bp	46 bp
1W Change	-4 bp	+1 bp	+3 bp	+6 bp	+0.5%	-3 bp	-13 bp	-1 bp
1M Change	-0 bp	+24 bp	+26 bp	+45 bp	+3.0%	-8 bp	+2 bp	+1 bp
3M Change	-65 bp	-70 bp	-110 bp	-185 bp	-13.8%	-36 bp	-109 bp	-31 bp
YTD Change	+10 bp	+26 bp	+28 bp	+47 bp	+3.0%	-7 bp	+2 bp	-1 bp

Source: Morgan Stanley Wealth Management GIO, Bloomberg. *See page 7 for TEY definition.

The Fed's Preferred Gauge of Inflation Continued Its Recent Deceleration



Source: Bloomberg, Morgan Stanley Wealth Management GIO. Data as of January 26, 2024.

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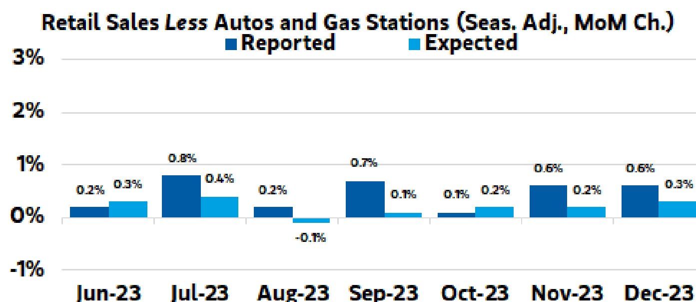
MACRO

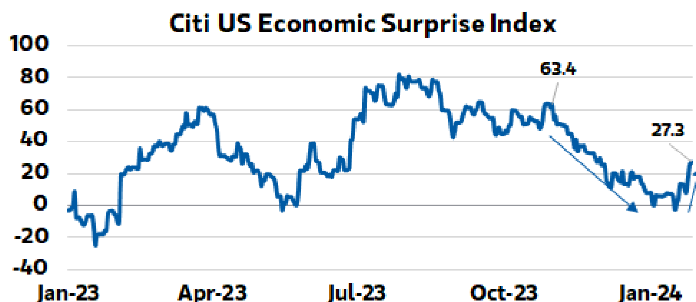
Recent Growth Data Has Surprised to the Upside; Net Bond Issuance Will Likely Increase in 2024, Potentially Driving Higher Yields

Recent data has pointed to robust consumer spending and subsiding inflationary pressures, which has offered a favorable backdrop for risky assets. In December, consumer expenditures less autos and gas stations increased 0.6% month-over-month, matching November's rise and exceeding economists' expectations of 0.3%. Consumers boosted their spending across both goods and services, with notable gains for financial and health services and recreational goods and vehicles. While the spending data pointed to ample energy in consumer activity through the holiday season, core PCE inflation, which excludes volatile food and energy prices, continued to soften. After a 3.2% year-over-year increase in November, it downshifted to 2.9% for December, below estimates of 3.0% and the lowest rate since this measure first began to rise in March 2021. Core PCE inflation has now annualized 1.9% over the past six months, below the Fed's 2% target for the second month in a row. Based on this data and other disinflationary trends, investors have grown increasingly confident that the Fed has achieved its inflation objective, nudging futures-implied probabilities for a March cut to 50% despite Fed governors' pushback.



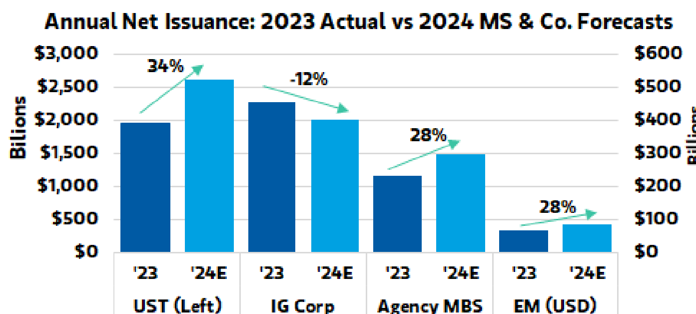
Source: Bloomberg, Morgan Stanley Wealth Management GIO. Data as of January 26, 2024.

The US economy continued to expand at an above-trend pace in the fourth quarter. According to fourth-quarter GDP data, released last week, the US economy expanded at an annualized pace of 3.3% versus estimates of 2.0%. This advance estimate suggests that US achieved full-year growth of 2.5%, much stronger than most economists anticipated and above 2022's 1.9% pace. In line with this positive trend, the Citigroup US Economic Surprise Index, which measures the degree to which actual economic releases exceed or undershoot economists' consensus forecasts, turned positive last week, reversing late 2023's downside trend. From October to mid-January, this index fell from +63.7 to -2.4, highlighting the prevalence of weaker-than-expected data. Over the past week, macro data has begun beating expectation, causing the index to rise to +27.3. This solid growth backdrop, coupled with the softening inflation trend, has reinforced investors' expectations for a soft landing. The strong growth path, particularly if it boosts the labor market, could complicate the Fed's decision-making.



Source: Bloomberg, Morgan Stanley Wealth Management GIO. Data as of January 26, 2024.

MS & Co. fixed income strategists project a significant increase in net supply for US Treasuries, agency MBS, and US dollar-denominated emerging market sovereigns this year. In contrast, investment grade corporates' net supply is expected to decline by 12%. Despite negative total returns for the first 10 months of 2023, pensions and insurers, foreign investors, and US households showed healthy demand for high-quality fixed income. Although yields have fallen well below their October peaks, investors' demand has remained strong, as investors have looked to lock in higher yields ahead of expected Fed rate cuts. MS & Co. economists expect the Fed to lower its policy rate by a cumulative 100 bp over the second half of 2024, starting with a cut in June. Amid an environment of slowing growth and disinflation, demand for high-quality fixed income may remain firm, but the heavy net supply may place modest upward pressure on bond yields.



