

DoubleLine Fixed Income Briefing

Third Quarter 2024 | September 30, 2024



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Third Quarter Review

Returns

The third quarter of 2024 marked a reversal from the first half of the year, as longer-duration and higher-rated sectors outperformed shorter-duration and lower-rated cohorts, driven primarily by falling U.S. Treasury rates. (Figure 1) The long-anticipated start of the interest-rate cutting cycle by the Federal Reserve in September contributed to lower Treasury rates across tenors in the quarter, as the two- and 10-year yields declined 111 basis points (bps) and 62 bps, respectively. Securitized and corporate credit spreads broadly tightened, and credit curves flattened.

3Q2024 Fixed Income Index Performance | As of Sept. 30, 2024

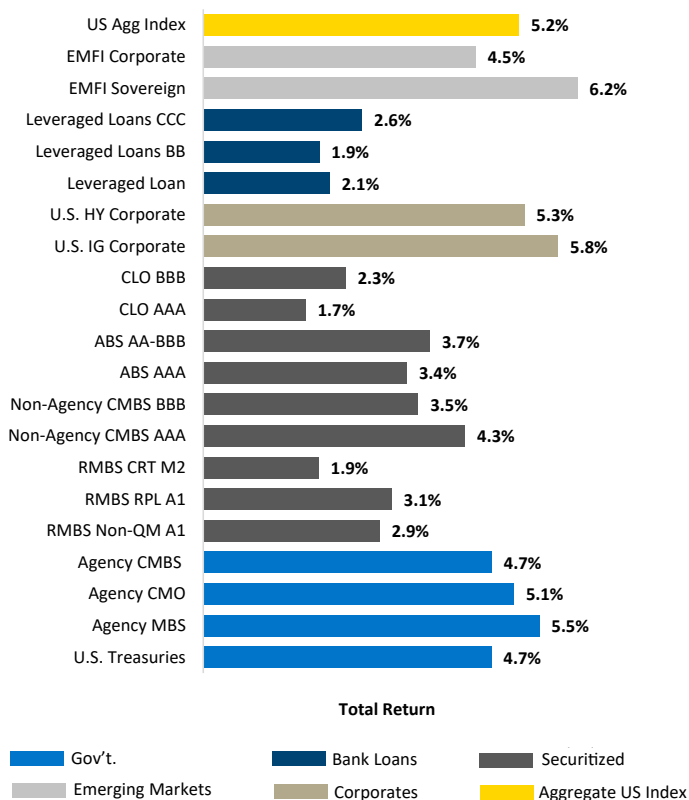


Figure 1

Source: DoubleLine, Bloomberg, BofA Global Research, J.P. Morgan
 Mortgage-Backed Securities (MBS), Collateralized Mortgage Obligation (CMO), Commercial MBS (CMBS), Residential MBS (RMBS), Non-Qualified Mortgage (Non-QM), Re-Performing Loan (RPL), Credit Risk Transfer (CRT), Asset-Backed Securities (ABS), Collateralized Loan Obligation (CLO), Investment Grade (IG), High Yield (HY), Emerging Markets Fixed Income (EMFI).
 Indices used in this figure can be found under disclosures.

Yields

Yields across the fixed income market remain above their 10-year averages. (Figure 2)

Fixed Income Yields | As of Sept. 30, 2024

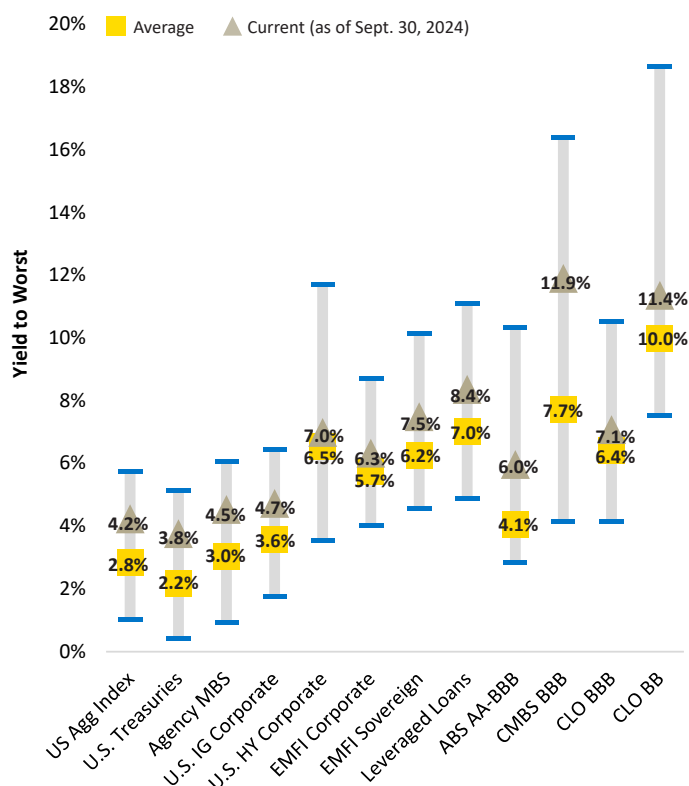
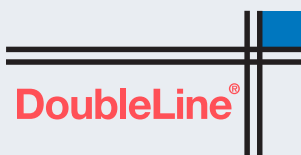


