Morgan Stanley

WEALTH MANAGEMENT

INVESTMENT STRATEGY

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Fixed Income Insights

Municipals Now Offer Taxable Investors a Yield Advantage Over Cash

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Macro: After backing-up in response to Tuesday's June CPI report, front-end US Treasury yields gravitated lower over the remainder of the week. The yield curve maintained its steepening trend, as trade policy uncertainty and concerns around global fiscal dynamics have placed upside pressure on term premiums.

What's Inside: We summarize the key takeaways from June's CPI and retail sales reports. We highlight MS & Co.'s Economic Team's updated macro outlook. Given recent yield curve steepening, we consider the case for stepping out of ultrashort fixed income ("cash") exposures and moving into core municipal bonds. We also discuss the relative attractiveness of agency MBS valuations.

As of 7/18/2025	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	3.87%	4.42%	3.34%	5.65%	75.1%	77 bp	283 bp	36 bp
1W Change	-2 bp	+1 bp	+18 bp	+30 bp	+2.9%	-3 bp	0 bp	+1 bp
1M Change	-8 bp	+3 bp	+8 bp	+14 bp	+0.3%	-8 bp	-21 bp	-4 bp
3M Change	+7 bp	+9 bp	-6 bp	-10 bp	-4.1%	-31 bp	-115 bp	-8 bp
YTD Change	-37 bp	-15 bp	+23 bp	+39 bp	+6.6%	-3 bp	-4 bp	-7 bp

Source: Morgan Stanley Wealth Management GIO, Bloomberg. *See page 10 for TEY definition.

Key Macro Data Releases

July 24: S&P PMI (July Prelim.)

Upcoming Central Bank Meetings

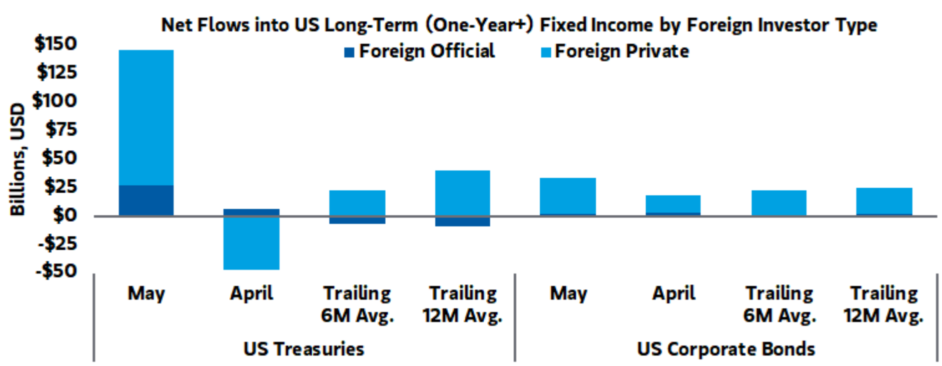
European Central Bank: July 24

US Federal Reserve: July 29-30

Bank of Japan: July 31

Bank of England: August 7

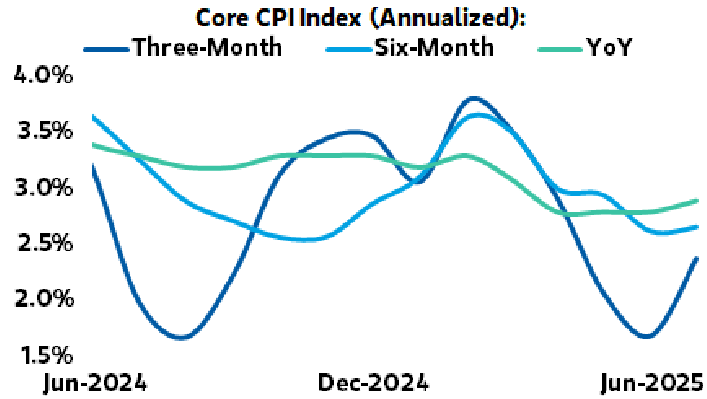
May's TIC Data Pointed to a Solid Rebound in Foreign Investors' Demand for US Treasuries



Source: Bloomberg, Morgan Stanley Wealth Management GIO. Data as of July 18, 2025.

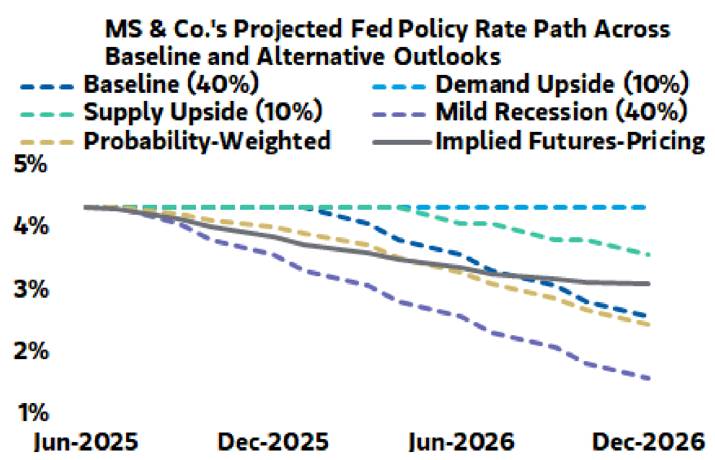
MACRO

MS & Co.'s Economics Team Views US Growth Risks as Skewed to the Downside, Along with the Future Path for Fed Policy



