

# FIXED INCOME



# US Bonds

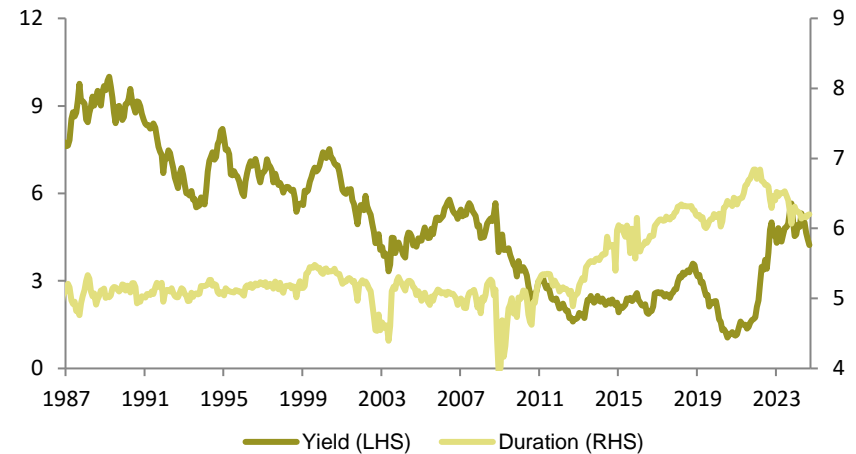
Facts & Figures Third Quarter 2024

Core US bonds had a strong third quarter as inflation cooled and the Fed embarked on a potentially prolonged rate cutting cycle. The market and the Fed are now pricing in around 150 bps of further easing over the next 12 months, but inflation and the labor markets will need to continue cooling down as expected.

- The Bloomberg US Aggregate Bond Index returned 5.2% in 3Q and is now up 4.4% YTD in 2024.
- Performance of core fixed income assets like US Treasuries was boosted in 3Q as the Fed cut 50 bps at its September meeting and released projections indicating it expected to cut rates another 150 bps by the end of 2025.
- Softer labor market data and inflation readings had strengthened the case for the Fed cut. The August core PCE reading (2.7% YOY) was above the Fed's target but has fallen more than 110 bps over the past year.
- While market expectations for future Fed easing sync with those provided by the Fed, forecasts can and do change. The unexpectedly strong September nonfarm payroll data highlights one potential argument against extensive easing.
- The Bloomberg US Aggregate Bond Index yield fell almost 80 bps in 3Q to 4.23% but remains above its ten-year average.
- The Bloomberg Aggregate Index has a high-quality asset mix—over 70% of the index carries an AA or higher rating, and most of this is either a direct or indirect obligation of the federal government. Just about 12% of the index consists of corporate bonds carrying a rating of BBB or below.
- The duration of the Bloomberg US Aggregate index (around 6 years) has declined as rates have backed up but leaves it vulnerable to unexpected spikes in long-term yields.
- Credit spreads declined in 2023 and are now well below historical averages. Still, US IG corporate fundamentals remain healthy as rising earnings are helping to somewhat offset higher interest costs.

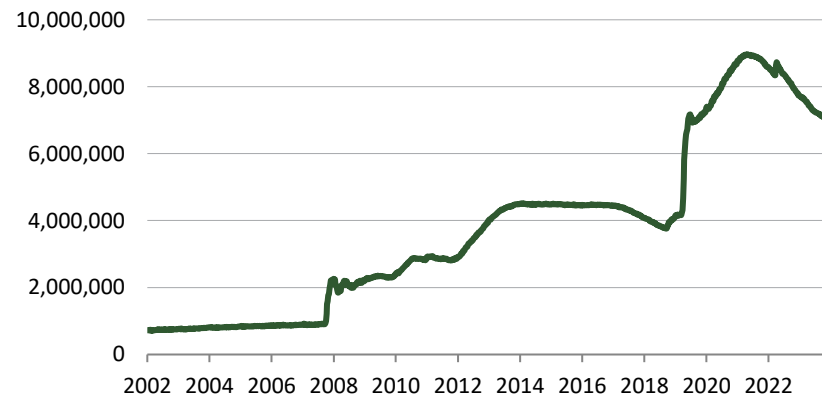
## YIELD VS DURATION: BBG US AGGREGATE BOND INDEX

Jan 31, 1987 – Sep 30, 2024



## FED BALANCE SHEET TOTAL ASSETS

Dec 18, 2002 – Sep 30, 2024 • US\$M



Sources: Bloomberg Index Services Limited, Federal Reserve Bank of St. Louis, and Thomson Reuters Datastream.

Notes: Fed balance sheet assets are weekly and not seasonally adjusted. Total assets are less eliminations from consolidation.

# US Treasuries

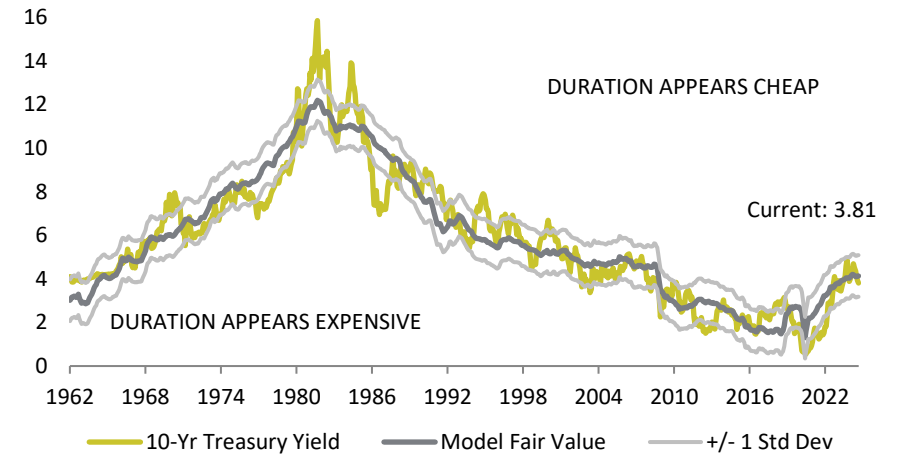
Facts & Figures Third Quarter 2024

US Treasury securities returned 4.7% in 3Q and 9.7% over the trailing 12-months, outperforming US cash (1.4% and 5.5%) over both periods. The outperformance was driven by weaker inflation and jobs data, which prompted the Fed to start cutting rates in September.

- Ten-year US Treasury notes were yielding 3.8% on Sept 30, which is about 60 bps below where they started the quarter and 90 bps below their 2024 peak of 4.70%.
- Treasury valuations are not longer as attractive given the decline in yields. Ten-year yields are now 0.3 standard deviation below their implied fair value yield of 4.1%, which is based on the trend in the nominal growth rate of the economy.
- Performance is now positive on a rolling 12-month basis. However, performance remains deeply depressed on a trailing three-year basis, suggesting there may still be more upside to the recent rally.
- Similarly, the macro environment is more conducive for high-quality bonds than it has been in recent years. US economic growth remains resilient, but both the jobs and inflation data have softened this year—the unemployment rate has risen from its low of 3.4% in 2023 to 4.1% and annual core CPI is 3.3%, down from 4.4% a year ago.
- The Fed believes inflation and employment risks have moved back into balance, and as a result, it began cutting rates in September with a larger than usual 50-bp cut. It projects it will lower the target range for the Fed funds rate by another 150 bps by the end of 2025, bringing the median rate from 4.9% to 3.4%. This is slightly less than what interest rate traders expect over this period (around 200 bps), making Treasury securities vulnerable to a repricing in rate expectations.
- The inverted Treasury yield curve also remains a headwind, but this should reverse as the curve steepens if the Fed cuts rates as much as projected over the next year.
- The US fiscal outlook is another risk. The CBO's latest projections show the deficit near 6% of GDP for much of the next ten years—significantly more than the 3.7% average over the past 50 years. A Republican sweep in the November election could exacerbate fiscal concerns.

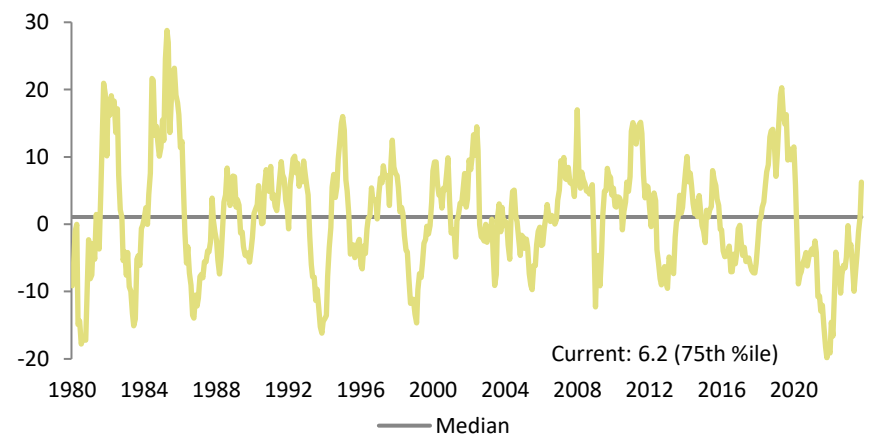
## VALUATIONS: 10-YR TREASURY

Jan 31, 1962 – Sep 30, 2024 • Percent (%)



## 12-MONTH PRICE MOMENTUM: 10-YR TREASURY

Dec 31, 1980 – Sep 30, 2024 • Percent (%)



Sources: Federal Reserve and Thomson Reuters Datastream.

Note: The Model Fair Value is the predicted range of ten-year yields based on a multiple linear regression model that includes trailing ten-year real GDP and CPI change. CPI data are as of August 31, 2024.