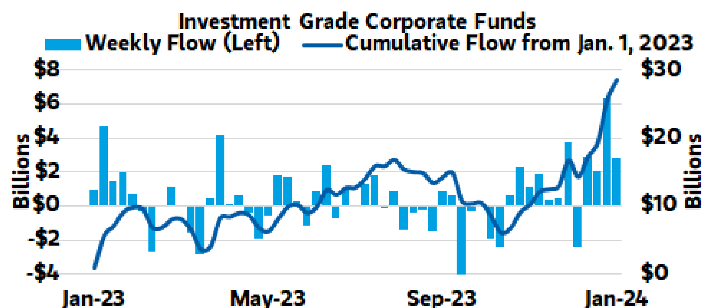
Source: MS & Co. Research, Morgan Stanley Wealth Management GIO. Data as of January 26, 2024.

Please refer to important information, disclosures and qualifications at the end of this material.

INVESTMENT GRADE CORPORATES

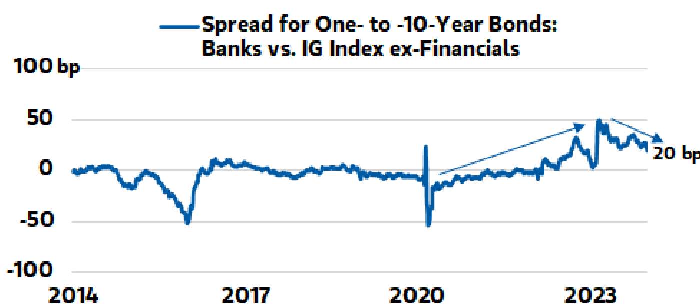
Strong Investor Demand Has Met 2024's Elevated Issuance; Long-Maturity Bonds Have Benefitted from Supportive Technicals

Despite a flurry of issuance to start the year, investment grade (IG) corporate spreads have continued to tighten, backed by healthy investor demand. Thus far in January, IG corporate supply has already clocked in at over $160 billion and may reach a record for the month. With all-in yields above 5%, well above prevailing post-crisis levels, traditional money managers, pensions, and foreign investors have demonstrated their appetite for IG corporates. Since November, IG funds have received just over $20 billion in inflows, underscoring individual investors' net-bullish views. This robust demand has allowed companies to avoid sizable new-issue concessions. Supportive technicals have driven IG spreads to 92 bp as of Friday, their tightest since November 2021. While all-in yields remain attractive, spread levels appear "priced-for-perfection" and could widen on geopolitical risk, a bumpy inflation path, and shifting investor expectations for Fed policy. Furthermore, many fixed income investors can pivot quickly into other asset classes, such as agency MBS, on relative-valuation metrics. As such, we recommend that investors seek actively managed strategies, which can rotate among sectors.



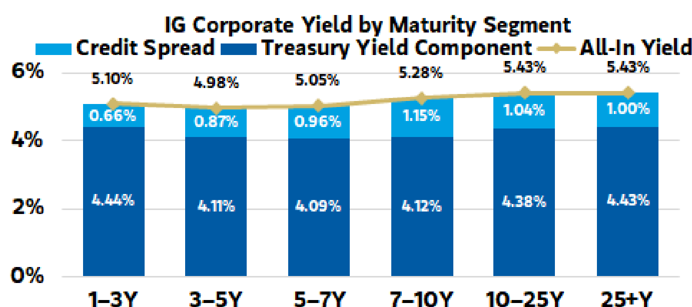
Source: EPFR, Morgan Stanley Wealth Management GIO. Data as of January 26, 2024.

Historically, the Financials sector has tended to dominate monthly issuance in January, making up 60% of 2024 issuance to date. Bank earnings for 4Q2023 pointed to benign outcomes for credit investors, as capital ratios remained resilient. Along with yield-driven demand, these fundamentals have helped to place a lid on spreads and allowed bonds of banks to outperform in 2024. The relative spread of banks to the IG index ex-Financials has tightened to 20 bp, the narrowest since March 2023's regional banking stress. Forthcoming regulatory changes will likely raise capital requirements for regional banks, which may trigger additional Financials supply. Along with ongoing operating challenges, this technical overhang threatens the ability of banks to return to pre-COVID norms, when their spreads typically lay below non-Financials.



Source: Bloomberg, Morgan Stanley Wealth Management GIO. Data as of January 26, 2024.

In 2024 thus far, shorter-term (one- to 10-year) IG corporates' spreads have widened, while longer-term (10+ year) spreads have tightened by 12 bp. For the long-maturity cohort, limited supply has continued to drive outperformance. Consistent with last year, 10+ year bonds have represented approximately 9% of year-to-date supply, well below their 2014-2022 average share of 17%. Tracking moves in US Treasuries, all-in IG yields have climbed 17 bp year-to-date. This dynamic has attracted demand from liability-driven investors, such as pensions and insurers, which tend to focus on yields versus spreads. As such, IG may be uniquely well-positioned: higher Treasury yields could boost demand, helping spreads to remain low; alternatively, should Treasury yields decline, income cushions, combined with the benefit from duration, would likely offset any drag from spread widening. Nevertheless, given tight spreads, we recommend a neutral allocation within fixed income portfolios. For investors less motivated by "locking in" yields and focused instead on total returns, the intermediate (one- to 10-year) segment appears to offer more value than longer-term bonds, given nearly identical spreads and due, in part, to the approximate 30% weight of banks.