Figure 2

Source: DoubleLine, Bloomberg, BofA Global Research, J.P. Morgan
 Gray bars represent the range from September 30, 2014, through September 30, 2024. Mortgage-Backed Securities (MBS), Investment Grade (IG), High Yield (HY), Emerging Markets Fixed Income (EMFI), Asset-Backed Securities (ABS), Commercial MBS (CMBS), Collateralized Loan Obligation (CLO). You cannot invest directly in an index. Indices used in this figure can be found under disclosures.



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Spreads

Spreads are generally tight. Areas of securitized sectors, however, remain wide of their 10-year averages, with Agency mortgage-backed securities (MBS) and lower-rated commercial MBS (CMBS) exhibiting the largest percentile differentials. (Figure 3)

| | US Agg Index | Agency MBS | U.S. IG Corp. | U.S. 1-3 Yr Corp. | CMBS AAA | RMBS AAA | CLO AAA | U.S. HY Corp. | EMFI Corp. | EMFI Sov. | Bank Loans | ABS AA-BBB | CMBS BBB | CLO BBB |
|-----------------|--------------|------------|---------------|-------------------|----------|----------|---------|---------------|------------|-----------|------------|------------|----------|---------|
| Sept. 30, 2024 | 36 | 129 | 88 | 56 | 109 | 135 | 124 | 295 | 263 | 361 | 510 | 230 | 800 | 358 |
| 3Q24 Change | -3 | -20 | -5 | -4 | -5 | 0 | -2 | -14 | -4 | -30 | -14 | 17 | -32 | -12 |
| YTD Change | -6 | -9 | -10 | -12 | -38 | -15 | -29 | -28 | -49 | -23 | -36 | -51 | -321 | -53 |
| 10-Year Average | 46 | 106 | 121 | 69 | 101 | 131 | 145 | 418 | 339 | 376 | 502 | 253 | 505 | 416 |
| Percentile Rank | 10 | 79 | 7 | 31 | 65 | 59 | 29 | 4 | 2 | 51 | 59 | 52 | 80 | 27 |

Figure 3

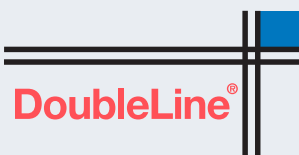
Source: DoubleLine, Bloomberg, Wells Fargo

Data from September 30, 2014, through September 30, 2024. Year-to-Date (YTD); Investment Grade (IG); Residential MBS (RMBS); Collateralized Loan Obligation (CLO); High Yield (HY); Emerging Markets Fixed Income (EMFI); Asset-Backed Securities (ABS). You cannot invest directly in an index. Indices for this figure can be found under disclosures.