# US Cash

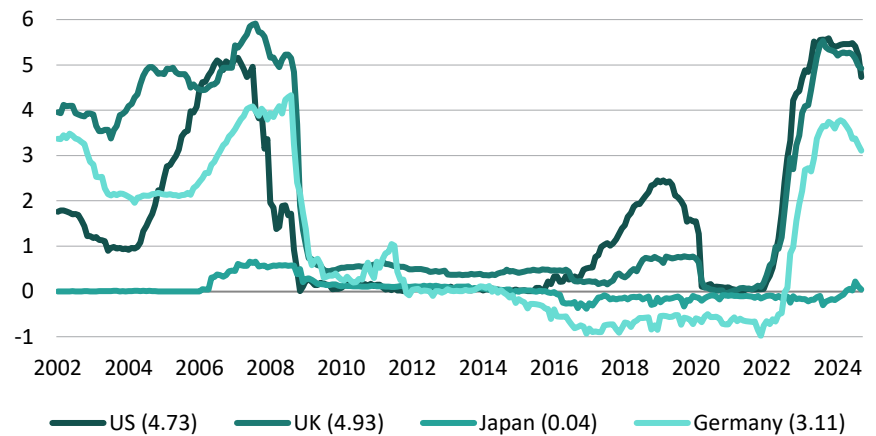
Facts & Figures Third Quarter 2024

US cash has returned 5.5% versus 9.7% for US Treasuries over the trailing 12 months, marking the first time that cash has underperformed bonds over this period since January 2021. The outlook for cash turned less favorable in 3Q with central banks starting to cut rates and Treasury yield curves steepening in most major developed markets.

- DM central banks aggressively raised interest rates in recent years to bring down inflation, but their policy stance shifted in 3Q. The Fed, ECB, and BOE each lowered their main policy rates last quarter and even the BOJ, which is tightening policy, provided more dovish forward guidance. Interest rates markets project each of the three former central banks will lower rates by another 140 bps–200 bps over the next 12 months.
- Monetary tightening has increased cash yields above treasury yields, reducing the opportunity cost of holding cash. While cash yields remain above Treasury yields, yield curves steepened in 3Q, and cash yields should move below treasury yields if DM central banks lower rates as much as expected over the next 12 months.
- Cash has been a stable source of returns in recent yields as central banks aggressively raised rates to fight inflation. However, holding cash for an extended period would be challenging, given the risk that inflation erodes the value of cash in real terms and the opportunity costs of not investing in assets with higher expected returns over longer periods. Additionally, reinvestment risk will likely increase as central banks cut rates and the yield curve steepens.
- Cash holdings are important for liquidity needs, particularly for investors with heavy operational spending, significant unfunded commitments, or that have currency and other hedging overlays. US investors should stick to secure instruments such as US T-bills. In the eurozone, cash should be kept in a core country bank within prudent limits.
- For investors that use money market funds, we recommend Treasury and government funds. Prime funds invest in bank commercial paper, corporate notes, and other credits and may have gating and floating-NAV provisions, making them slightly riskier.

## T-BILL RATES

Jan 31, 2002 – Sep 30, 2024 • Percent (%)



## MARKET EXPECTATIONS FOR FUTURE CENTRAL BANK RATES

As of Sep 30, 2024 • Percent (%)

	CURRENT	3M	6M	1Y	2Y
UK	5.00	4.67	4.23	3.56	3.39
Japan	0.25	0.32	0.39	0.45	0.59
EMU	3.50	3.02	2.37	1.85	1.83
US	4.88	4.16	3.57	2.96	2.81

Sources: Bloomberg L.P. and Thomson Reuters Datastream.

Notes: ECB data represented by the ECB overnight deposit rate. Feds funds target range is 4.75%-5.00%. The mid-point of 4.88% is used for future market expectations.

# US Corporate Bonds

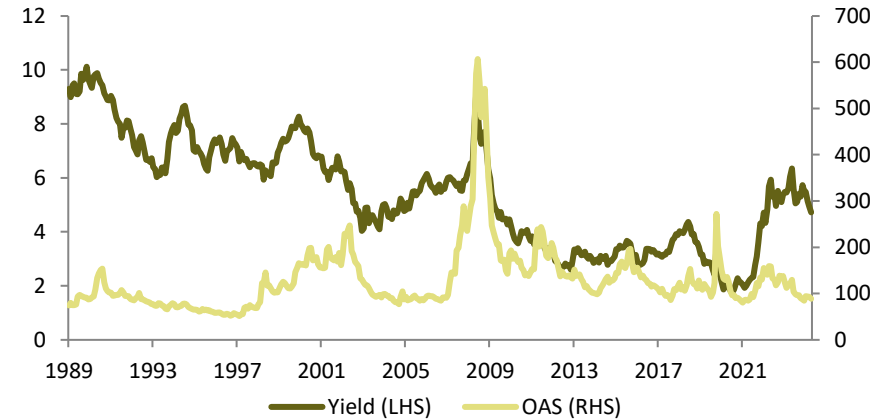
Facts & Figures Third Quarter 2024

US investment-grade corporate bonds returned 5.8% in 3Q, reversing minor first-half losses and putting the index firmly in the black YTD. Further Fed rate cuts could boost returns, but any upside surprises to inflation or growth could cool sentiment.

- The Bloomberg Corporate Investment-Grade Index returned 5.8% in 3Q and is now up 5.3% YTD 2024.
- Spreads tightened slightly in 3Q (by 5 bps to 0.89%) and look expensive on a historical basis (25<sup>th</sup> percentile). The index spread is a bit deceptive, however, as its average credit rating has declined over time. Looking at individual categories suggests IG bonds are more expensive; for example, the 46 bps OAS on AA-rated bonds is just 14<sup>th</sup> percentile.
- Yields have compressed around 100 bps since their highs earlier this spring as cooling inflation and economic growth caused medium-term benchmark yields to decline. In September, the Fed cut its benchmark interest rate by 0.50% and signaled that more easing is coming. The 4.72% index yield at the end of 3Q remains above its ten-year average.
- Spreads look expensive but IG corporate fundamentals look sound. Morgan Stanley reports the median interest coverage ratio for investment-grade corporate borrowers was 10.6x at the end of 2Q. IG issuer net income growth was modest during 1H 2024 but is expected to accelerate in 2025, leading to further improvement in debt coverage metrics.
- New issue supply has been elevated YTD with around \$675B of net issuance through 3Q compared to FY 2023 IG issuance of \$561B.

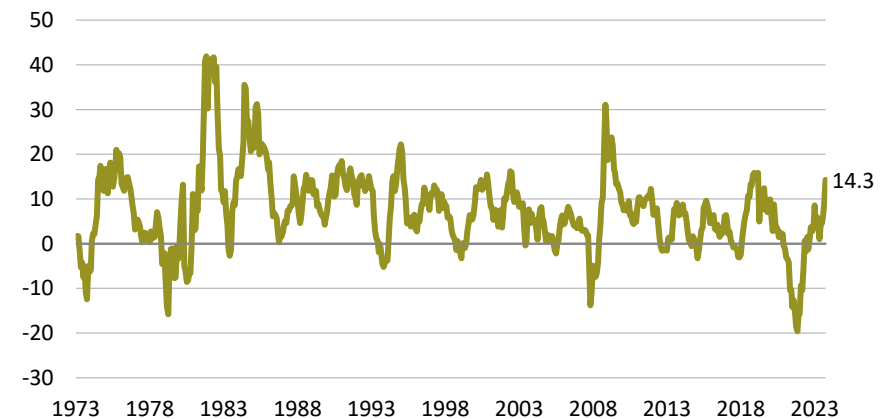
## YIELD AND OPTION-ADJUSTED SPREAD: US INVESTMENT-GRADE CORPORATES

Jun 30, 1989 – Sep 30, 2024 • Percent (%)



## TRAILING 12-MONTH RETURN: US INVESTMENT-GRADE CORPORATES

Dec 31, 1973 – Sep 30, 2024 • Percent (%)



Sources: Bloomberg Index Services Limited and Thomson Reuters Datastream.

# US Tax-Exempt Bonds

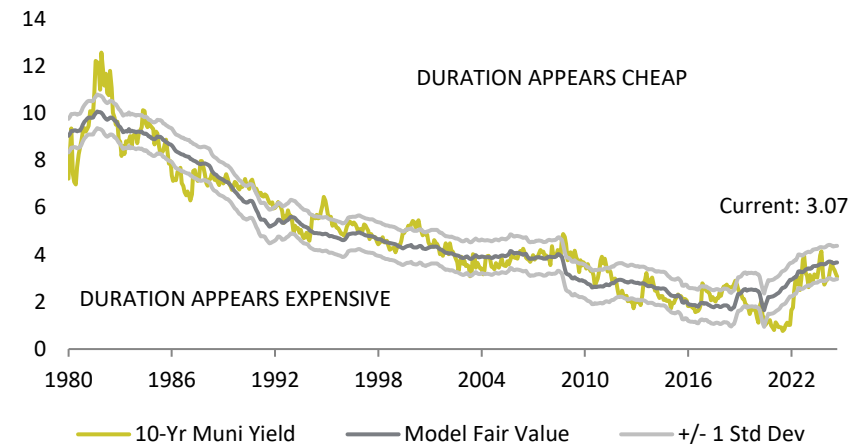
Facts & Figures Third Quarter 2024

US munis returned 2.7% in 3Q and 10.4% over the trailing 12-months, slightly outperforming taxable bonds over the latter period. The strong performance has occurred alongside a significant decline in Treasury yields and positive fundamentals and technicals for the muni market.

- US Treasury yields peaked in late-2023 as it became clear the Fed was done tightening. Since then, ten-year muni yields have declined from a peak of 4.2%, their highest level since 2009, to 3.1% as of Sept 30.
- Ten-year muni valuations are expensive based on current yields. While current yields are in the 60th percentile of their trailing 20-year distribution, they are well below their implied fair value of 3.7% based on the average muni/Tsy ratio and long-term economic fundamentals.
- As a buy-and-hold investment for high tax bracket individuals, ten-year munis still offer a reasonable 106 bps yield pick-up over Treasury securities after taxes, which is slightly below the trailing 20-year median of 141 bps.
- Munis are less appealing from a tactical perspective. The current ten-year muni/Tsy ratio of 0.81 is low (23rd percentile) and the spread (-74 bps) remains near the lower end of its trading range since 2000.
- The macro-environment remains uncertain, but both US economic data releases and inflation prints have moderated somewhat after surprising to the upside in the 1Q and the Fed began cutting rates in September. This should support high-quality bonds broadly.
- Retail investors, which own about 70% of the muni market, pulled a record \$120B from muni mutual funds and ETFs in 2022. Flows stabilized last year and have become a tailwind in 2024, with total inflows of \$26B through 38 weeks.
- Robust state and local finances have helped reign in issuance and support fundamentals. According to NASBO, combined state ending balances and rainy-day funds are projected to total 23% of proposed spending in 2024, well exceeding pre-COVID levels.
- Munis would still likely lag Treasuries in a flight to quality given their illiquid nature, but the risk of default among high-quality muni issuers is low and the sector is well prepared for a slowdown.