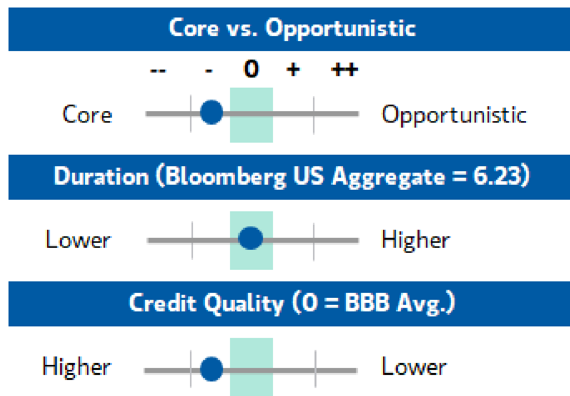


Source: Bloomberg, Morgan Stanley Wealth Management GIO. Data as of January 26, 2024.

Taxable Fixed Income Strategy

- **Rates:** US Treasuries remain attractive from a total return perspective as yields are still relatively high. We expect the Treasury yield curve to undergo a "bull steepening," with a decline in yields led by the front-end. We recommend maintaining some duration exposure, particularly for investors seeking to fortify multi-asset portfolios across a range of potential outcomes.
- **Credit:** Total return prospects for investment grade remain attractive, owing to a favorable rate outlook. With IG and HY spreads near 100 and 350 bp, respectively, corporate bonds' relative value has diminished. We advocate that investors maintain an IG preference over high yield or leveraged loans, staying cautious on lower-quality credits amid macroeconomic and earnings pressures.
- **Opportunistic:** With valuations elevated vs. long-term history, lower-quality sectors look vulnerable, given the probability of tighter financial conditions in the near term. With the prevalence of late-cycle risks, maintain a preference for duration risk over spread risk.

Allocation and Positioning Strategy



Sector Preferences (Ranked)

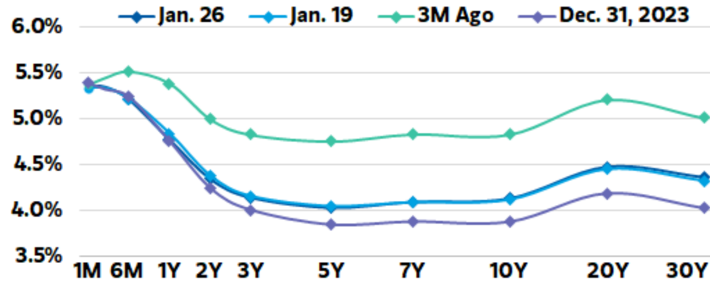
1) US Treasuries
2) Agency MBS
3) IG Corporates
4) TIPS
5) Preferreds
6) Leveraged Loans
7) High Yield Corporates
8) Emerging Markets

Sector	Yield | Duration	-- - 0 + ++	Rationale
Core			
US Treasuries (41%*)	4.28% | 6.03	+	We recommend an overweight position, given the preference for higher-quality exposure and the favorable rate outlook over the tactical horizon. Healthy yield cushions support the total return prospects.
Agency MBS (27%)	4.95% | 6.23	0	Valuations have recovered notably in recent weeks from historically weak levels. Valuations now appear fair, considering the softer technical backdrop with continued Fed run-off and tepid bank demand.
Investment Grade Corporates (25%)	5.23% | 6.98	0	Tight spreads leave limited room for outperformance vs. other core exposures. We recommend focusing on three- to five-year sector from a risk-adjusted perspective. Fundamentals have remained resilient for high-quality borrowers.
Opportunistic			
High Yield Corporates	7.75% | 3.19	-	Companies have made solid progress terming out debt, but refinancing challenges are set to become more prominent with an oncoming maturity wall in future quarters. Broadly speaking, lower-quality tiers may struggle in the current funding environment, with defaults expected to continue trending upward.
Leveraged Loans	9.51% | 0.25	-	Credit quality skews poorly relative to high yield corporates. Proliferation of loan-only capital structures leaves a significant part of the market vulnerable to funding pressures from higher rates. Expect further bifurcation between BB- vs. B/CCC-rated tiers, which argues for active management of exposure.
Treasury Inflation-Protected Securities (TIPS)	4.41% | 5.81	0	While real yields may decline modest over the tactical horizon, two-way inflation risks suggest a neutral outcome, compared to nominal Treasuries. Commodity price volatility will likely continue to serve as an important driver of relative performance with nominal Treasuries.
Preferreds	5.92% | 4.86	-	We remain cautious around Financials and therefore preferreds' bank-heavy exposure. Subordination risk compensation looks fair. Yield levels look appealing for income-focused investors, especially where QDI treatment may prove to be an advantage.
Emerging Markets	7.94% | 6.98	-	Strong valuations appear vulnerable, as rising geopolitical tensions, the risk of energy market disruption, and higher US real yields may pressure spreads wider and limit relative performance.

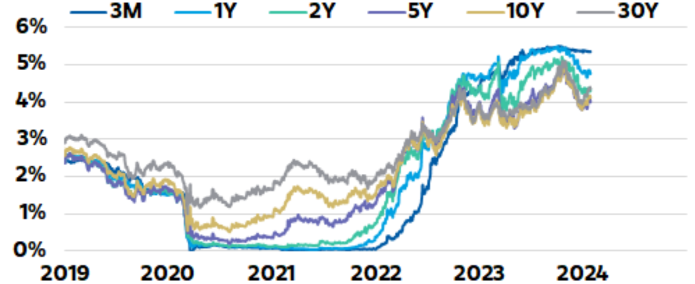
Source: Morgan Stanley Wealth Management GIO, Bloomberg, Factset. Data as of January 26, 2024. Guidance as of January 29, 2024, based on a Tactical, 12-month horizon. Note: ++ is most attractive; + moderately attractive; 0 neutral; - moderately unattractive; and -- most unattractive. Percentages represent each sector's respective weight in the Bloomberg US Aggregate Index. Please see the indices used for each asset class at the end of the report, below the final table.