Summary of DoubleLine Fixed Income Views by Sector

| Sector | Fundamentals | Investment Focus |
|---|--|--|
| U.S. Treasuries | <ul style="list-style-type: none"> Inflation continues to trend downward and should allow the Fed to continue cutting rates The pace of the currently softening labor market may have implications for the level and shape of the yield curve | <ul style="list-style-type: none"> Neutral overall on Treasuries in intermediate-term portfolios, favoring the short end and belly of the curve with a steepening bias Extended duration to neutral relative to the ICE BofA 1-3 Year U.S. Treasury Index in short-term portfolios to further participate in Fed cutting cycle Remain cautious on long end of the curve (10-year to 30-year) due to the fiscal deficit and rising debt-to-gross domestic product (GDP) ratio |
| Agency MBS | <ul style="list-style-type: none"> Spreads remain wide by historical standards given the technical backdrop and elevated rate volatility Further Fed rate cuts should lead to an environment of lower Treasury rates coupled with declining interest-rate volatility | <ul style="list-style-type: none"> 2.0% to 3.0% coupons, in particular stories that we feel have potential upside in prepayments on a sector that is still deeply discounted 5.0% to 6.0% coupons that offer attractive carry and spread that could outperform if prepayments come in slower than expected Agency derivatives that offer higher yields or increased carry with minimal duration risk due to the difference between the rate on the loans in the MBS market and current mortgage rates |
| U.S. Investment Grade Corporates | <ul style="list-style-type: none"> Corporate balance sheets remain strong and margins on nonfinancial companies' earnings before interest, taxes, depreciation and amortization (EBITDA) are at all-time highs Investment grade (IG) corporate spreads are tight by historical standards generally due to strong investor demand with yields well over 4.5% Declining interest rates could further stimulate demand as investors seek duration with attractive yields | <ul style="list-style-type: none"> Rising stars across a variety of sectors, including gaming and cruising Midstream companies that generate stable cash flow backed by durable, long-lived assets Aircraft leasing due to long-term supply-demand imbalance and improving balance sheets |

DoubleLine reserves the right to change its investment perspective and outlook, as well as portfolio construction, without notice as market conditions dictate or as additional information becomes available and assumes no duty to update the recipients of this presentation.

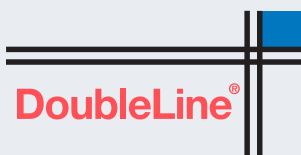


DoubleLine Fixed Income Briefing

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| Sector | Fundamentals | Investment Focus |
|-----------------------------------|---|---|
| U.S. High Yield Corporates | <ul style="list-style-type: none"> High yield (HY) defaults continue to decline, with 12-month par-weighted default rates falling to 0.94% from 2.08% at the end of 2023 HY corporate leverage remains comfortably below the long-term average, and interest coverage is above its long-term average Due to heavy demand, issuers were able to successfully refinance at significant volume to address the near-term maturity wall | <ul style="list-style-type: none"> Hospitals, as volume recovery continues, and staffing headwinds abate Cruise lines, as demand remains resilient, and companies are focused on multiyear balance-sheet repair Cautious on legacy media, given cyclical concerns about the ad market as well as structural changes in media consumption Cautious on metals and mining, due to broad concerns surrounding future economic growth and weakening fundamentals Cautious on bonds rated CCC, with a focus on issuers whose balance sheets cannot sustain an economic cycle |
| U.S. Bank Loans | <ul style="list-style-type: none"> Loans may offer attractive carry and relative value advantages despite a Fed that is likely to continue cutting rates Interest coverage metrics have been under strain but could find relief ahead from lower rates | <ul style="list-style-type: none"> Healthcare providers and insurance brokers benefiting from enhanced procedure volumes and normalizing labor inflation Vertical software providers with mission-critical products and high revenue retention Cautious on cable and telecommunication names with overlevered balance sheets and significant capital expenditure requirements facing shifting consumer preferences |
| Non-Agency MBS | <ul style="list-style-type: none"> Home prices remain supported by strong demand (household formation) and low housing supply (lock-in effect) Historically low affordability remains a headwind for housing activity | <ul style="list-style-type: none"> New-issue, non-qualified mortgages (non-QMs) with all-in yields of approximately 5.0% for bonds rated AAA and approximately 5.7% for bonds rated BBB Seasoned credit risk transfer (CRT) bonds that offer strong total return potential due to structural deleveraging, limited CRT issuance and resilient housing fundamentals Cautious on less-seasoned collateral and higher loan-to-value ratios that likely underperform in an economic slowdown |
| Non-Agency CMBS | <ul style="list-style-type: none"> Investor sentiment, transaction activity and lending standards have continued to improve relative to last year Capital availability is improving via nonbank lenders and the non-Agency CMBS market Most commercial real estate (CRE) property prices appear to have bottomed Industrial and multifamily properties remain healthy with stable cash flows Office space remains challenged post-pandemic | <ul style="list-style-type: none"> Senior-rated seasoned bonds with multiborrower pools that have delevered through time, exhibit limited extension risk and are well insulated from credit risk Select lower-rated non-Agency CMBS where possible collateral outcomes have been crystalized and fundamental value is well established Underweight properties with near-term loan maturities that might be vulnerable to default if borrowers are unable to refinance or negotiate a loan extension |