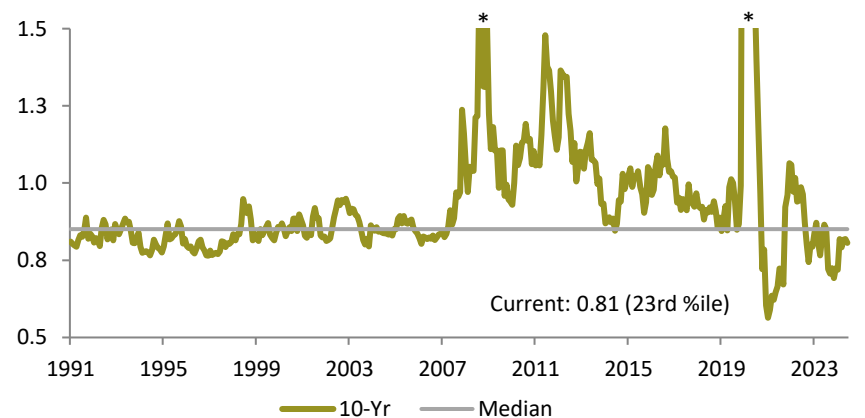
## VALUATIONS: 10-YR MUNI

Jan 31, 1980 – Sep 30, 2024 • Percent (%)



## RATIO OF 10-YR MUNI YIELDS TO TREASURY YIELDS

Apr 30, 1991 – Sep 30, 2024



\* Axis is capped for scaling purposes. Ratio hit a high of 3.16 on 4/30/2020.

Sources: Bloomberg Index Services Limited and Thomson Reuters Datastream.

Note: The Model Fair Value is the predicted range of ten-year yields based on a multiple linear regression model that includes trailing ten-year real GDP and CPI change. CPI data are as of August 31, 2024.

# US Inflation-Linked Bonds

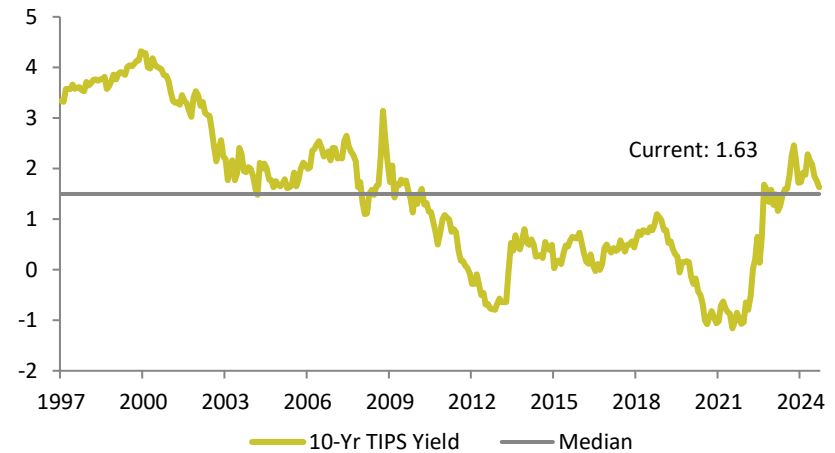
Facts & Figures Third Quarter 2024

US TIPS returned 4.1% in 3Q and 9.8% over the trailing 12-months, which is less than what nominal Treasury securities return in 3Q (4.7%) but in line with their return over the previous year (9.7%). TIPS have performed well amid a sharp decline in real yields, while inflation expectations have been rangebound.

- US ten-year TIPS were yielding 1.6% on Sept 30, which is over 40 bps below where they started the quarter and about 90 bps below their recent peak of 2.5% in 4Q 2023.
- US TIPS valuations are less attractive than they were a few months ago. Ten-year real yields are only slightly above their long-term median of 1.5% and their implied fair value yield of 1.4%, which is based on trailing ten-year real GDP growth.
- The decline in real yields accelerated following a soft patch of US economic data over the summer, highlighted by revisions to employment data that showed jobs growth was weaker than previously thought over the past year. At the same time, inflation has softened following upside surprises to start the year. Annual US core CPI is 3.3%, down from 4.4% a year ago.
- This prompted a reassessment of the future path of policy rates. The Fed, which began cutting rates in September with a larger than usual 50-bp cut, projects it will lower the target range for the Fed funds rate by another 150 bps by the end of 2025. That would bring the median rate from 4.9% to 3.4%. This is slightly less than what interest rate traders expect over this period (around 200 bps).
- Weaker data has put modest downward pressure on inflation expectations. The ten-year breakeven inflation rate is 2.2%, which is near the bottom-end of its trading range over the previous year.
- TIPS are contractually linked to CPI and less liquid than Treasuries, which has led to them underperforming Treasuries when inflation is falling and during periods of markets stress.
- TIPS are one of the few assets that provide defense against unexpectedly high inflation. TIPS may offer more value if inflation is stickier than expected given higher real yields and relatively subdued breakeven inflation rates for the current environment.

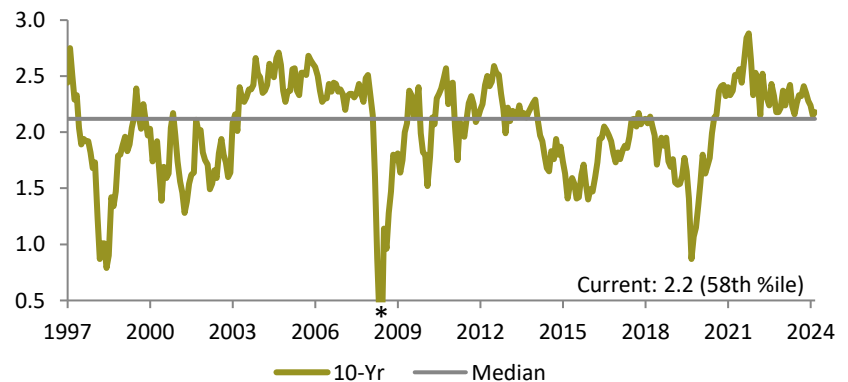
## HISTORICAL YIELD: 10-YR TIPS

Jan 31, 1997 – Sep 30, 2024 • Percent (%)



## 10-YR BREAKEVEN INFLATION

Jul 31, 1997 – Sep 30, 2024 • Percent (%)



\* Capped for scale purposes. 10-Yr BE Inflation hit a low of 0.11% on 12/31/2008.

Sources: Bloomberg Index Services Limited, Global Financial Data, Inc., and Thomson Reuters Datastream.

# Global Inflation-Linked Bonds

Facts & Figures Third Quarter 2024

Global linkers returned 3.2% in 3Q and 8.1% over the trailing 12-months. The strong performance comes as major central banks have started to cut rates, which has driven real yields lower, while inflation expectations have been rangebound.

- Global treasury yields peaked in 4Q 2023, with real yields reaching as high as 1.9%, their highest level since 2009. Since then, there has been a sharp decline in yields and global real yields are currently 1.3%.
- Global linkers valuations are still relatively attractive based on current real yields. Global real yields have moved back in line with their long-term median for the first time since 2010 and are 0.7 standard deviation above their implied fair value yield of 0.7%, which is based on trailing ten-year real global GDP growth.
- Real yields have moved lower as inflation has eased and central banks have shifted from tightening to easing monetary policy in major economies. The ECB lowered its main policy rate by 25 bps in June, and again in September, the BOE cut rates 25 bps in August, and the Fed cut rates 50 bps in September. All three central banks are projected to cut rates by 140 bps–200 bps over the next 12 months.
- Consensus expects inflation in DMs will be 3.7% in 2024 and 2.7% in 2025, down from 5.7% in 2023. The anticipated continued decline in inflation has put modest downward pressure on inflation expectations in many DMs, which was a headwind to global linkers versus nominals treasury bonds in 3Q.
- While lower policy rates are positive for real yields, continued disinflation and/or weaker-than-expected growth are potential headwinds for linkers versus nominal treasury bonds. Linkers are contractually linked to inflation and less liquid than Treasuries, which has caused them to underperform when inflation is falling and in periods of economic/market stress.
- Linkers are one of the few assets that protect against unexpectedly high inflation. Linkers may offer more value if inflation continues to be stickier than expected given higher real yields and relatively subdued breakeven inflation rates in most DM countries.

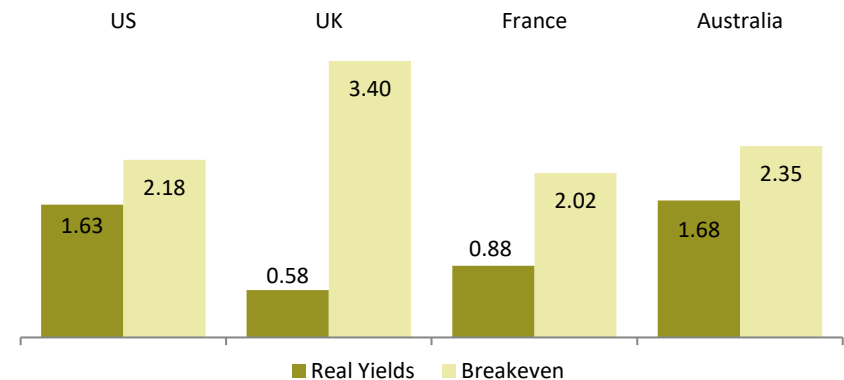
## HISTORICAL INDEX YIELD: BBG GLOBAL LINKERS

Dec 31, 1996 – Sep 30, 2024 • Percent (%)



## 10-YR REAL YIELDS AND BREAKEVEN INFLATION

As of Sep 30, 2024 • Percent (%)



Sources: Bloomberg Index Services Limited and Thomson Reuters Datastream.

Notes: France data are based on the underlying securities within the Bloomberg Global Agg Treasuries and Bloomberg World Govt Inflation-Linked indexes. All other data are based on the Bloomberg real yield and breakeven series.