Taxable Fixed Income Market Data

US Treasuries: Yield Curve



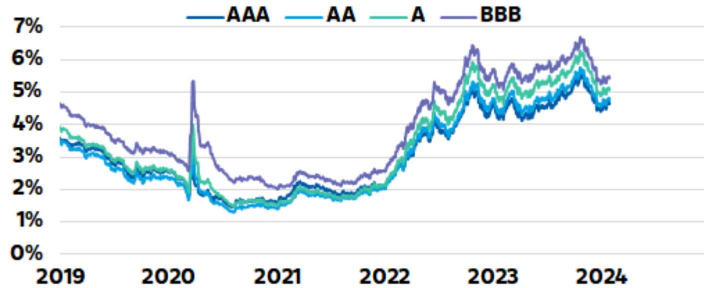
US Treasuries: Yields by Tenor



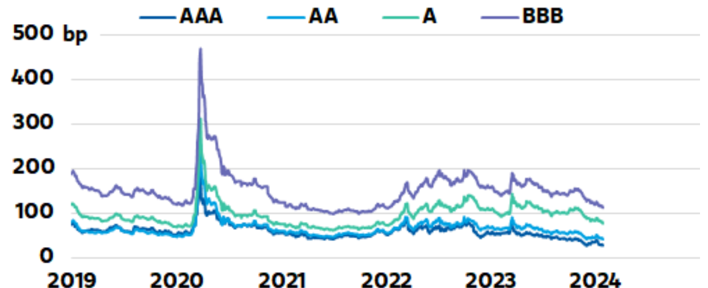
Agency MBS: Yield to Worst

Agency MBS: Option-Adj. Spread

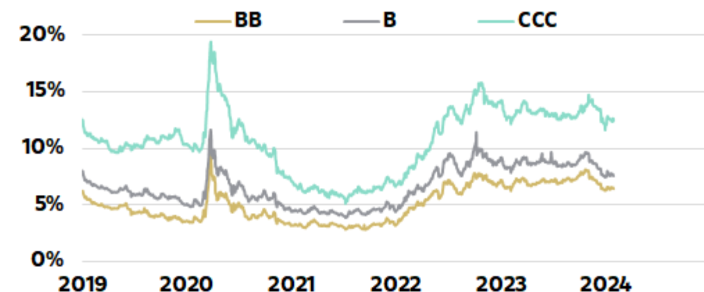
Investment Grade Corporates: Yields to Worst



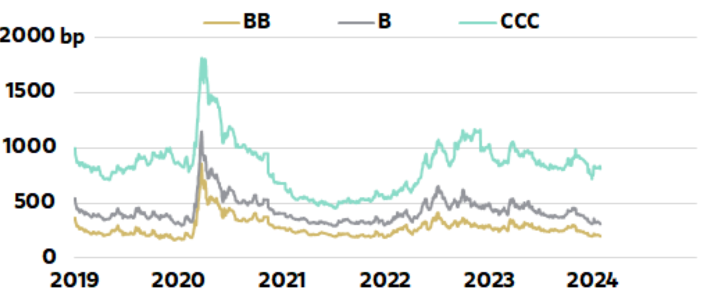
Investment Grade Corporates: Option-Adjusted Spread



High Yield Corporates: Yields to Worst



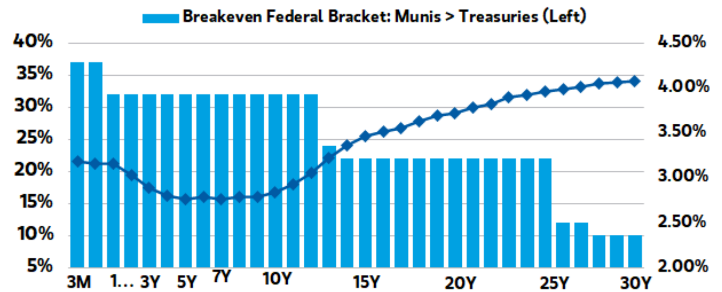
High Yield Corporates: Option-Adjusted Spreads



Source: Morgan Stanley Wealth Management GIO, Bloomberg. Data as of January 26, 2024.

Municipal Fixed Income Strategy and Market Data

- **Allocation:** With late-cycle risks likely more prevalent, we recommend keeping high-quality municipals as a focus within broader asset allocations, given their defensive characteristics.
- **Ratios:** As a result of recent outperformance, yield ratios across the curve have declined, indicating reduced attractiveness relative to US Treasuries. Notwithstanding, municipal yields remain elevated and continue to offer attractive tax-advantaged income and total return prospects.
- **Brackets:** For investors in higher tax brackets, municipals offer value across the entire yield curve. For investors in middle to lower tax brackets, however, municipals only begin to offer an after-tax yield advantage past the 10-year point of the curve.



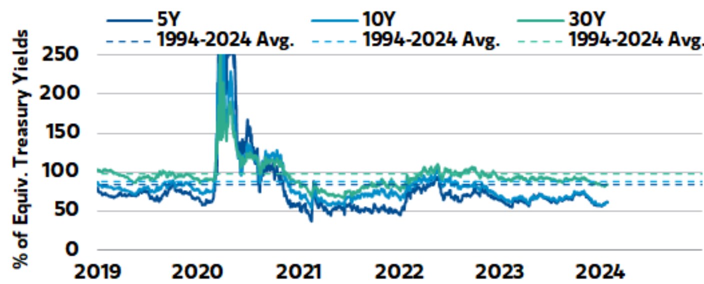
Municipal Ladder Monitor *Based on Bbg. Managed Money Indices*	Yield-to-Worst (YTW)	Option-Adj. Duration	Breakeven Fed. Bracket
Short (1–5Y)	2.82%	2.71	32%
Short/Intermediate (1–10Y)	2.68%	4.49	35%
Intermediate (1–15Y)	2.88%	5.95	32%
Long (1–30Y)	3.59%	9.54	22%

Source: Bloomberg, Morgan Stanley Wealth Management GIO. Data as of January 26, 2024.