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| Sector | Fundamentals | Investment Focus |
|--------------------------------------|--|---|
| ABS | <ul style="list-style-type: none"> Industrial and hard-asset collateral asset-backed securities (ABS) continue to display strength The consumer sector remains healthy, but delinquencies are picking up for subprime borrowers | <ul style="list-style-type: none"> Increased allocation to auto ABS rated A/AA given preference for two-year weighted-average-life profile and attractive risk-adjusted return potential Hard-asset ABS securitizations with three-to-five-year duration-profile securitizations with strong liquidity profiles such as digital infrastructure that exhibits stable cash flows Underweight mezzanine consumer and auto loan transactions given continued deterioration of borrower fundamentals, particularly within subprime collateral |
| CLO | <ul style="list-style-type: none"> Bank loan default rates have trended lower since year-end Technical factors remain supportive | <ul style="list-style-type: none"> New-issue CLOs with clean collateral pools, high credit enhancement and relatively high carry Cautious on CLOs rated AA/A due to historically tight basis to CLOs rated AAA |
| Emerging Markets Fixed Income | <ul style="list-style-type: none"> Emerging markets (EM) credit fundamentals remain resilient In general, EM IG and HY corporates tend to have better credit metrics than those of their US and European peers We expect GDP growth for EM to slow as we head into 2025, but EM GDP should continue to exceed that of developed markets (DM) Absent a credit event or recession, we expect defaults to remain dominated by Chinese properties and repeat defaulters | <ul style="list-style-type: none"> Latin American corporate and bank credits in the five-to-10-year maturity range whose prices can benefit from spread compression and/or falling Treasury rates Strategic sectors: banking, utilities, oil and gas, mining Cautious on frontier markets given high beta and drawdown risk among difficult macroeconomic backgrounds Cautious on countries facing elevated geopolitical risks Cautious on China, Turkey, Eastern Europe, Africa ex South Africa |

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Sector Outlooks – Thoughts From the DoubleLine Investment Team

U.S. Treasuries

Policy Normalization: What's Next?

Treasury yields fell across the curve during the third quarter on the back of improving inflation prints, which allowed the Fed to begin its highly anticipated cutting cycle. The Fed lowered the target federal funds rate (FFR) by 50 bps at the September Federal Open Market Committee (FOMC) meeting, to a target range of 4.75% to 5.00%. The decision to lower the FFR by 50 bps instead of 25 bps left some market participants wondering if the Fed is poised to cut rates at an accelerated pace. However, Fed Chair Jerome H. Powell emphasized that the Fed is not on a preset course, stating, “We will continue to make our decisions meeting by meeting.”¹ The 50-bp cut, which was not universally expected by economists, was accompanied by a move in FOMC September dot plots that estimate another 50 bps of cuts through the end of 2024. Market participants however, expect the FOMC to deliver roughly 75 bps of cuts over the remainder of the year.² The focus of markets now moves from inflation toward employment, as the labor market should drive the extent and pace of future rate cuts.

The Consumer Price Index moved lower year-over-year (YoY) across the quarter from 2.97% at the end of June to 2.44% at the end of September. U.S. second quarter real GDP was revised higher in September by the Bureau of Economic Analysis, with the third estimate reporting the economy grew at a seasonally adjusted annualized rate of 3.0% quarter-over-quarter (QoQ). Nonfarm payrolls for the third quarter averaged 145,000 per month, down from 177,000 in the second quarter and 267,000 in the first quarter.

Looking across Treasury maturities, the yield curve bull steepened in the third quarter, with the two-year note falling 111 bps and the 10-year note falling 62 bps, respectively. (Figure 4) This resulted in a yield differential between the notes (2s10s) of positive 14 bps at quarter-end, bringing a close to the longest yield curve inversion in the post-World War II era at 112 weeks. (Figure 5) The Bloomberg US Treasury Index returned 4.74% for the quarter.

The DoubleLine team favors the front end and belly of the yield curve while maintaining an underweight to the long bond, resulting in a steepening bias overall. We believe the Fed will continue to cut rates while long-end yields could remain supported by fiscal unease. Overall, the team maintains that Treasuries are especially useful in the context of diversified fixed-income portfolios as an offset to risks presented by credit-sensitive sectors.