# UK Gilts

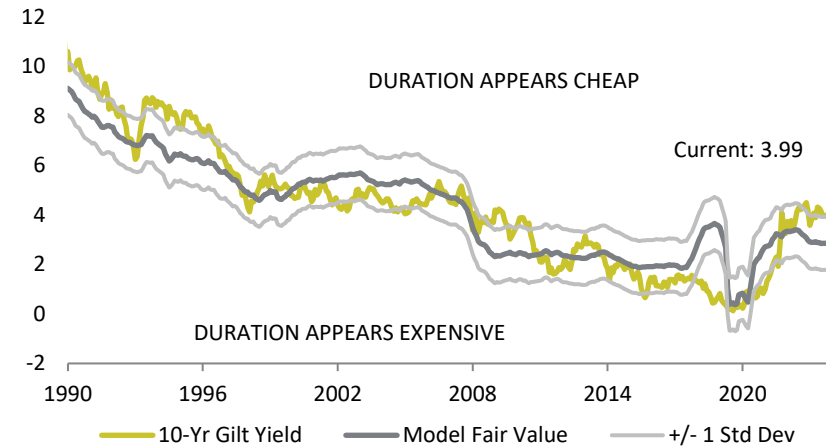
Facts & Figures Third Quarter 2024

UK gilts returned 2.4% in 3Q and 8.0% over the trailing 12-months in local currency terms, outperforming UK cash (1.4% and 5.4%) over both periods. The strong performance coincides with weaker domestic inflation and economic data, which raised odds the Bank of England (BOE) will ease policy more than previously anticipated.

- Ten-year gilts were yielding 3.99% as of Sept 30, which is roughly 40 bps above where they started the year but well below their trailing 12-month peak of 4.7%.
- Despite the decline in yields, gilt valuation remain somewhat attractive in absolute terms and relative to US Treasury securities. UK ten-year yields are 1.1 standard deviations above their implied fair value yield of 2.9%, which is based on the trend in the nominal growth rate of the economy.
- Performance is now positive on a trailing 12-month basis. However, performance remains deeply depressed on a trailing three-year basis, suggesting there may still be more upside to the recent rally.
- Additionally, stagnant domestic growth and lower inflation have opened the door to rate cuts, which should support gilt yields. The UK economy rebounded in 1H 2024 with GDP growing at a 2.3% annualized rate, which is above its ten-year average (1.3%), but it has flatlined for two straight months. UK annual core CPI was 3.6% in August, down from 6.2% a year ago.
- As a result, the BOE began cutting rates in August by lowering the main bank rate 25 bps to 5.0%. Interest rate traders expect it will lower rates by around 150 bps over the next 12 months.
- The combination of the UK's relatively small, open economy and its fiscal position is a risk for gilts markets. The OBR projects the UK debt-to-GDP ratio will rise to 274% over the next 50 years, compared with less than 100% today. Its unlikely the outcome of the recent UK election will materially impact the UK's fiscal outlook. At the same time, the BOE plans to keep reducing gilt holdings by £100B this fiscal year.
- The inverted gilt yield curve remains a headwind, but this should abate if the BOE cuts rates as much as expected and the curve steepens.

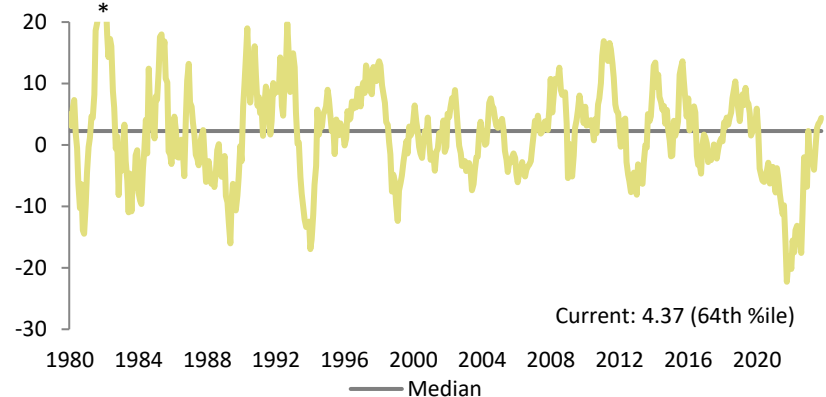
## VALUATIONS: 10-YR GILTS

Jan 31, 1979 – Sep 30, 2024 • Percent (%)



## 12-MONTH PRICE MOMENTUM: 10-YR GILTS

Dec 31, 1980 – Sep 30, 2024 • Percent (%)



\* Capped for scale purposes. The rolling 12-M Momentum was 44.5% in October 1982.

Source: Thomson Reuters Datastream.

Note: The Model Fair Value is the predicted range of ten-year yields based on a multiple linear regression model that includes trailing ten-year real GDP and RPI/CPI change. CPI data are as of August 31, 2024.

# UK Corporate Bonds

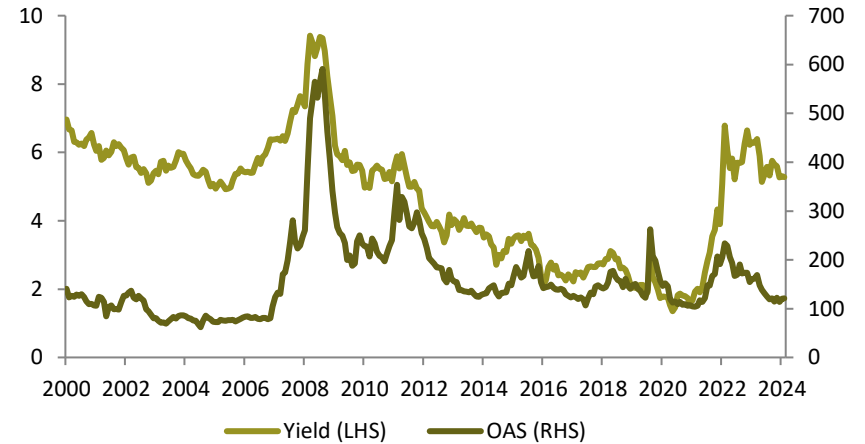
Facts & Figures Third Quarter 2024

Sterling-denominated investment-grade corporate bonds generated solid gains in 3Q, reversing first-half losses.

- Sterling investment-grade corporate bonds returned 2.4% in 3Q, putting them slightly in the black for 2024 YTD (2.0%).
- Yields fell around 30 bps in 3Q to 5.28% as underlying gilt yields were pulled lower by the August rate cut from the Bank of England (BOE)..
- The option-adjusted index spread has fallen 17 bps YTD to 121 bps, reflecting the 31st percentile of observed values.
- Investors may continue to be attracted by yields, which remain over 200 bps above their prior ten-year average (3.24%).
- The BOE cut its base rate to 5.0% in August. Declining inflation may allow scope for further easing at one of its remaining 2024 meetings. The August CPI reading of 2.2% was unchanged from July and close to the lowest in almost three years.
- The macro backdrop for UK corporate credit has slightly strengthened in recent months. In addition to easing inflation pressures and potential for further rate cuts, economic forecasts have been revised upward. The consensus now expects growth to hit 1.1% in 2024, below long-term averages but 40 bps above the level expected three months ago.
- Very low net issuance remains an ongoing technical tailwind for the market. Year to date issuance totals just GBP 19 billion.

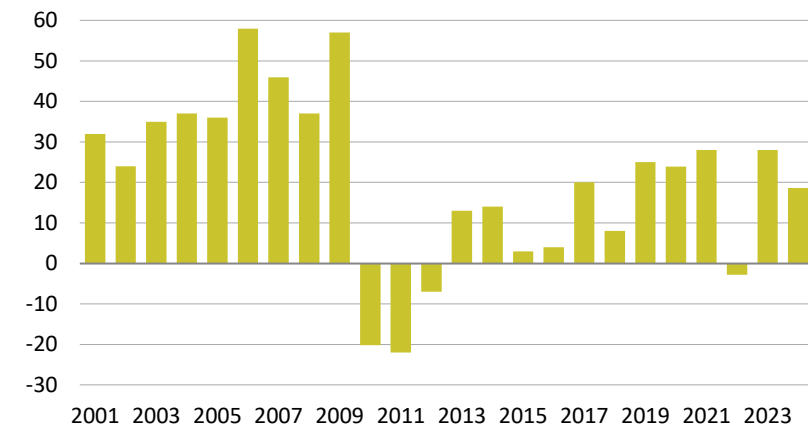
## YIELD AND OPTION-ADJUSTED SPREAD: STERLING CORPORATES

Aug 31, 2000 – Sep 30, 2024 • Percent (%)



## NET ANNUAL ISSUANCE: STERLING CORPORATES

2001-24 • Sterling (Billions)



Source: Bloomberg Index Services Limited.

Note: Issuance data for 2024 are through September 30.

# Euro Area Sovereign Bonds

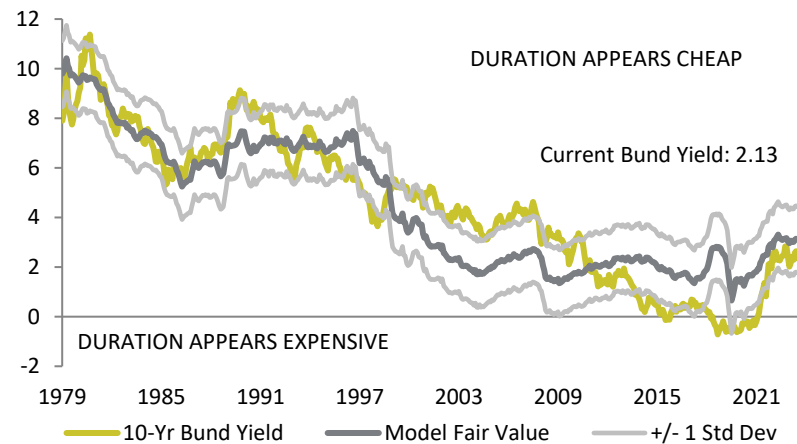
Facts & Figures Third Quarter 2024

Core EA sovereigns (i.e., German bunds) returned 3.2% in 3Q and 7.4% over the trailing 12-months in local currency terms, outperforming cash (1.0% and 4.2%) over both periods. The strong performance coincides with weaker domestic inflation and economic data, which raised odds the ECB will ease policy more than previously anticipated.