Source: Bloomberg, Morgan Stanley Wealth Management GIO as of July 18, 2025

June's CPI report offered mixed signals for investors, even as core CPI increased less than expected month-over-month. In June, headline CPI advanced 0.3% month-over-month and gained 2.7% on a year-over-year basis, up from 2.4% in May, largely driven by higher food and energy prices. Core CPI, which excludes volatile food and energy components, increased 0.2% for the month—below expectations—and 2.9% year-over-year, matching economists' forecasts. June marked the fifth-consecutive month of softer-than-expected core CPI inflation. While tariff-related price pressures have begun to emerge in categories like toys, appliances, and sports equipment, the overall impact on CPI data has appeared limited and uneven. For example, auto prices declined in June, helping to contain broader inflation; excluding autos, however, core goods prices rose 0.55%, the greatest increase since November 2021. Shelter inflation slowed to 3.8% year-over-year, due to falling hotel prices, while a services measure excluding housing and energy rose 0.2%, driven by higher hospital costs. Altogether, inflation and related macro data continue to represent a mixed picture, and investors expect the FOMC to hold its policy targets unchanged at its upcoming July 29-30 meeting. Investors continue to expect two rate cuts in 2025, beginning in October. At the same time, retail sales data showed renewed consumer strength, rising 0.6% in June—well above an expected gain of 0.1%—after two months of declines. Retail sales enjoyed broad-based growth, with 10 out of 13 categories posting increases, led by auto sales. Control-group sales data, which feeds into GDP calculations and excludes certain categories such as food, autos, building materials, and gas stations, also showed resilience, rising by 0.5% for the month. Consumers' outlooks on growth and inflation have also improved, with the University of Michigan Consumer Sentiment Index reaching a five-month high. Consumers' one-year inflation expectations declined to 4.4%, the lowest since February (before April's tariff announcements) and down from 5.0% the month prior, likely influenced by recent delays or adjustments in the Trump administration's tariff plans.



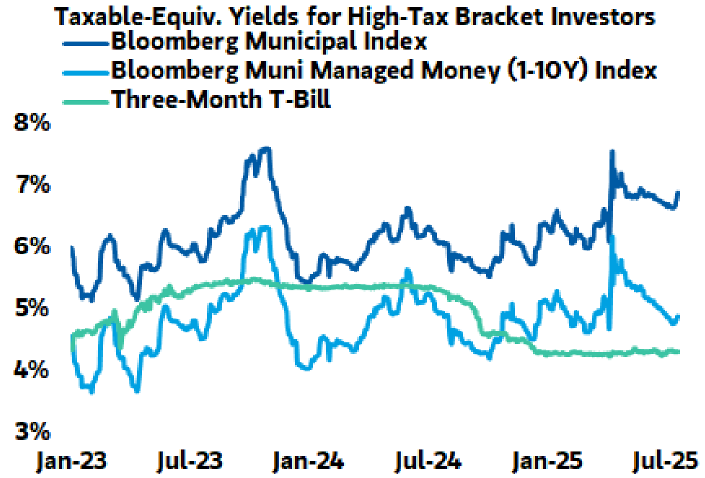
Source: Bloomberg, MS & Co. Research, Morgan Stanley Wealth Management GIO as of July 18, 2025.

Last week, MS & Co.'s US Economics team updated its near-term outlook for the US economy to reflect recent developments. The team's baseline view, considered a 40% probability, anticipates slower growth and firmer inflation. In this case, the team expects real GDP growth to weaken to 0.8% in 2025 and 1.1% in 2026. At the same time, it expects inflation to peak in 3Q2025, with core PCE inflation at 3.2% in 2025 and 2.3% in 2026. As part of its base-case view, the team believes the Fed will remain on hold throughout 2025 but cut rates seven times in 2026, beginning in March as evidence of slowing growth solidifies. The unemployment rate would remain at 4.4% by the end of 2025 but increase to 4.9% by the end of 2026. Trade barriers would also slow import volumes, with net trade contributing slightly to growth in 2026. Fiscal policy would add a 0.4% boost to 2026 GDP growth. Alternatively, the team's bear case, also with a 40% probability, contemplates a mild recession, due to trade shocks and increased tariffs. In this scenario, the effective tariff rate could rise to 23%, leading to a potential GDP decline of 1.2% from 2025 to 2026. Under this scenario, inflation would rise to 4.1% in 2025 before falling back towards 2.0% in 2026, due to a sharp drop in demand. To stimulate growth, the Fed would cut three times (75 bp) in 2025 and eight times (200 bp) in 2026. By contrast, the team considers two upside scenarios, each with a 10% probability. The first involves a fiscal push from the One Big Beautiful Bill Act (OBBBA), leading to stronger demand and elevated inflation, with no Fed cuts in 2025 or 2026. The second scenario involves a de-escalation in trade and immigration policies, resulting in faster growth and diminished arguments for Fed cuts.