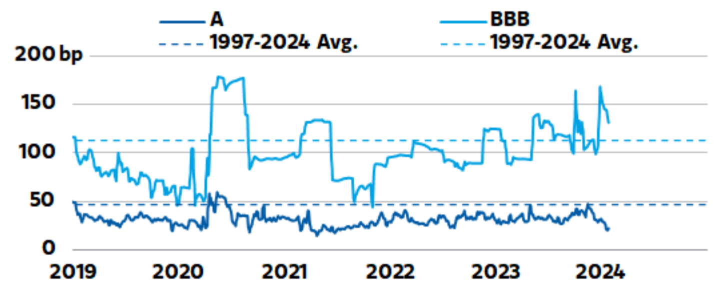
Allocation and Positioning Strategy

Duration (Bloomberg Municipal = 5.93)	Rationale
-- - 0 + ++ Lower — Higher	Neutral stance following a recent move lower in yields. Longer-term securities may serve as better equity diversifiers, with macro risk skewed to the downside. Anticipate rate volatility to remain elevated in the near term, as it may take time for a clear direction in rates to emerge.
Curve Strategy	
Ladder — Barbell	Given the inversion throughout the intermediate part of the yield curve (1–10Y), focus on a combination of short-term bonds (1–3Y), offering attractive yields, and longer-term bonds (15–20Y), which could provide ballast and upside potential, should the macro environment soften moving forward.
Credit Quality	
High — Low	We recommend a defensive stance, given relatively tight credit spreads, near exhaustion of federal COVID-19 aid, slowing economic growth, and mounting challenges for lower-quality or more speculative sectors.

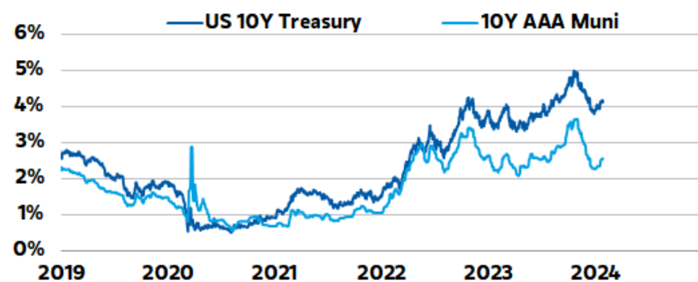
Ratios: Muni-to-Treasury Yields



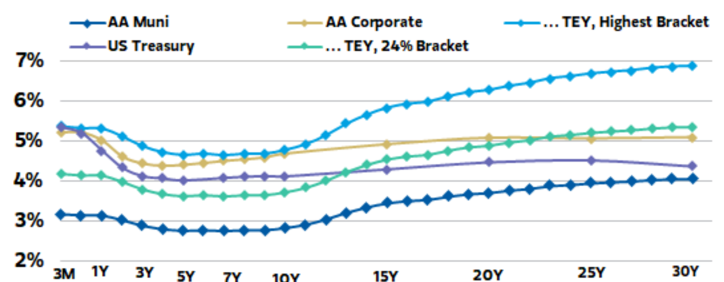
Credit Spreads vs. AAA Munis



10Y Yields: Treasury vs. AAA Muni



Yield Curves: Treasuries vs. Munis



Source: Morgan Stanley Wealth Management GIO, Bloomberg. Data as of January 26, 2024. Note: We have limited the top-left chart's maximum value to 250% in order to make current comparisons more visible.

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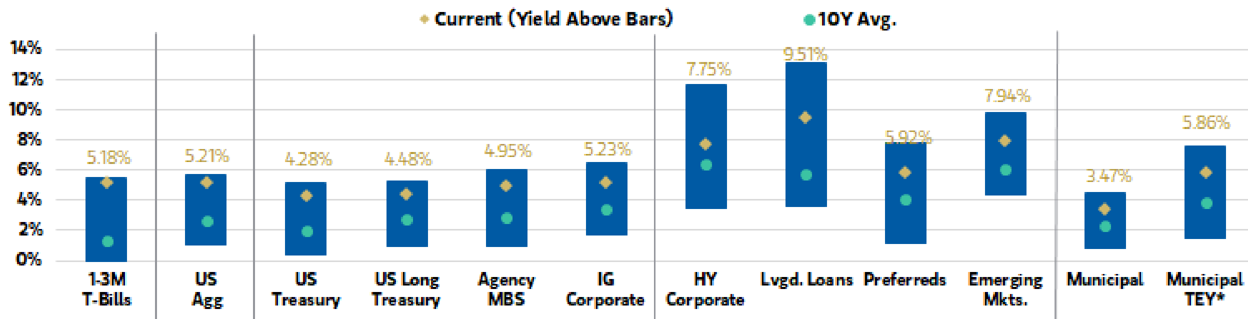
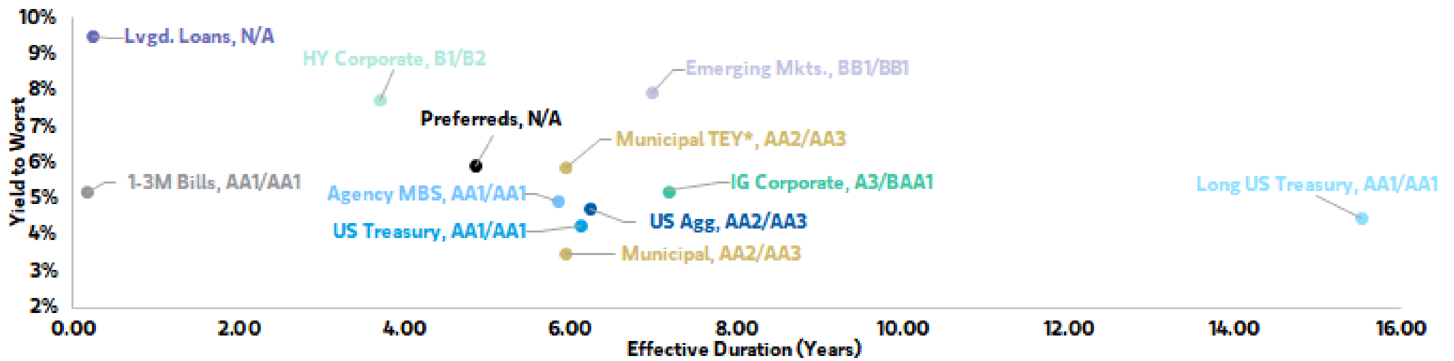
Multi-Sector Fixed Income Market Data