- Ten-year bunds were yielding 2.1% as of Sept 30, roughly 10 bps above where they started the year but off their trailing 12-month peak of 3.0%.
- Ten-year bund yields are well above their trailing 20-year median of 1.7%, but unlike other major DMs, valuations are unattractive. Ten-year yields are 0.7 standard deviations below their implied fair value yield of 3.1%, which is based on the trend in the nominal growth rate of the economy.
- Performance is now positive on a trailing 12-month basis. However, performance remains deeply depressed on a trailing three-year basis, suggesting there may still be more upside to the recent rally.
- Additionally, weak domestic growth and a sharp decline in inflation have opened the door to rate cuts, which should support bond yields. EA real GDP grew at a 1.0% annualized rate in 1H 2024, which is below its ten-year average monthly rate of growth (1.4%), and leading indicators are depressed. Preliminary annual EA core CPI was 2.7% in September, down from 4.5% a year ago.
- As a result, the ECB cut rates by 25 bps for the first time in June and a second time in September, bringing its deposit rate to 3.5%. Interest rate traders expect it will cut rates by another 165 bps over the next year.
- Increased coordination within the EA and structural reforms within the periphery have reduced fiscal risk and mostly kept EA spreads in check, despite the ECB reducing its bond holdings. According to Eurosystem projections, the EA budget deficit is estimated to steadily decline from 3.1% of GDP in 2023 to 2.6% in 2026.
- However, concerns about debt sustainability have risen in France following the recent election. The ten-year OATs-bunds spread has widened to just under 80 bps, one of the largest premiums outside of the 2011 debt crisis.
- The inverted bund yield curve remains a headwind, but this should abate if the ECB cuts rates as much as expected and the curve steepens.

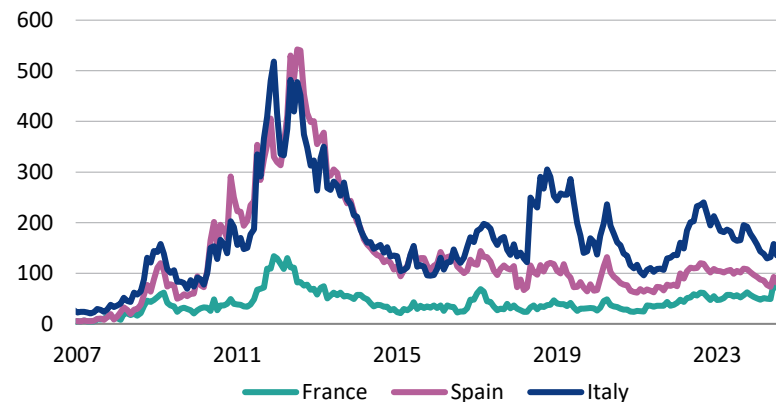
## VALUATIONS: 10-YR BUNDS

Dec 31, 1979 – Sep 30, 2024 • Basis Points (bps)



## HISTORICAL 10-YR SPREADS OVER BUND YIELDS

Jan 31, 2007 – Sep 30, 2024 • Basis Points (bps)



Source: Thomson Reuters Datastream.

Note: The Model Fair Value is the predicted range of ten-year yields based on a multiple linear regression model that includes trailing ten-year real GDP and CPI change.

# Euro Area Corporate Bonds

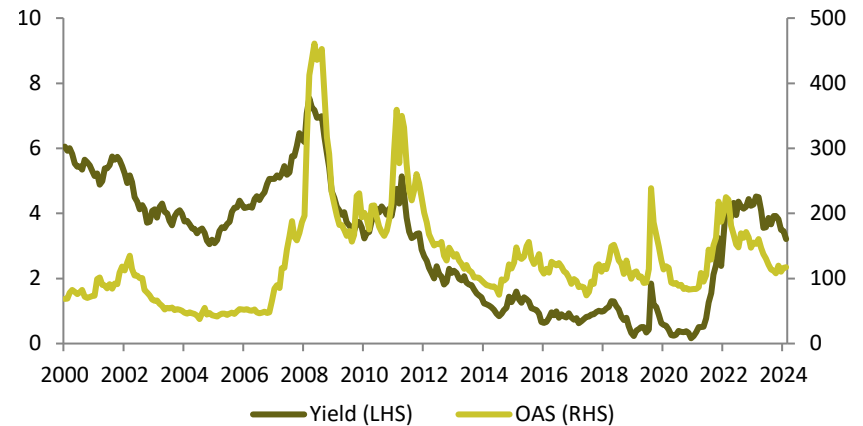
Facts & Figures Third Quarter 2024

The Bloomberg Euro-Aggregate Corporate Index generated a solid 3.3% return in 3Q, lifting its year-to-date return to 3.8%. Yields are collapsing as the ECB embarks on a rate easing cycle.

- The Bloomberg Euro-Aggregate Corporate Index returned 3.3% in 3Q, boosting its YTD return to 3.8% after a relatively flat first half.
- Yields on euro corporate bonds fell 60 bps in 3Q to 3.22%. Yields have declined around 130 bps since their cyclical peaks last fall.
- The corporate bonds OAS of 117 bps is very close to its historical median. This spread looks fairly valued relative to other international fixed-rate IG bond markets (e.g., the US) but declining index credit quality means there isn't a significant cushion for investors if fundamentals weaken.
- The macro backdrop is mixed for corporate bonds. The ECB has cut rates twice in 2024 to 3.5% given ebbing inflationary pressures. Lower rates should boost debt servicing capabilities. On the other hand, weak economic growth is not supportive for corporate earnings. The current consensus estimate for 2024 Eurozone GDP growth is just 0.7%.
- According to Morgan Stanley, Euro IG issuer Ebitda growth was flat in 2Q while debt levels grew slightly, resulting in slightly higher leverage ratios. Still, the main threat for investors in Euro corporate bonds is shifts in base rates, which result in mark-to-market losses as opposed to credit fundamentals. At the end of 2Q, median interest coverage for a Euro IG issuer was almost 9x.
- Issuance of Eurozone corporate bonds continues to rebound and totaled €153B during the first half, a pace well above that of full-year 2023.

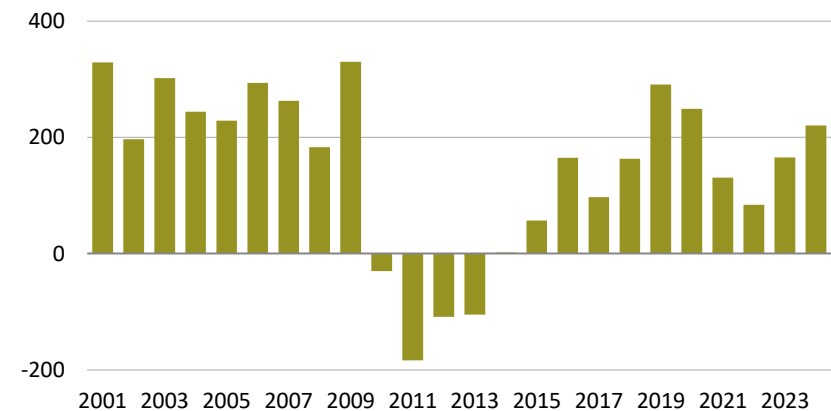
## YIELD AND OPTION-ADJUSTED SPREAD: EUROPEAN CORPORATES

Aug 31, 2000 – Sep 30, 2024 • Percent (%)



## NET ANNUAL ISSUANCE: EUROPEAN CORPORATES

2001-24 • Billions (EUR)



Source: Bloomberg Index Services Limited.

Note: Issuance data for 2024 are through September 30.

# Structured Finance

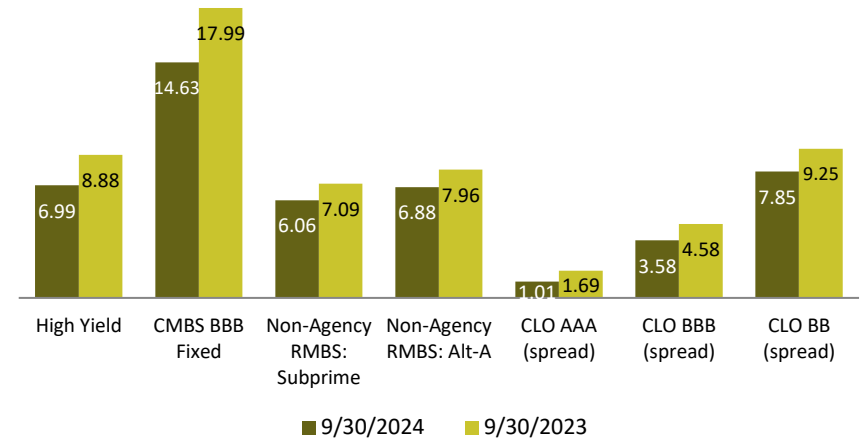
Facts & Figures Third Quarter 2024

Most parts of the structured credit market have generated healthy returns in 2024. Underlying corporate credit fundamentals have been boosted by resilient economic growth and some property-backed bonds have seen sentiment improve amid signs that fundamentals may be stabilizing.

- Most structured credit indexes posted positive returns in 3Q. Examples included CMBS bonds, with the Bloomberg US CMBS 2.0 Index returning 4.6%, lifting its YTD return to 7.8%.
- CMBS bonds are bouncing back despite write-downs being taken on specific transactions. Lower prices at the start of 2024 priced in a fair amount of bad news. The average price for bonds in the Bloomberg US BBB-rated CMBS Index has risen from 62 cents on December 31, 2023, to around 74 cents at the end of 3Q.
- Cooling inflation and labor market data have allowed the Fed to begin easing interest rates, in turn lowering coupons on floating-rate assets like CLO debt. Spreads on these assets remain above those on comparably rated corporate credit, providing an offset for investors.
- Fundamentals have held up reasonably well, but caution is warranted in some quarters. As examples, while defaults thus far in CLO pools have been limited, rising interest costs mean the leveraged loan default rate has risen to 3.7%. In a similar vein, delinquency rates on underlying loans in CMBS pools have risen around 130 bps over the past year to 5.7% given well-publicized struggles in categories like office and retail.
- Some structured credit assets are less liquid than corporate equivalents and often require specialized systems to analyze. Many also have indefinite maturities given amortizing loan pools. The result is a spread premium to similarly rated corporate debt.
- Investors can access structured credit through several vehicles and mandates, including mutual funds, hedge funds, and closed-end funds.