MUNICIPAL BONDS

Should a Steeper-for-Longer Curve Persist, Municipals' Tax-Adjusted Yield Advantage Over Cash May Expand in the Coming Quarters

Following an extended period of earning 4% or more in pre-tax yields in ultrashort taxable fixed income, recent shifts have contributed to greater attractiveness for core municipals. For nearly three years, taxable ultrashort fixed income strategies have offered investors pre-tax yields above 4.0%. In 2022 and 2023, investors initially encountered yield curve inversion, raising the hurdle for shifting from ultrashort to longer-term fixed income strategies, as it implied sacrificing yield for the uncertain prospect of higher sensitivity to a potential decline in interest rates (duration). Since 3Q2024, however, investors have experienced a positively sloped yield curve. After holding its fed funds target at 5.375% for just over a year, the Fed cut its policy rate by a cumulative 100 bp from September to December 2024. Meanwhile, municipal bond yields across the curve have trended higher since late 2024, albeit in a non-linear manner. Bloomberg designed its Municipal Managed Money Index to be representative of the universe of bonds that fit common investment criteria of municipal bond portfolios implemented through separately managed accounts. The index yield for the Short/Intermediate (one- to 10-year maturities, resulting in a 4.7-year duration) sub-index, which can be viewed as proxy for popular intermediate-term bond ladder strategies, has increased from 2.50% as of October 1, 2024, to 2.90% currently. For investors in the highest federal tax bracket, the taxable-equivalent index yield has increased from 4.24% to 4.91%. As such, on a tax-adjusted basis, short/intermediate core municipal bonds have recently begun to offer such investors a notable yield pick-up over ultrashort, money market-like investments. The Bloomberg Municipal Index spans a much broader universe of investment grade tax-exempt bonds, including several segments that tend to fall outside of typical SMA investment policies due to maturity, rating, sector, or other restrictions. Given the steepness of the municipal yield curve, and the yield pick-up offered through lower-rated (A/BBB) credits and specific credit sectors, the broad municipal index yield shows greater tax-equivalent yields (6.90%) and a longer duration (~7.0 years).



Source: Bloomberg, Morgan Stanley Wealth Management GIO as of July 18, 2025.

Looking ahead, federal funds futures imply a moderate decline in ultrashort fixed income yields. While three-month T-Bill yields currently sit at 4.34%, six-month and 12-month forward pricing looks for declines to 3.84% and 3.62%, respectively. As discussed previously, the MS & Co. Economics team's baseline monetary policy expectations indicate stickier ultrashort yields through March 2026. In addition, we find insight in considering the team's projected policy rate paths on a probability-weighted basis. The team currently assigns a 40% probability of a mild recession developing over the next six to 18 months. Intuitively, under this scenario the team projects both an earlier start and a deeper path for Fed easing, with the policy target projected to fall below 2.0% by December 2026. On a probability-weighted basis—blending the probability of this scenario with the probability assigned to the team's other potential outcomes—MS & Co. estimates that the Fed's target rate may decline by a cumulative ~100 bp over the next 12 months. MS & Co.'s rates strategists hold the view that the Treasury yield curve will bull-steepen throughout 2026. If this view turns out to be correct, the attractiveness of ultrashort yields will become somewhat diminished over time, raising the value of stepping out the curve from ultrashort, given the reinvestment risk presented by such an outcome. Furthermore, while yields for intermediate to long-term maturities may not decline as much as front-end yields, their decline may still have potential to generate positive price returns. Bottom line: Considering municipal bonds' tax-adjusted yield advantage and favorable price return prospects, the case for stepping out of cash has become increasingly compelling for high-tax bracket investors.

	Index Weight (%)	Duration (Years)	Yield-to-Worst (%)	Tax-Eq. Yield (%)
Municipal Bond Index	**-**	**7.1**	**4.1**	**6.9**
Select Sub-Indexes Typically Excluded from Short-Intermediate SMA Guidelines				
Long-Term (22+)	19.6	11.6	5.1	8.7
A-Rated	22.5	7.1	4.3	7.4
BBB-Rated	5.2	8.0	4.9	8.3
Hospital Sector	9.1	7.8	4.6	7.8
Housing Sector	4.0	9.2	4.5	7.6
Managed Money Sub-Indexes				
Short (1-5)	6.3	2.7	2.6	4.4
Short/Intermediate (1-10)	15.2	4.7	2.9	4.9
Intermediate (1-17)	24.7	6.3	3.4	5.7
Long (10+)	22.1	10.4	4.6	7.9

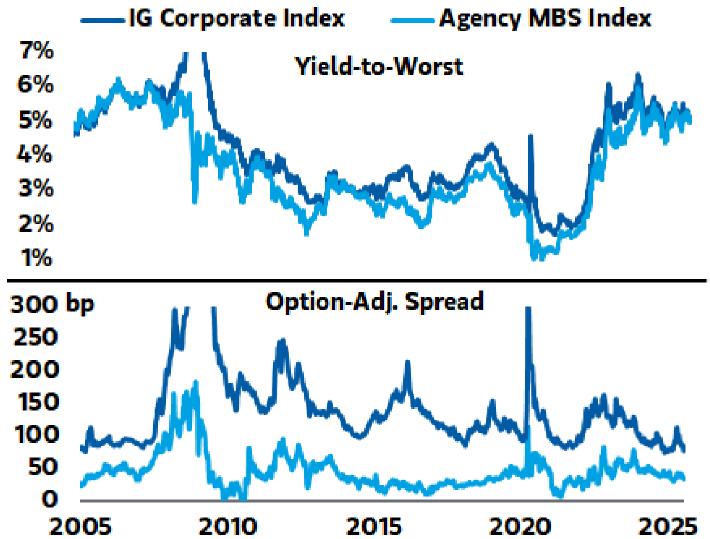
Source: Bloomberg, Morgan Stanley Wealth Management GIO as of July 18, 2025.