Yield-to-Worst Ranges over Past 10 Years



Yields vs. Durations by Sector



Source: Morgan Stanley Wealth Management GIO, Bloomberg. *We compute TEYs by applying the highest US federal income tax rates and the 3.8% Medicare surtax. These figures could be higher if state tax exemption or SALT deduction limitations were applicable.

Total Returns by Fixed Income Sector

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	3M	1M	1W
Long Treasury 25.07%	Municipal 3.30%	HY Corporate 17.13%	Emerging Mkts. 9.32%	1-3M Bills 1.82%	Long Treasury 14.83%	Long Treasury 17.70%	TIPS 5.96%	1-3M Bills 1.52%	HY Corporate 13.45%	Lvgd. Loans 0.41%	Long Treasury 11.80%	Lvgd. Loans 0.63%	HY Corporate 0.61%
Municipal 9.05%	Agency MBS 1.51%	Lvgd. Loans 10.87%	Long Treasury 8.53%	Municipal 1.28%	IG Corporate 14.54%	TIPS 10.99%	HY Corporate 5.28%	Lvgd. Loans -0.70%	Lvgd. Loans 13.17%	1-3M Bills 0.39%	Emerging Mkts. 9.02%	1-3M Bills 0.47%	IG Corporate 0.22%
IG Corporate 7.46%	Emerging Mkts. 1.23%	Emerging Mkts. 10.19%	HY Corporate 7.50%	Agency MBS 0.99%	Emerging Mkts. 14.42%	IG Corporate 9.89%	Lvgd. Loans 3.54%	Municipal -8.53%	Emerging Mkts. 10.45%	HY Corporate -0.07%	IG Corporate 8.97%	HY Corporate 0.22%	Emerging Mkts. 0.10%
Agency MBS 6.08%	Treasury 0.84%	IG Corporate 6.11%	IG Corporate 6.42%	Treasury 0.86%	HY Corporate 14.32%	Treasury 8.00%	Municipal 1.52%	HY Corporate -11.19%	IG Corporate 8.52%	TIPS -0.79%	HY Corporate 8.68%	IG Corporate -0.63%	1-3M Bills 0.10%
US Agg 5.97%	US Agg 0.55%	TIPS 4.68%	Municipal 5.45%	US Agg 0.01%	Lvgd. Loans 10.65%	US Agg 7.51%	1-3M Bills 0.04%	Agency MBS -11.81%	Municipal 6.40%	IG Corporate -1.08%	Agency MBS 7.87%	TIPS -0.65%	US Agg 0.10%
Emerging Mkts. 5.53%	1-3M Bills 0.03%	US Agg 2.65%	US Agg 3.54%	Lvgd. Loans -0.59%	US Agg 8.72%	HY Corporate 7.11%	IG Corporate -1.04%	TIPS -11.85%	US Agg 5.53%	Municipal -1.10%	Municipal 7.67%	US Agg -0.97%	Agency MBS 0.09%
Treasury 5.05%	IG Corporate -0.68%	Agency MBS 1.67%	Lvgd. Loans 3.30%	TIPS -1.26%	TIPS 8.43%	Emerging Mkts. 5.88%	Agency MBS -1.04%	Treasury -12.46%	1-3M Bills 5.14%	US Agg -1.30%	US Agg 6.81%	Municipal -0.98%	Lvgd. Loans 0.05%
TIPS 3.64%	Long Treasury -1.21%	Long Treasury 1.33%	TIPS 3.01%	Long Treasury -1.84%	Municipal 7.54%	Municipal 5.21%	Emerging Mkts. -1.51%	US Agg -13.01%	Agency MBS 5.05%	Treasury -1.37%	Treasury 5.14%	Treasury -1.06%	Treasury 0.02%
HY Corporate 2.45%	TIPS -1.44%	Treasury 1.04%	Agency MBS 2.47%	HY Corporate -2.08%	Treasury 6.86%	Agency MBS 3.87%	US Agg -1.54%	IG Corporate -15.76%	Treasury 4.05%	Agency MBS -1.52%	TIPS 4.20%	Agency MBS -1.26%	Municipal -0.09%
Lvgd. Loans 0.99%	Lvgd. Loans -2.75%	1-3M Bills 0.26%	Treasury 2.31%	IG Corporate -2.51%	Agency MBS 6.35%	Lvgd. Loans 2.84%	Treasury -2.32%	Emerging Mkts. -16.45%	TIPS 3.90%	Emerging Mkts. -1.90%	Lvgd. Loans 3.60%	Emerging Mkts. -1.64%	TIPS -0.24%
1-3M Bills 0.02%	HY Corporate -4.47%	Municipal 0.25%	1-3M Bills 0.82%	Emerging Mkts. -4.61%	1-3M Bills 2.21%	1-3M Bills 0.54%	Long Treasury -4.65%	Long Treasury -29.26%	Long Treasury 3.06%	Long Treasury -4.89%	1-3M Bills 1.34%	Long Treasury -4.36%	Long Treasury -0.28%