U.S. Treasury Yield Curve | As of Sept. 30, 2024

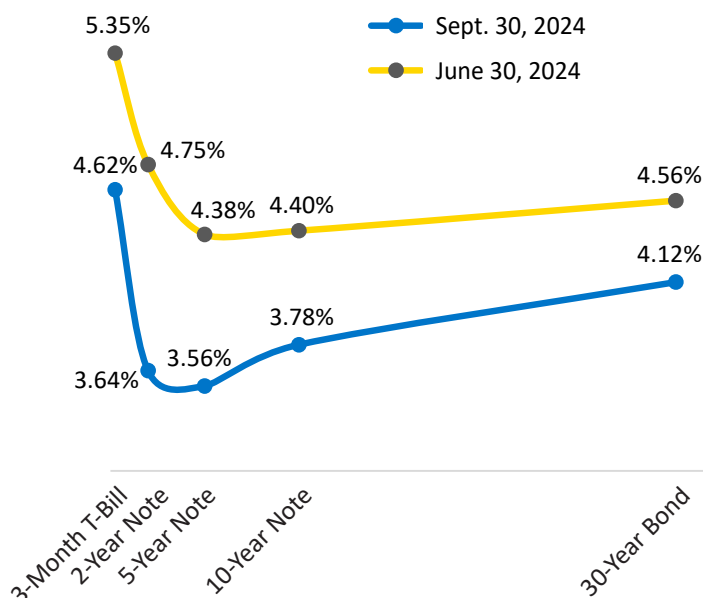


Figure 4
Source: DoubleLine, Bloomberg

2s10s U.S. Treasury Spread | As of Sept. 30, 2024

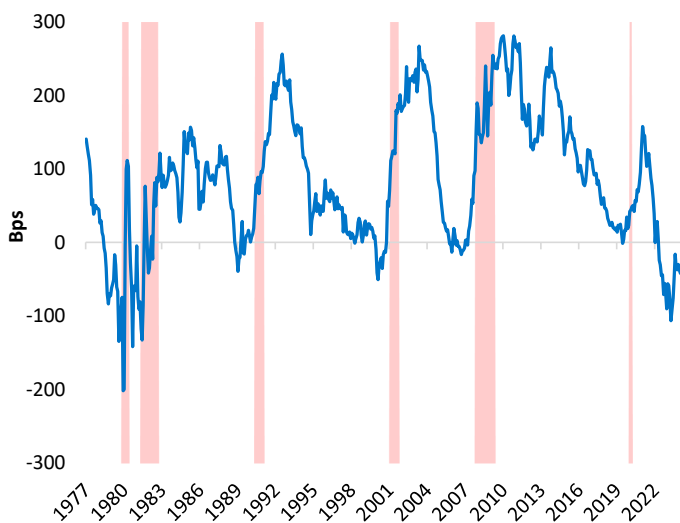


Figure 5
Source: DoubleLine, Bloomberg. Red-shaded areas represent National Bureau of Economic Research U.S. recessions.

Agency Mortgage-Backed Securities

Tailwinds Emerge

Agency MBS returned 5.53% in the third quarter, outperforming Treasuries, which returned 4.74%.³ Current-coupon spreads ended the period at 129 bps, approximately 19 bps tighter QoQ, driven in part by declining interest-rate volatility and lower Treasury rates throughout the quarter. Lower coupons outperformed higher coupons, driven by a longer-duration profile in a period of falling interest rates. (Figure 6)

Supply continued to underwhelm, with net issuance down roughly 13% YoY, driven largely by a slowdown in overall housing activity given higher prices and mortgage rates.⁴ Meanwhile, demand from money managers remained strong, as higher-coupon mortgages offered attractive relative value compared to corporate bonds. While the spread basis between Agency MBS current coupons and IG corporate bonds narrowed during the period, it remained wide relative to its longer-term history. (Figure 7) We expect money managers to continue to allocate to Agency MBS opportunistically, given the yields available in government-backed securities, helping to balance the supply-demand dynamic. Further, banks have recently begun to add Agency MBS and might add more as the Basel III banking regulations are finalized.

With further rate cuts expected, we remain constructive on Agency MBS for the remainder of the year. An environment of lower Treasury rates coupled with declining interest-rate volatility should support Agency MBS spread compression. In general, we believe there are several opportunities across the coupon stack for attractive risk-adjusted returns. Lower coupons may offer advantageous optionality via lower dollar prices and upside to increased prepayments. Coupons trading slightly below par generally offer advantageous carry without sacrificing too much convexity. There are also opportunities in Agency derivatives that allow for targeted exposure to higher yields and/or increased prepayments in the future.