INVESTMENT GRADE CORPORATE BONDS AND AGENCY MORTGAGE-BACKED SECURITIES

Considering Both Yields and Spreads, Agency MBS Valuations Appear Attractive Relative to Investment Grade Corporates

In contrast to the past 25 years, where Investment Grade (IG) credit yields have exceeded mortgage-backed securities (MBS) yields by ~50 bp on average, the two sectors now offer effectively the same yield.

The Securitized Strategy team at MS & Co recommends that investors should consider MBS for all-in yield, as IG credit spreads trade near MS & Co's Credit team's bull-case scenario of 70 bp (currently, 79 bp). In addition, IG credit spreads have approached post-Great Financial Crisis (GFC) tights, while agency MBS index's option-adjusted spread hovers near post-GFC averages. Historically, MBS yields have typically traded below those of IG credit, given MBS's lower-risk profile.

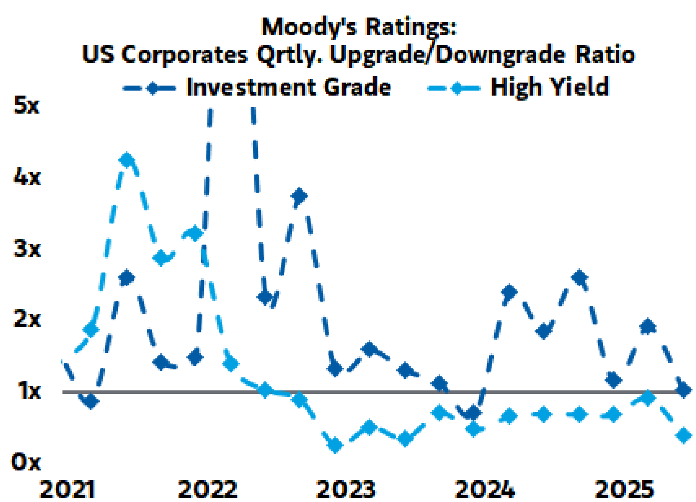


Source: Bloomberg, Morgan Stanley Wealth Management GIO as of July 18, 2025.

While valuations have proven to be a poor predictor of credit performance over the past 12 to 18 months, we believe that investors must consistently evaluate fundamentals to avoid taking unrewarded risks. With IG spreads near 20-year tights, they offer little remaining "value." Their rapid rise to 118 bp after April 2's Liberation Day tariff announcements reminded investors how quickly spreads can widen. Second, the breakeven spread widening move required to offset a full year of excess returns has become quite small (just ~10 bp at current levels). Third, for credit spreads to hit Morgan Stanley's bull-case scenario of 70 bp by the middle of 2026, US macro conditions would have to solidly outpace our economists' expectations. Lastly, current spread levels have been supported by the high level of rates, which drives demand from yield buyers, such as insurance and pension companies. If rates were to go lower, investor demand could soften, pressuring spreads to the upside. In conclusion, the Securitized Strategy team believes credit will underperform mortgages over the coming months, in the event of lower Treasury yields.

IG credit's ratings momentum looked negative for 2Q2025.

Over the period, downgrades exceeded upgrades, led by greater incidence of downgrades broadly and within Fallen Angels (those credit that had traded as IG but now have dipped into high yield territory). In the second quarter, ratings agencies downgraded $94 billion of debt, including $34 billion in Fallen Angels, owing primarily to a single issuer. The upgrade/downgrade ratio for the quarter stood at ~0.8, the lowest since 1Q2021. Still, the full 2025 remains healthy (~1.4). Moving on to HY, 2025's upgrade/downgrade ratio has declined to ~0.9, compared to ~1.2 in 2024. Furthermore, breaking into ratings cohorts, we find evidence of greater deterioration among lower-rated credits. While BB's upgrade/downgrade ratio has clocked in at ~1.3, B- and CCC-rated debt have faced ~0.7 and ~0.6 ratios, respectively. The loan universe's credit quality appears less favorable, too, with downgrades exceeding upgrades in 2024 and 2025 (~0.6 and ~0.5, respectively). Looking forward, we expect the trend of increased downgrades to continue with rising economic uncertainty, supporting our recommendation to stay up in quality.

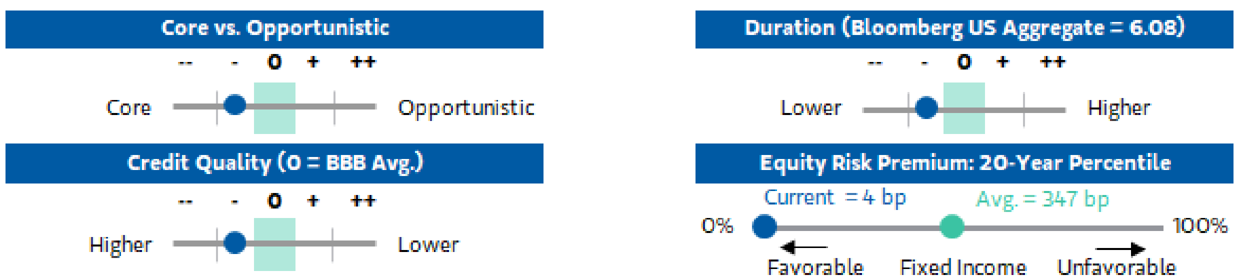


Source: Moody's Ratings, Morgan Stanley Wealth Management GIO as of July 18, 2025.