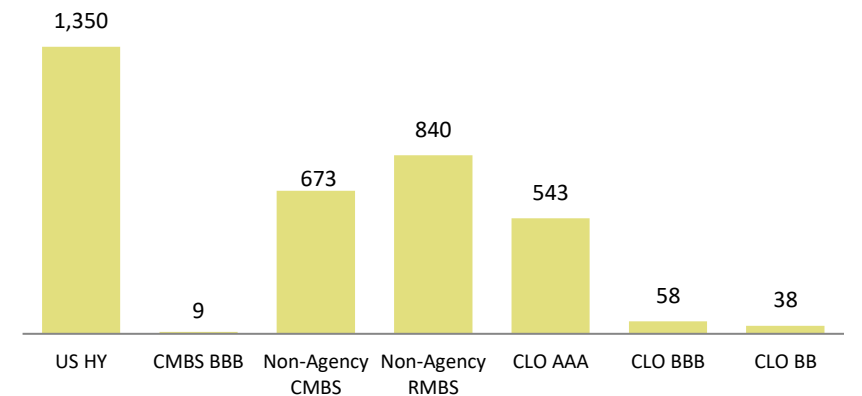
## YIELD: SELECT STRUCTURED CREDITS

Percent (%)



## MARKET CAP: SELECT STRUCTURED CREDITS

As of September 30, 2024 • US\$B



Sources: Bloomberg Index Services Limited, ICE BofA Merrill Lynch, J.P. Morgan Securities, Inc., Securities Industry and Financial Markets Association(SIFMA), and Thomson Reuters Datastream.

Notes: CLOs yield data are represented by discount margins. Non-Agency CMBS and Non-Agency RMBS market-cap data are as of December 31, 2021.

# US High-Yield Bonds

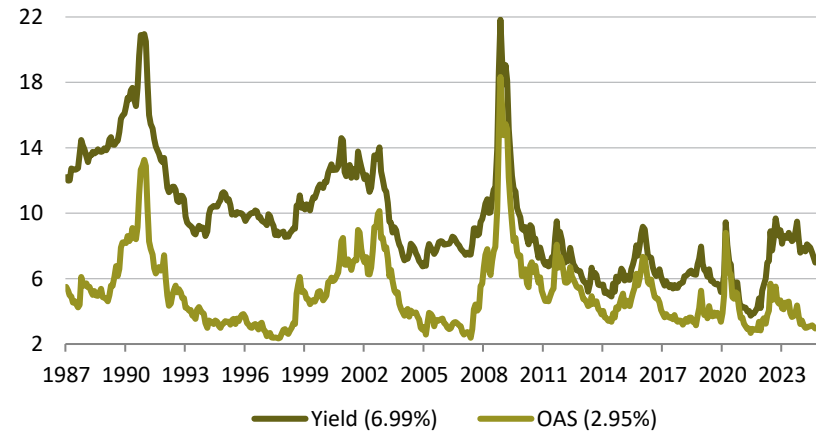
Facts & Figures Third Quarter 2024

US high-yield bonds returned 5.3% in 3Q, lifting their YTD return to 8.0%. Rising prices have lowered yields to around 7%—close to their average from the past decade.

- The Bloomberg High-Yield Index returned 5.3% in 3Q, outperforming benchmarks like US leveraged loans (2.1%) but not quite keeping pace with a 70/30 MSCI ACWI/30% Bloomberg Govt/Credit portfolio (6.2%) for US dollar investors.
- Significant yield compression drove returns—the high-yield index yield fell over 90 bps in 3Q as the Fed embarked on an easing cycle.
- The index OAS fell 14 bps in 3Q to 295 bps and is in the bottom decile of observed values. Investors have limited cushion if defaults rise further or if market expectations of further Fed cuts are disappointed.
- High-yield borrowers have grown earnings and handled the strain from higher rates in recent years. Moody's reported a speculative-grade default rate of 1.7% at the end of August, below its long-term median of 2.3%. The distressed ratio has fallen, suggesting market concerns about an elevated default cycle are starting to fade.
- Credit fundamentals have improved in recent months for many borrowers. Morgan Stanley reports the median interest coverage for HY borrowers rose 0.2x QOQ to 4.8x at the end of 2Q, the first improvement since the end of 2022.
- HY credit fundamentals have held up better than loan borrower metrics given fixed-rate HY borrowers have been more insulated from rising short-term rates. Interest coverage for B-rated HY borrowers was 3.4x at the end of 2Q, a full multiple higher than for B-rated loan issuers.
- Strong new issuance market conditions are allowing companies to boost credit fundamentals by refinancing debt at more attractive yields and spreads. According to J.P. Morgan, roughly 78% of YTD issuance in the high-yield market reflects refinancing.

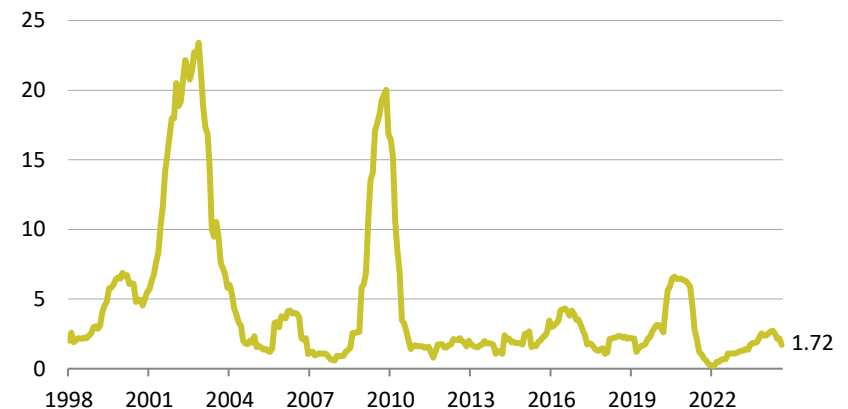
## YIELD AND OPTION-ADJUSTED SPREAD: US HIGH-YIELD INDEX

Jan 31, 1987 – Sep 30, 2024 • Percent (%)



## PAR DEFAULT RATES: US HIGH-YIELD

Jan 31, 1998 – Aug 31, 2024 • Percent (%)



Sources: Bloomberg Index Services Limited, Deutsche Bank Credit Strategy, and Moody's Investors Service. Notes: Data prior to June 30, 2017, are represented by Moody's default rates as provided by the Deutsche Bank US Credit Strategy Chartbook. All default rate data on and after June 30, 2017, are sourced from the Moody's Investor Services Default Report.

# Leveraged Loans

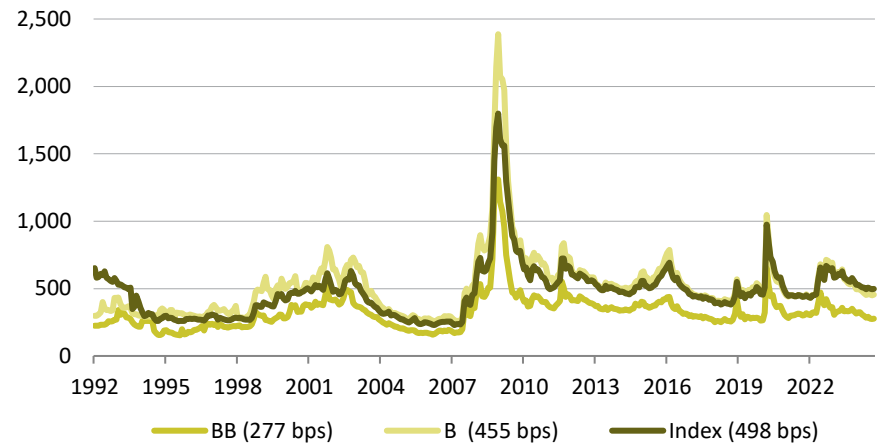
Facts & Figures Third Quarter 2024

US leveraged loans returned 2.1% in 3Q, bringing their YTD return to 6.6%. Credit fundamentals are stable for most borrowers and may get a further boost from the recent Fed cut, though rising defaults reflect that not all firms have been able to handle the stress of higher rates.

- Leveraged loans returned 2.1% in 3Q, underperforming US high-yield bonds. Loans had outperformed high-yield (HY) bonds in recent years, given their floating rate coupons insulated them from mark-to-market issues associated with rising rates. However, that performance headwind for HY bonds has turned into a tailwind as the Fed begins to cut rates.
- Discount margins for leveraged loans have hovered in a narrow range over recent months and ended 3Q at 498 bps, above their long-term median of 473 bps.
- Current short-term rates (one-month SOFR is around 4.9%) mean the current yield on leveraged loans is over 8%.
- Fundamentals have stabilized for loan issuers after softening given the Fed hiking cycle over the course of 2022-2023. According to Morgan Stanley, the median interest coverage ratio (ICR) for loan issuers stood at 4.0x at the end of 2Q. This ratio should rise further as earnings rebound and the September rate cut translates into lower coupon payments.
- Still, 12% of the index has an interest coverage ratio of less than 1.5x, reflecting how some companies struggle with higher rates. This ties with higher default rates. J.P. Morgan reports the trailing default rate for leveraged loans was 3.7% at the end of 3Q, more than 200 bps higher than the rate for HY bonds—the largest such gap in over 20 years. Looser documentation means these defaults are more painful for loan owners as recoveries are below historical averages.
- The loan index has lower average credit quality than the HY index, leaving it more vulnerable to future downturns. According to LCD, just 30% of the S&P loan index has at least one BB rating.
- Loan supply has been strong YTD as issuers have rushed to refinance loans given declining credit spreads. After totaling just \$370B gross in 2023, loan issuance reached \$908B YTD through September 30.