Source: Morgan Stanley Wealth Management GIO, Bloomberg. Data as of January 26, 2024. This table presents the following indices: 1-3M T-Bills: Bloomberg US One- to Three-Month Treasury Bill; US Agg: Bloomberg US Aggregate; Treasury: Bloomberg US Treasury; Long Treasury: Bloomberg US Long Treasury; TIPS: Bloomberg US TIPS; Agency MBS: Bloomberg US MBS; IG Corporate: Bloomberg US Corporate; HY Corporate: Bloomberg US Corporate High Yield; Municipal: Bloomberg Municipal; Leveraged Loans: Morningstar/LSTA Leveraged Loans 100; Preferreds: ICE BofA Fixed-Rate Preferred Securities; and Emerging Markets: JPMorgan EMBI Global Core.

Disclosure Section

Important Information

For index, indicator and survey definitions referenced in this report please visit the following:
https://www.morganstanley.com/wealth-investmentsolutions/wmir-definitions.

Glossary of Terms

Call feature - provision set by an issuer giving them the right to redeem outstanding securities before their scheduled maturity, at a predetermined date and price. The dates and prices at which a bond can be called are set forth in its offering documents. Issuers are more likely to exercise a call in periods of declining interest rates, as they can refinance existing debt at lower coupon rates. If the security is called, the investor bears the risk of reinvesting the proceeds at a lower rate of return.

Coupon - annual rate of interest payable on an interest bearing security expressed as a percentage of the principal amount.

Current yield - annual interest rate paid by a bond, expressed as a percentage of its current market price. It does not reflect the total return over the life of the bond.

Excess Return - represents the average quarterly total return of the portfolio relative to its benchmark. A portfolio with a positive Excess Return has on average outperformed its benchmark on a quarterly basis. This statistic is obtained by subtracting the benchmark return from the portfolio's return.

Maturity date - date on which the principal of a fixed income security becomes due and payable to the security holder.

Option-adjusted spread (OAS) - is a measurement of the spread of a fixed income security rate and the risk-free rate of return, which is adjusted to take into account an embedded option.

Term premium - is the excess yield that investors require to commit to holding a long-term bond instead of a series of shorter-term bonds.

Volatility This is a statistical measure of the dispersion of returns for a given security or market index. Volatility can either be measured by using the standard deviation or variance between returns from that same security or market index. Commonly, the higher the volatility, the riskier the security.

Yield curve - line that plots the interest rates, at a set point in time, of bonds having equal credit quality, but differing maturity dates. The most frequently reported yield curve compares the three-month, two-year, five-year, ten-year, and thirty-year U.S. Treasury debt. This yield curve is used as a benchmark for other debt in the market, such as mortgage rates or bank lending rates. The curve is also used to predict changes in economic output and growth.

Yield to Maturity - yield of a bond if an investor were to buy and hold it until its maturity date. This yield factors in the purchase price, the interest one is set to receive, and the length of time to maturity.

Yield to Worst - lower of yield to maturity and yield to the date of the worst call. The lowest potential yield that can be received on a bond without the issuer actually defaulting.

Risk Considerations

Bonds are subject to interest rate risk. When interest rates rise, bond prices fall; generally the longer a bond's maturity, the more sensitive it is to this risk. Bonds may also be subject to call risk, which is the risk that the issuer will redeem the debt at its option, fully or partially, before the scheduled maturity date. The market value of debt instruments may fluctuate, and proceeds from sales prior to maturity may be more or less than the amount originally invested or the maturity value due to changes in market conditions or changes in the credit quality of the issuer. Bonds are subject to the credit risk of the issuer. This is the risk that the issuer might be unable to make interest and/or principal payments on a timely basis. Bonds are also subject to reinvestment risk, which is the risk that principal and/or interest payments from a given investment may be reinvested at a lower interest rate.

High yield bonds (bonds rated below investment grade) may have speculative characteristics and present significant risks beyond those of other securities, including greater credit risk, price volatility, and limited liquidity in the secondary market. High yield bonds should comprise only a limited portion of a balanced portfolio.

Interest on **municipal bonds** is generally exempt from federal income tax; however, some bonds may be subject to the alternative minimum tax (AMT). Also, municipal bonds acquired in the secondary market at a discount may be subject to the market discount tax provisions, and therefore could give rise to taxable income. Typically, state tax-exemption applies if securities are issued within one's state of residence and, if applicable, local tax-exemption applies if securities are issued within one's city of residence. The tax-exempt status of municipal securities may be changed by legislative process, which could affect their value and marketability.

Principal is returned on a monthly basis over the life of a **mortgage-backed security**. Principal prepayment can significantly affect the monthly income stream and the maturity of any type of MBS, including standard MBS, CMOs and Lottery Bonds. Yields and average lives are estimated based on prepayment assumptions and are subject to change based on actual prepayment of the mortgages in the underlying pools. The level of predictability of an MBS/CMO's average life, and its market price, depends on the type of MBS/CMO class purchased and interest rate movements. In general, as interest rates fall, prepayment speeds are likely to increase, thus shortening the MBS/CMO's average life and likely causing its market price to rise. Conversely, as interest rates rise, prepayment speeds are likely to decrease, thus lengthening average life and likely causing the MBS/CMO's market price to fall. Some MBS/CMOs may have "original issue discount" (OID). OID occurs if the MBS/CMO's original issue price is below its stated redemption price at maturity, and results in "imputed interest" that must be reported annually for tax

purposes, resulting in a tax liability even though interest was not received. Investors are urged to consult their tax advisors for more information.