Taxable Fixed Income Strategy

- **Rates:** We recommend modestly underweight-duration positioning, as the trajectory of US debt and deficits may crimp potential declines in longer-term US Treasury yields. Consider balancing duration risk versus reinvestment risk, with a focus on intermediate maturities, which offer the benefit of 1) “locking in” income and 2) potentially helping to fortify multi-asset portfolios in a recession scenario.
- **Credit:** Corporate bond valuations have turned less favorable, as credit spreads have completed a full retracement of their post-Liberation day widening moves. As a result, excess return prospects have diminished, given ongoing macro headwinds. Notwithstanding, total return prospects for investment grade remain attractive, given elevated starting yields.
- **Opportunistic:** We maintain a preference for core investment grade fixed income, as the set-up for lower-quality sectors looks generally unappealing, given ongoing macroeconomic headwinds.

Allocation and Positioning Strategy

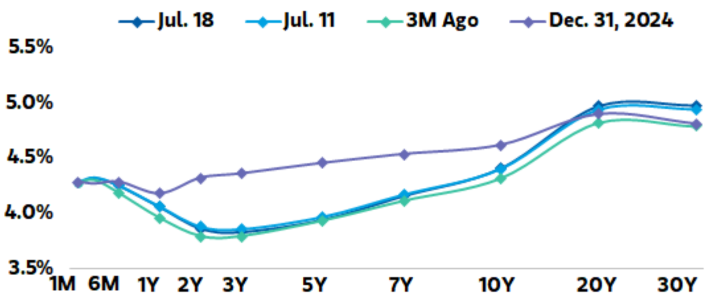


Sector	Yield | Duration	-- - 0 + ++	Rationale
Core			
US Treasuries	4.19% | 5.81		We recommend an overweight position, given the preference for higher-quality exposure. Healthy yield cushions support total return prospects. Focus on one- to 10-year maturities, as risk-reward in the long end of the curve appears less attractive.
Agency MBS	5.11% | 6.12		Valuations appear fair considering the sector's defensive characteristics. We maintain a favorable view given an outlook for Fed rate cuts and higher demand from banks.
Investment Grade Corporates	5.11% | 6.77		Valuations have become less appealing, following recent credit spread tightening. While supportive technical dynamics and healthy fundamentals should help keep spreads somewhat contained, the cooling macro backdrop likely limits re-tightening potential and excess return prospects.
Opportunistic			
Treasury Inflation-Protected Securities (TIPS)	4.28% | 4.50		While real yields may decline modestly 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.
Emerging Markets	6.98% | 6.85		We maintain a neutral view on the asset class, given tight valuations and uncertainty related to trade policy and tariffs.
Preferreds	6.00% | 6.33		Tight valuations provide low compensation for capital subordination and higher downside risk. Yield levels may be appealing for income-focused investors, especially where QDI tax treatment may prove to be an advantage.
High Yield Corporates	7.11% | 2.91		While all-in yields remain attractive, the risk-reward remains unattractive relative to investment grade bonds. Current spread levels are trading below MS & Co.'s base-case target of 335 bp, with the potential to widen to 475 bp in a bear-case scenario.
Leveraged Loans	7.59% | 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.

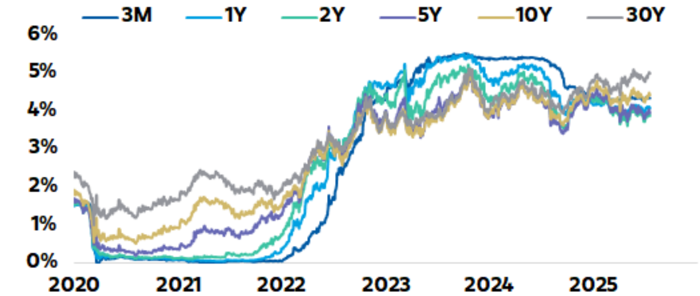
Source: Morgan Stanley Wealth Management GIO, Bloomberg, Factset. Data as of July 18, 2025. Guidance as of July 21, 2025, based on a tactical, 12-month horizon. Note: ++ is most attractive; + moderately attractive; 0 neutral; - moderately unattractive; and -- most unattractive. Percentages represent 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