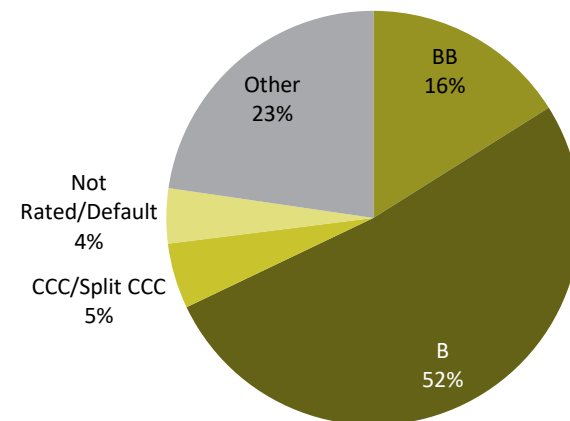
## DISCOUNT MARGIN: CS LEVERAGED LOAN INDEX

Jan 31, 1992 – Sep 30, 2024 • Basis Points



## RATINGS BREAKDOWN: CS LEVERAGED LOAN INDEX

As of September 30, 2024



Source: Credit Suisse.

Notes: Discount margin assumes a three-year life, assuming all loans are paid off at par with no defaults. Other category includes Split BBB, Split BB, and Split B. Not Rated/Default includes CC, C, and Not Rated/Default loans.

# Pan-European High-Yield Bonds

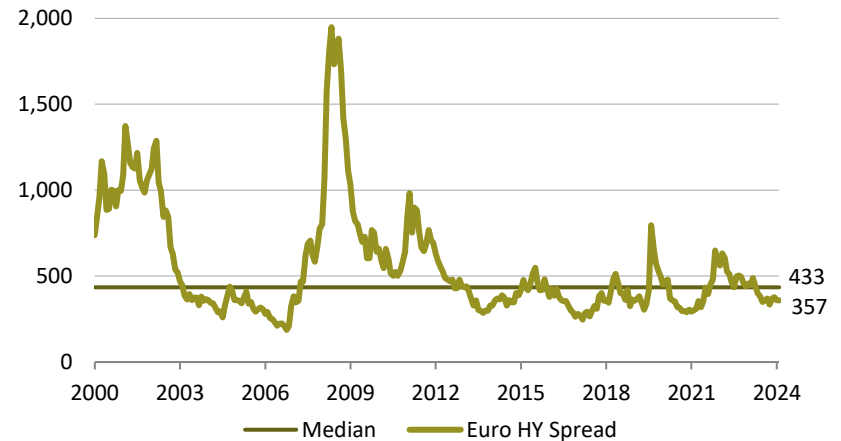
Facts & Figures Third Quarter 2024

European high-yield bonds have posted solid gains in 2024 as central banks embark on a rate cutting cycle and coupon income remains healthy. Spreads continue to compress despite lackluster economic data and softening credit fundamentals.

- The Bloomberg Pan-European High-Yield Index returned 3.7% in 3Q 2024, lifting its YTD return to 7.0%.
- YTD returns had been driven mainly by carry though yield compression boosted returns in 3Q. The index yield fell 70 bps in 3Q to 6.3%.
- The 357-bps index OAS fell slightly in 3Q and is well below its historical median. Investors seem to be accepting below average spreads given yields remain higher than historical averages.
- Declining inflation and growth in European economies are allowing central banks to begin an easing cycle. The ECB has cut its base rate twice in 2024 and the Bank of England made its first 25 bps cut in August.
- European HY credit metrics are tracking growth prospects and have deteriorated yet remain in line with historical averages. Morgan Stanley reports the median interest coverage ratio for European HY borrowers was 4.1x at the end of 2Q, down 1.1x from early 2023 highs. The flipside is that growth in interest expense is slowing and should start to turn downward given recent rate cuts.
- Defaults have been contained in recent years as low rates reduced interest expenses. According to Moody's the trailing 12-month European HY default rate was just 1.2% at the end of August, down slightly from 1.4% at year-end 2023.
- Looking ahead, distressed ratios are below historical averages and don't suggest an imminent spike in default risk. Another positive signal is that the tail of borrowers with leverage ratios above 6x has roughly fallen in half to around 13% of the index over the past 12 months.
- On a relative basis, European borrowers are less levered than those in the United States. More than 65% of the European HY Index carries at least one BB rating.

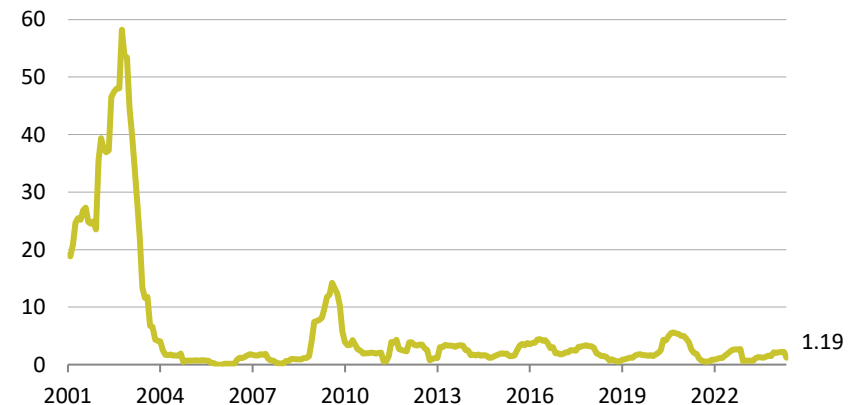
## OPTION-ADJUSTED SPREAD: EUROPEAN HIGH YIELD

Aug 31, 2000 – Sep 30, 2024 • Basis points (bps)



## PAR DEFAULT RATES: EUROPEAN HIGH YIELD

Apr 30, 2001 – Aug 31, 2024 • Percent (%)



Sources: Bloomberg Index Services Limited and Moody's Investor Services.

Notes: The European high-yield option-adjusted spread peaked in December 31, 2008, at 1,949 bps. The European high-yield default rate peaked on January 31, 2003, at 58.2%.



# Distressed Investing: Non-Control

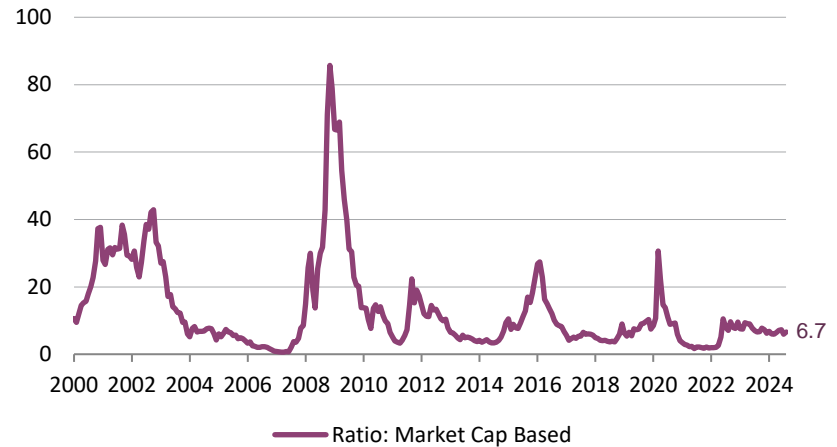
Facts & Figures Third Quarter 2024

Distressed hedge funds have generated consistent returns in recent quarters. Distressed ratios remain low, but credit markets have grown in size and funds are finding opportunity amid discounted bond and loan prices as some companies struggle with elevated borrowing costs.

- The HFRI Event Driven: Distressed/Restructuring Index returned 3.7% in 3Q, lifting its YTD return to 8.5%. Returns from distressed hedge funds have compared favorably to those of fund-of-funds and many other hedge fund categories over the past 12 months.
- Distressed funds have seen their opportunity set fluctuate over the past couple of years. Only 7% of the \$1.4 trillion face value HY index trades with a spread above 1,000 bps. The flipside is that the combined US HY and leveraged loan market has more than doubled in size since the GFC, so the overall opportunity set is large.
- Rising bond prices have boosted returns but create a headwind to future returns. The average price of CCC-rated bonds rose from 82 cents to 89 cents over the course of 3Q.
- The proportion of troubled high-yield borrowers (i.e., those with interest coverage ratios under 1.5x) has remained stable at between 8%–10% over the last couple of years, creating ample opportunities for distressed funds.
- Some of these borrowers may get a reprieve given the Fed has begun to cut rates and may accelerate the pace of easing in 2025. The flipside is that struggling companies may have difficulties in refinancing debt and weak loan documentation means recoveries after default may be lower.
- There are a variety of ways to invest in distressed debt, including hedge funds and lock-up vehicles, which will do everything from trade existing securities to provide rescue finance for troubled companies. Skilled managers may find opportunities beyond traditional focus areas, including structured credit and property-backed credit.

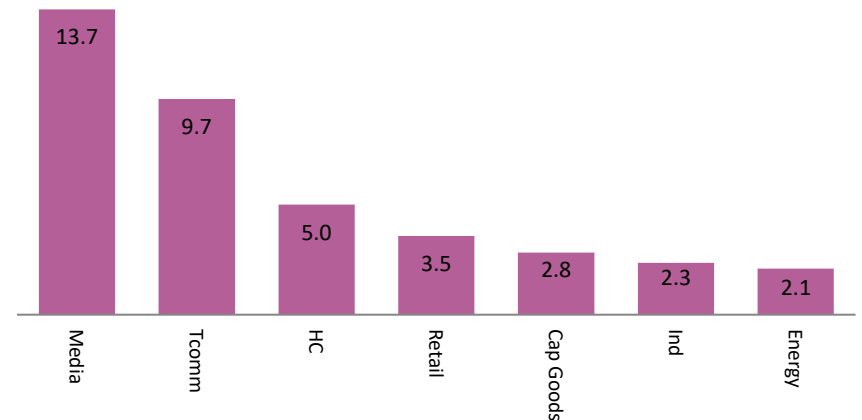
## DISTRESSED RATIO: BOFA ML HIGH YIELD MASTER II INDEX

Jan 31, 2000 – Aug 31, 2024 • Percent (%)



## MARKET VALUE OF DISTRESSED PAPER FOR SELECT INDUSTRIES

As of September 30, 2024 • US\$B



Source: ICE BofA Merrill Lynch.

Notes: Bottom chart represents the ICE BofA Merrill Lynch US High Yield Index universe. Distressed bonds are defined as bonds with option-adjusted spreads greater than 1,000 basis points. Only industries with a market value equal or greater than \$2 billion are shown.