Asset-backed securities generally decrease in value as a result of interest rate increases, but may benefit less than other fixed-income securities from declining interest rates, principally because of prepayments.

Treasury Inflation Protection Securities' (TIPS) coupon payments and underlying principal are automatically increased to compensate for inflation by tracking the consumer price index (CPI). While the real rate of return is guaranteed, TIPS tend to offer a low return. Because the return of TIPS is linked to inflation, TIPS may significantly underperform versus conventional U.S. Treasuries in times of low inflation.

The majority of $25 and $1000 par **preferred securities** are "callable" meaning that the issuer may retire the securities at specific prices and dates prior to maturity. Interest/dividend payments on certain preferred issues may be deferred by the issuer for periods of up to 5 to 10 years, depending on the particular issue. The investor would still have income tax liability even though payments would not have been received. Price quoted is per $25 or $1,000 share, unless otherwise specified. Current yield is calculated by multiplying the coupon by par value divided by the market price.

Some $25 or $1000 par preferred securities are QDI (Qualified Dividend Income) eligible. Information on QDI eligibility is obtained from third party sources. The dividend income on QDI eligible **preferreds** qualifies for a reduced tax rate. Many traditional 'dividend paying' perpetual preferred securities (traditional preferreds with no maturity date) are QDI eligible. In order to qualify for the preferential tax treatment all qualifying preferred securities must be held by investors for a minimum period – 91 days during a 180 day window period, beginning 90 days before the ex-dividend date.

Ultrashort-term fixed income asset class is comprised of fixed income securities with high quality, very short maturities. They are therefore subject to the risks associated with debt securities such as credit and interest rate risk.

Yields are subject to change with economic conditions. Yield is only one factor that should be considered when making an investment decision.

A **taxable equivalent yield** is only one of many factors that should be considered when making an investment decision. Morgan Stanley Wealth Management and its Financial Advisors do not offer tax advice; investors should consult their tax advisors before making any tax-related investment decisions.

Credit ratings are subject to change.

Duration, the most commonly used measure of bond risk, quantifies the effect of changes in interest rates on the price of a bond or bond portfolio. The longer the duration, the more sensitive the bond or portfolio would be to changes in interest rates. Generally, if interest rates rise, bond prices fall and vice versa. Longer-term bonds carry a longer or higher duration than shorter-term bonds; as such, they would be affected by changing interest rates for a greater period of time if interest rates were to increase. Consequently, the price of a long-term bond would drop significantly as compared to the price of a short-term bond.

International investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with **emerging markets and frontier markets**, since these countries may have relatively unstable governments and less established markets and economies.

Investing in foreign markets entails greater risks than those normally associated with domestic markets, such as political, currency, economic and market risks. **Investing in currency** involves additional special risks such as credit, interest rate fluctuations, derivative investment risk, and domestic and foreign inflation rates, which can be volatile and may be less liquid than other securities and more sensitive to the effect of varied economic conditions. In addition, international investing entails greater risk, as well as greater potential rewards compared to U.S. investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economies.

Equity securities may fluctuate in response to news on companies, industries, market conditions and general economic environment.

Investing in smaller companies involves greater risks not associated with investing in more established companies, such as business risk, significant stock price fluctuations and illiquidity.

Stocks of medium-sized companies entail special risks, such as limited product lines, markets, and financial resources, and greater market volatility than securities of larger, more-established companies.

Investing in commodities entails significant risks. Commodity prices may be affected by a variety of factors at any time, including but not limited to, (i) changes in supply and demand relationships, (ii) governmental programs and policies, (iii) national and international political and economic events, war and terrorist events, (iv) changes in interest and exchange rates, (v) trading activities in commodities and related contracts, (vi) pestilence, technological change and weather, and (vii) the price volatility of a commodity. In addition, the commodities markets are subject to temporary distortions or other disruptions due to various factors, including lack of liquidity, participation of speculators and government intervention.

Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations.

Value investing does not guarantee a profit or eliminate risk. Not all companies whose stocks are considered to be value stocks are able to turn their business around or successfully employ corrective strategies which would result in stock prices that do not rise as initially expected.

Asset allocation and diversification do not assure a profit or protect against loss in declining financial markets.

REITs investing risks are similar to those associated with direct investments in real estate: property value fluctuations, lack of liquidity, limited diversification and sensitivity to economic factors such as interest rate changes and market recessions.

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

Nondiversification: For a portfolio that holds a concentrated or limited number of securities, a decline in the value of these investments would cause the portfolio's overall value to decline to a greater degree than a less concentrated portfolio. Portfolios that invest a large percentage of assets in only one industry sector (or in only a few sectors) are more vulnerable to price fluctuation than those that diversify among a broad range of sectors.

IRS rules stipulate that if a security is sold by an investor at a **tax loss**, the tax loss will not be currently usable if the investor has acquired (or has entered into a contract or option on) the same or substantially identical securities 30 days before or after the sale that generated the loss. This so-called "wash sale" rule is applied with respect to all of the investor's transactions across all accounts.

Rebalancing does not protect against a loss in declining financial markets. There may be a potential tax implication with a rebalancing strategy. Investors should consult with their tax advisor before implementing such a strategy.

The returns on a portfolio consisting primarily of **environmental, social, and governance-aware investments (ESG)** may be lower or higher than a portfolio that is more diversified or where decisions are based solely on investment considerations. Because ESG criteria exclude some investments, investors may not be able to take advantage of the same opportunities or market trends as investors that do not use such criteria.

The indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment.

The indices selected by Morgan Stanley Wealth Management to measure performance are representative of broad asset classes. Morgan Stanley Wealth Management retains the right to change representative indices at any time.

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