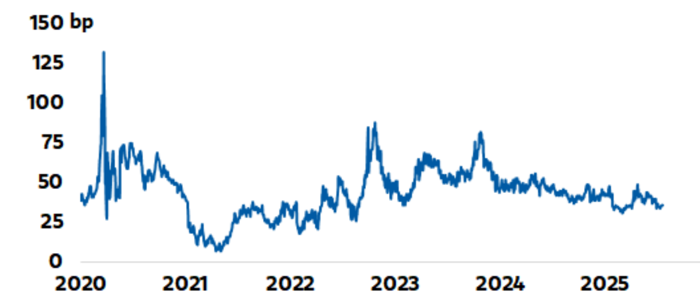


US Treasuries: Yields by Tenor

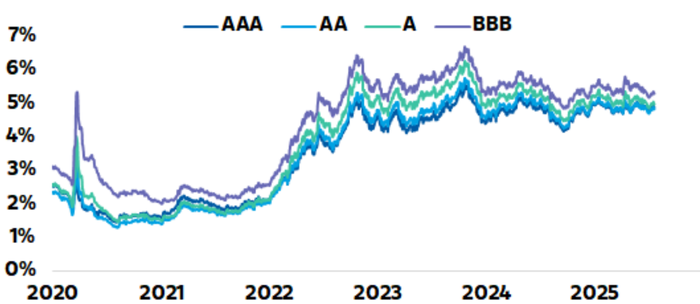


Agency MBS: Yield to Worst

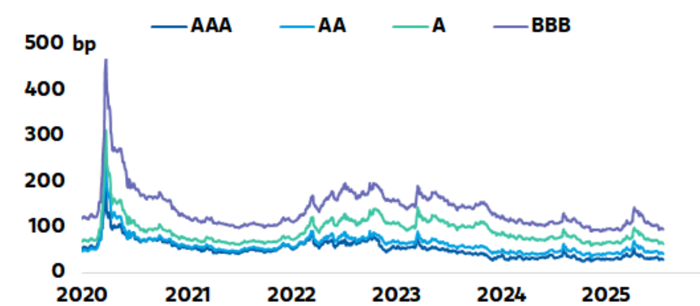
Agency MBS: Option-Adj. Spread



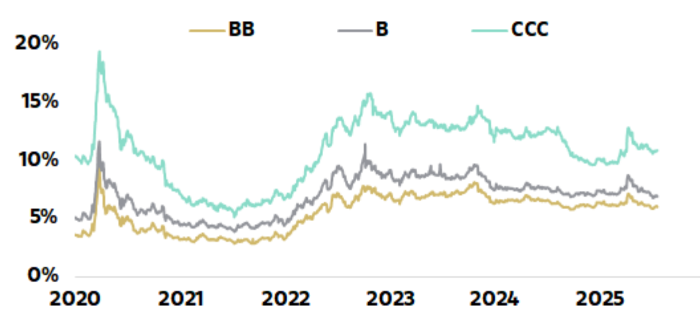
Investment Grade Corporates: Yields to Worst



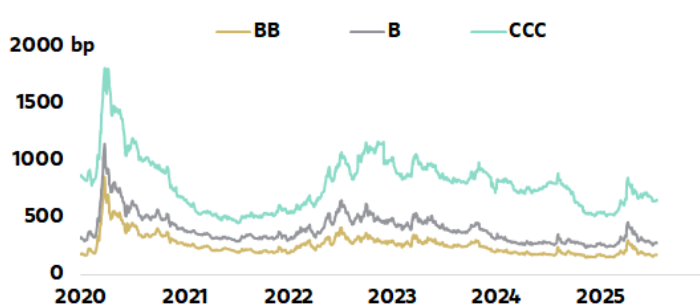
Investment Grade Corporates: Option-Adjusted Spread



High Yield Corporates: Yields to Worst



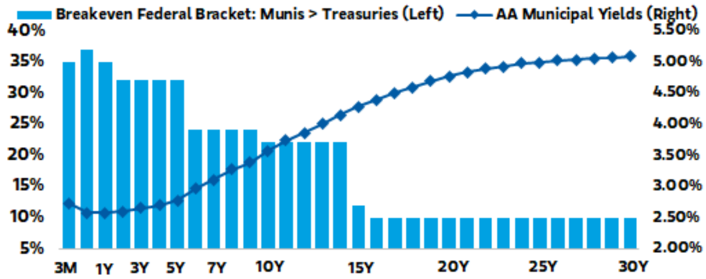
High Yield Corporates: Option-Adjusted Spreads



Source: Morgan Stanley Wealth Management GIO, Bloomberg. Data as of July 18, 2025.

Municipal Fixed Income Strategy and Market Data

- **Allocation:** We recommend keeping high-quality municipals as a focus within broader asset allocations, given their defensive characteristics. Municipal yields offer fair tax-advantaged income and total-return prospects.
- **Yield Ratios:** From a long-term perspective, relative valuations appear fair across the curve, with potentially greater value on the longer end.
- **Brackets:** For investors in the highest tax brackets, municipals offer an after-tax yield advantage across the curve.



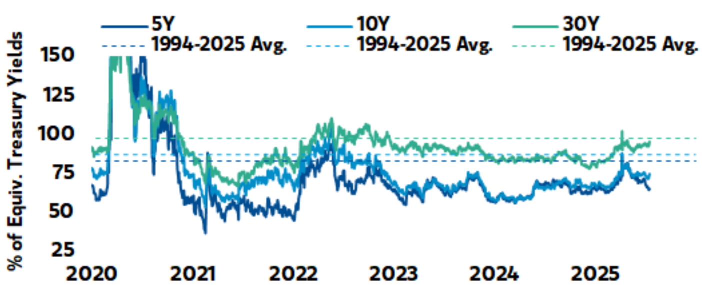
Municipal Ladder Monitor *Based on Bbg. Managed Money Indices*	Yield-to-Worst (YTW)	Option-Adj. Duration	Breakeven Fed. Bracket
Short (1–5Y)	2.57%	2.74	32%
Short/Intermediate (1–10Y)	2.90%	4.67	32%
Intermediate (1–15Y)	3.38%	6.25	22%
Long (1–30Y)	4.64%	10.41	10%

Source: Bloomberg, Morgan Stanley Wealth Management GIO. Data as of July 18, 2025.