# USD-Denominated Emerging Markets Debt

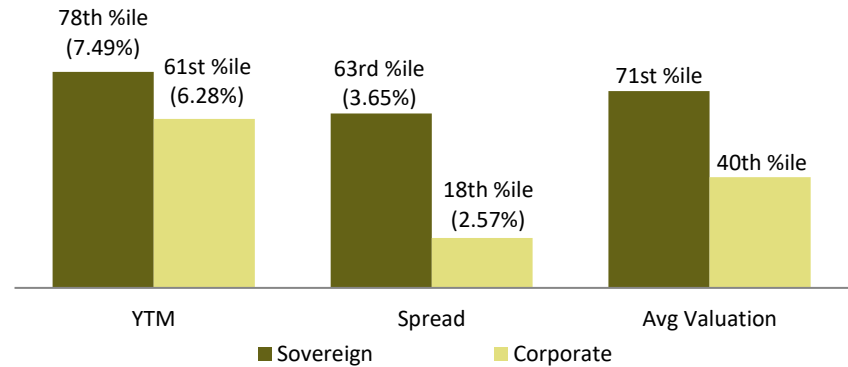
Facts & Figures Third Quarter 2024

EM debt rallied in 3Q, bringing YTD performance for the (sovereign) JPM EMBI Global Diversified and (corporate) CEMBI Broad Diversified indexes to 8.6% and 8.5%, respectively. The 3Q rally was supported by softening US labor market data and growing momentum for Fed rate cuts. Indeed, the Fed delivered an outsized 50-bp cut in September.

- YTD performance built on strong returns in 2023 for both the sovereign (11.1%) and corporate (9.1%) segments. Still, the sovereign and corporate indexes returned just -0.4% and 1.1% annualized, respectively, over the latest three-year period, after seeing heavy drawdowns in 2022 as inflation and interest rates spiked.
- EM debt yields have risen around 200 bps over the past three years, pushed higher by the backup in Treasury yields, which rose as growth and inflation forced the Fed to hike its target rate by 500 bps. Sovereign yields fell nearly 40 bps YTD given the more dovish Fed pivot, with corporate yields also down roughly 70 bps.
- EM sovereign debt spreads compressed in 3Q, ending at the 63rd percentile. Corporate spreads were flat in 3Q at the 18th percentile but were down roughly 50 bps YTD.
- Sovereign yields look elevated from a historical perspective, but the asset class faces unique risk factors. For example, following Russia's invasion of Ukraine, EM index providers responded to the uninvestable nature of Russian assets by eliminating them from many indexes (from their prior 3% weight). In addition, debt from Ukraine and surrounding countries also plunged.
- Broader EM debt index stats disguise wide variation in underlying fiscal health across borrowers. For example, the main EM sovereign index includes several CCC/CC-rated borrowers (Argentina, Ukraine, Sri Lanka, etc.) whose optically cheap debt will only prove attractive if coupons and principal payments are repaid.
- About 50% of the sovereign index has an investment-grade rating, which is similar for corporates. The wide dispersion of fundamentals and possible political outcomes suggests an active management approach to these assets may generate more successful outcomes.

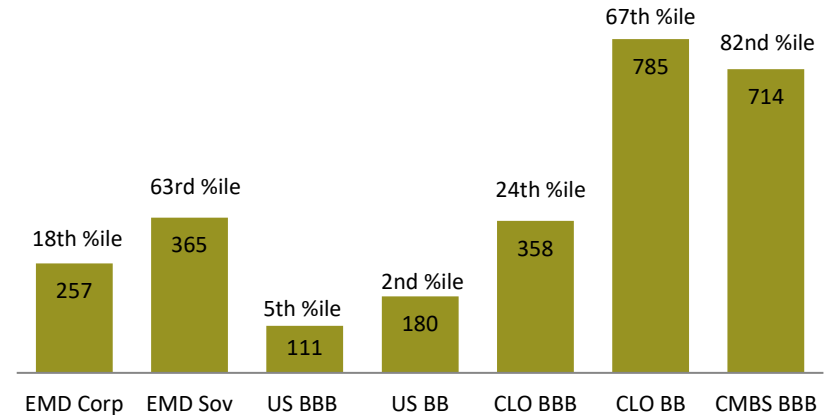
## PERCENTILE RANK: USD EM DEBT

As of Sep 30, 2024 (Based on Post-2003 Data)



## PERCENTILE RANK: OPTION-ADJUSTED SPREAD

As of Sep 30, 2024



Sources: Bloomberg Index Services Limited, J.P. Morgan Securities, Inc. and Thomson Reuters Datastream.  
 Notes: Composite Valuation Indicator is the average of YTM percentile and spread percentile. Asset classes represented by J.P. Morgan Emerging Market Bond Index (EMD Sov), J.P. Morgan Corporate Emerging Markets Bond Index (EMD Corp), Bloomberg US Corporate Investment Grade BBB Index (US BBB), Bloomberg US High Yield BB Index (US BB), J.P. Morgan CLOIE BBB Index (CLO BBB), J.P. Morgan CLOIE BB Index (CLO BB), and Bloomberg US CMBS Baa Index (CMBS BBB).

# Local Currency Emerging Markets Debt

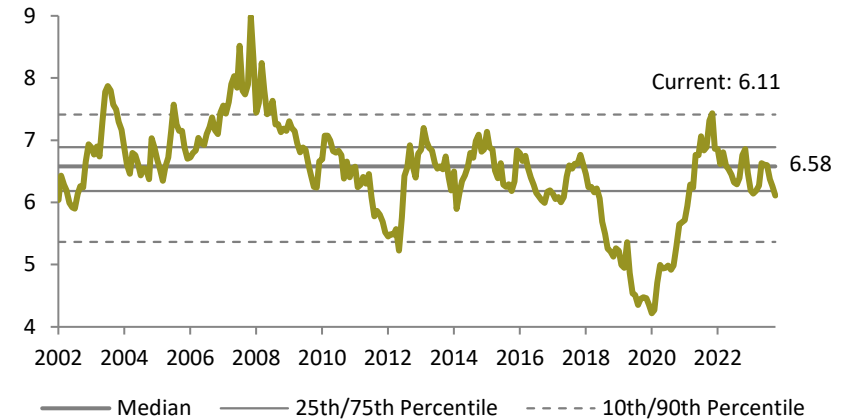
Facts & Figures Third Quarter 2024

Local currency EM debt returned 4.1% in local currency terms in 3Q 2024. A weakening US dollar saw stronger USD returns with the index rising 9% on the quarter. This now brings year-to-date USD performance to 4.9%. Yields declined during the quarter, primarily in sympathy with moves in developed markets bond markets.

- EM local currency bonds once again took their cues from their DM counterparts. US Treasury yields declined as softer labor market data allowed the Fed to emphasize the employment side of its mandate with inflation back near target. The fact that economic activity is holding up even as extra rate cuts get priced in was of particular advantage to EM assets. This was especially beneficial for USD returns as it also spurred a softening dollar. The interest rate differential between EM and DM is toward the bottom end of historical precedent, presenting a possible risk were sentiment to shift and a severe risk-off episode to eventuate.
- EM currencies are highly sensitive to global growth prospects. Therefore, various inter-related factors have proved to be headwinds in the post-COVID era including impaired global supply chains, geopolitical risks, and fears of a policy-induced slowdown. More recently, the idiosyncratic slowdown and data deterioration in China have weighed on EM. In the last quarter; however, the easing of rates expectations in the US, in addition to policy easing announcements in China, have supported EM assets.
- EM-LC bond yields fell by 49 bps during the quarter. The yield now sits back at the 22nd percentile of historical observations. The spread to the Global Agg rose by 8 bps but remains relatively low at 2.78 ppts. As a result, EM currencies are likely to remain the larger driver of returns for unhedged investors. While the currency valuation has risen from the 2022 low, it remains relatively depressed, with the REER of EM fixed income-weighted currencies sitting at the 18th percentile.
- On a medium-term outlook, EM currencies look well placed to appreciate. Global growth will eventually improve more materially, risk appetite will pick up, and the dollar should secularly decline. Shorter-term headwinds could appear if the extent of the Fed's easing cycle disappoints, or if recessionary fears rematerialize. The level of dispersion between the underlying countries suggests there are opportunities for active managers with broad mandates to add value.

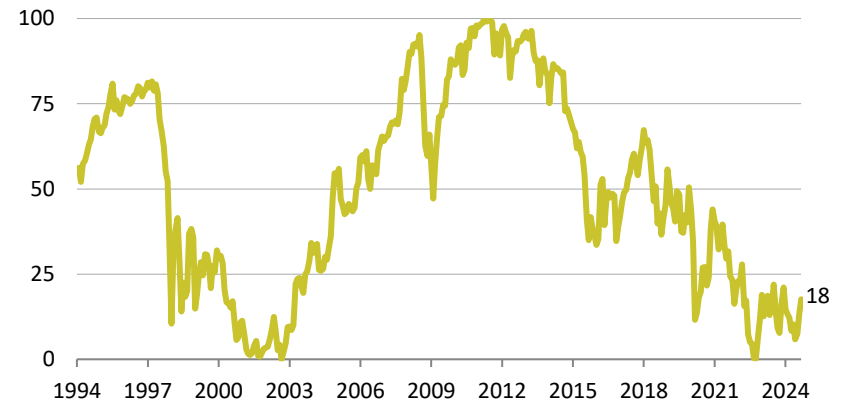
## NOMINAL YIELD: JPM GBI-EM GLOBAL DIVERSIFIED INDEX

Dec 31, 2002 – Sep 30, 2024



## FI-WEIGHTED EM REAL EXCHANGE RATE VS US: PERCENTILE

Jan 31, 1994 – Sep 30, 2024



Sources: Directorate-General of Budget, Accounting and Statistics, Executive Yuan, Taiwan; INE - National Institute of Statistics, Chile; International Monetary Fund; J.P. Morgan Securities, Inc.; MSCI Inc.; National Bureau of Statistics of China; Thomson Reuters Datastream; and US Department of Labor - Bureau of Labor Statistics. MSCI data provided "as is" without any express or implied warranties.