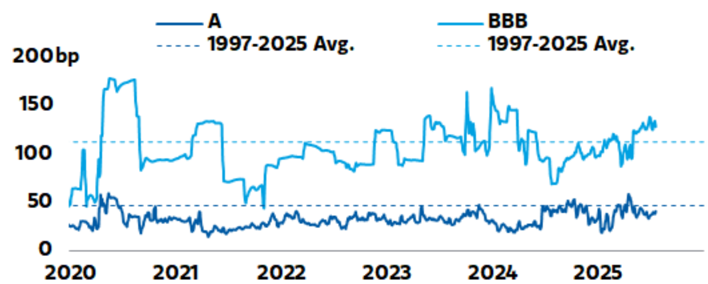
Allocation and Positioning Strategy

Duration (Bloomberg Municipal = 7.15)	Rationale
-- - 0 + ++ Lower — Higher	Given our expecation for rate volatility to remain elevated in the near term, we suggest a neutral stance, as it may take time for a clear direction in rates to emerge. Longer-term securities may serve as better equity diversifiers, however, with macro risk skewed to the downside.
Curve Strategy	
Ladder — Barbell	The 10-to 20-year segment offers considerable yield pick-up for extending out the curve. The one-to 10-year segment, however, will likely continue to benefit from structurally higher demand. As such, return prospects for ladder vs. barbell strategies appear fairly balanced.
Credit Quality	
High — Low	With credit spreads relatively tight, we recommend a defensive stance, given slowing economic growth, mounting budgetary pressures, and the risk of reduced support from the federal government.

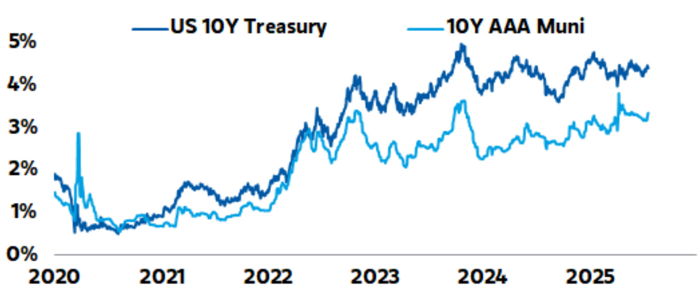
Ratios: Muni-to-Treasury Yields



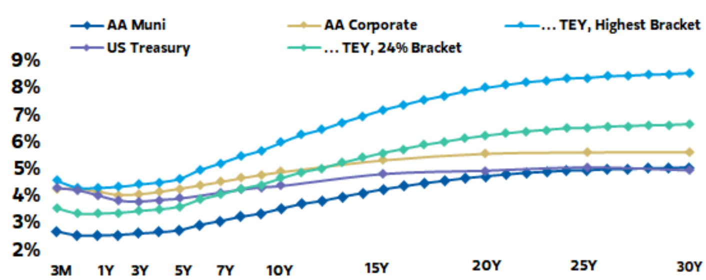
Credit Spreads vs. AAA Munis



10Y Yields: Treasury vs. AAA Muni



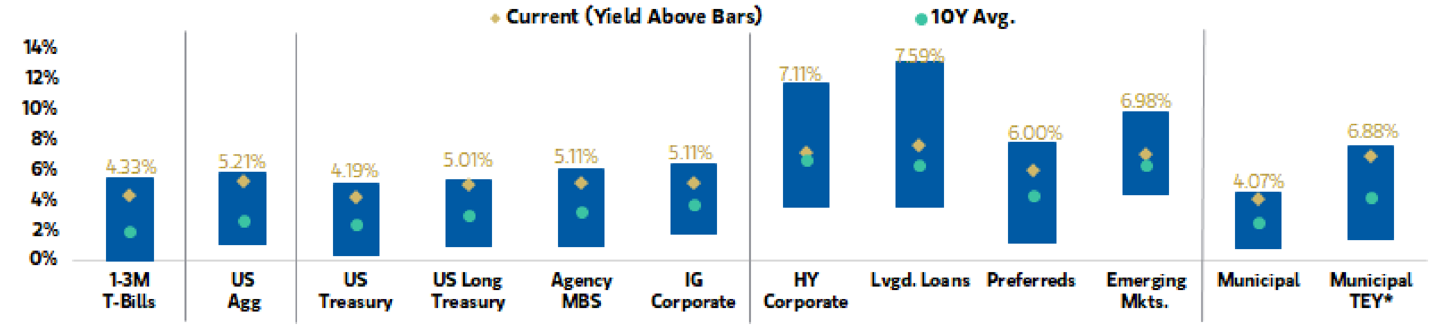
Yield Curves: Treasuries vs. Munis



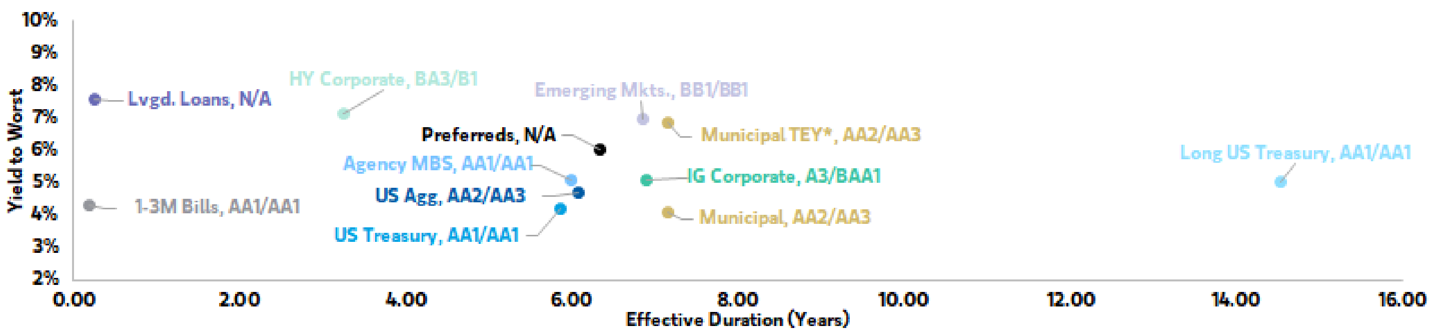
Source: Morgan Stanley Wealth Management GIO, Bloomberg. Data as of July 18, 2025. Note: We have limited the top-left chart's maximum value to 150% in order to make current comparisons more visible.

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

2015	2016	2017	2018	2019	2020	2021
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%
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%
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%
Treasury 0.84%	IG Corporate 6.11%	IG Corporate 6.42%	Treasury 0.86%	HY Corporate 14.32%	Treasury 8.00%	Municipal 1.52%
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%
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%
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%
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%
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%
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%
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%

2022	2023	2024	2025	3M	1M	1W
1-3M Bills 1.52%	HY Corporate 13.45%	Lvgd. Loans 8.76%	Emerging Mkts. 5.44%	HY Corporate 4.89%	HY Corporate 1.39%	TIPS 0.32%
Lvgd. Loans -0.70%	Lvgd. Loans 13.17%	HY Corporate 8.19%	HY Corporate 4.70%	Emerging Mkts. 4.33%	Lvgd. Loans 1.27%	Lvgd. Loans 0.19%
Municipal -8.53%	Emerging Mkts. 10.45%	Emerging Mkts. 5.73%	TIPS 4.69%	Lvgd. Loans 4.03%	Emerging Mkts. 1.25%	IG Corporate 0.16%
HY Corporate -11.19%	IG Corporate 8.52%	1-3M Bills 5.32%	Lvgd. Loans 3.91%	IG Corporate 2.47%	TIPS 0.98%	HY Corporate 0.14%
Agency MBS -11.81%	Municipal 6.40%	IG Corporate 2.13%	IG Corporate 3.48%	TIPS 1.79%	IG Corporate 0.57%	1-3M Bills 0.09%
TIPS -11.85%	US Agg 5.53%	TIPS 1.84%	Agency MBS 3.42%	Agency MBS 1.30%	Agency MBS 0.48%	US Agg 0.04%
Treasury -12.46%	1-3M Bills 5.14%	US Agg 1.25%	US Agg 3.22%	US Agg 1.22%	1-3M Bills 0.39%	Treasury 0.01%
US Agg -13.01%	Agency MBS 5.05%	Agency MBS 1.20%	Treasury 2.88%	1-3M Bills 1.08%	US Agg 0.36%	Agency MBS -0.04%
IG Corporate -15.76%	Treasury 4.05%	Municipal 1.05%	1-3M Bills 2.37%	Treasury 0.44%	Treasury 0.16%	Emerging Mkts. -0.10%
Emerging Mkts. -16.45%	TIPS 3.90%	Treasury 0.58%	Long Treasury 0.28%	Municipal 0.31%	Municipal -0.69%	Long Treasury -0.47%
Long Treasury -29.26%	Long Treasury 3.06%	Long Treasury -6.41%	Municipal -1.39%	Long Treasury -1.07%	Long Treasury -0.89%	Municipal -1.13%

Source: Morgan Stanley Wealth Management GIO, Bloomberg. Data as of July 18, 2025. 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; 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

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.

Equity risk premium is the excess return that an individual stock or the overall stock market provides over a risk-free rate. The risk-free rate represents the interest an investor would expect from an absolutely risk-free investment over a specified period of time.

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.

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.

Real Gross Domestic Product (GDP) is the GDP of the country measured at current market prices and adjusted for inflation or deflation.

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.

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.

Floating-rate securities The initial interest rate on a floating-rate security may be lower than that of a fixed-rate security of the same maturity because investors expect to receive additional income due to future increases in the floating security's underlying reference rate. The reference rate could be an index or an interest rate. However, there can be no assurance that the reference rate will increase. Some floating-rate securities may be subject to call risk.

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.

Because of their narrow focus, **sector investments** tend to be more volatile than investments that diversify across many sectors and companies. Risks applicable to companies in the **energy and natural resources sectors** include commodity pricing risk, supply and demand risk, depletion risk and exploration risk.

Environmental, Social and Governance ("ESG") investments in a portfolio may experience performance that is lower or higher than a portfolio not employing such practices. Portfolios with ESG restrictions and strategies as well as ESG investments may not be able to take advantage of the same opportunities or market trends as portfolios where ESG criteria is not applied. There are inconsistent ESG definitions and criteria within the industry, as well as multiple ESG ratings providers that provide ESG ratings of the same subject companies and/or securities that vary among the providers. Certain issuers of investments may have differing and inconsistent views concerning ESG criteria where the ESG claims made in offering documents or other literature may overstate ESG impact. ESG designations are as of the date of this material, and no assurance is provided that the underlying assets have maintained or will maintain and such designation or any stated ESG compliance. As a result, it is difficult to compare ESG investment products or to evaluate an ESG investment product in comparison to one that does not focus on ESG. Investors should also independently consider whether the ESG investment product meets their own ESG objectives or criteria. There is no assurance that an ESG investing strategy or techniques employed will be successful. Past performance is not a guarantee or a dependable measure of future results.

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.

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