Agency MBS Pass-Through Stats by Coupon | As of Sept. 30, 2024

| Coupon | Price | Duration (Yrs) | 3Q24 Return |
|--------|----------|----------------|-------------|
| 2.0 | \$83.03 | 8.3 | 7.06% |
| 2.5 | \$86.62 | 7.8 | 7.07% |
| 3.0 | \$90.09 | 7.3 | 6.54% |
| 3.5 | \$93.48 | 6.6 | 6.60% |
| 4.0 | \$96.34 | 5.8 | 6.62% |
| 4.5 | \$98.56 | 4.9 | 5.90% |
| 5.0 | \$100.09 | 3.9 | 5.12% |
| 5.5 | \$101.27 | 2.4 | 4.27% |
| 6.0 | \$102.24 | 1.6 | 3.59% |
| 6.5 | \$103.13 | 1.3 | 2.93% |
| 7.0 | \$103.96 | 1.0 | 2.47% |

Figure 6
Source: DoubleLine, Yield Book. Returns based on price returns.

Agency MBS vs. Corporate Bond Spreads | As of Sept. 30, 2024

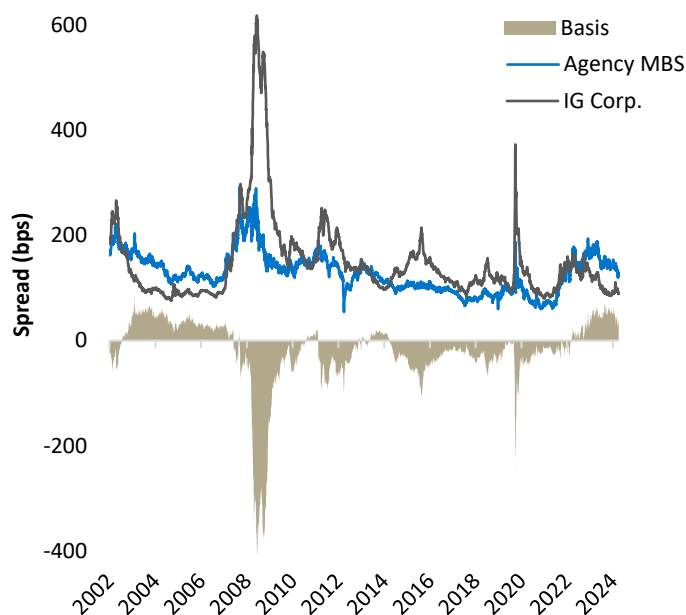


Figure 7
Source: DoubleLine, Bloomberg

U.S. Investment Grade Corporates

Fundamentals, Technicals and All-In Yields

IG corporate bonds posted a positive return of 5.83% during the third quarter, as measured by the Bloomberg US Corporate Index, driven by falling rates. Despite a temporary jump at the beginning of August due to macro events, IG corporate spreads tightened to levels unseen since 2021, after the U.S. government stepped in to buy corporate bonds during the pandemic. Lately, spreads have been compressing due to healthy investor demand and robust fundamentals, ending the quarter at 88 bps.

On the technical front, inflows have been strong from investors of all types, including retail and overseas investors, insurance companies and pensions, many of which are looking to take advantage of the attractive all-in yields that corporate bonds offer while providing duration during the Fed cutting cycle. The yield on the index remains well above 4.5%, which it sustained in 2022 for the first time since the Global Financial Crisis. (Figure 8) This buying pressure has been met with increased issuance year-to-date (YTD), with issuance up 5% YoY in the quarter.

Fundamentals have remained strong for IG corporate issuers, creating an additional tailwind to the pressure on spreads. (Figure 9) EBITDA margins for nonfinancial companies are at an all-time high, with companies displaying conservative management against an uncertain backdrop.⁵

U.S. monetary policy has begun easing, kicked off by the Fed's first rate cut of 50 bps in September, which should further support IG corporations. As the Fed cuts rates, the generally longer duration of corporate bonds could provide investors the opportunity to add duration at attractive yield levels. Conversely, lower rates could lead to corporate managers loosening their previously conservative style as debt becomes cheaper. While we remain constructive on U.S. IG corporates given the positive fundamentals, we find it difficult to be overly excited about putting new money to work into the sector given tight spreads. The team is favoring rising stars across a variety of sectors, including gaming and cruising, while avoiding cable satellite companies due to the secular pressure from cord cutting and continued market-share shift to streaming.

IG Bond Yields Above Long-Term Average | As of Sept. 30, 2024

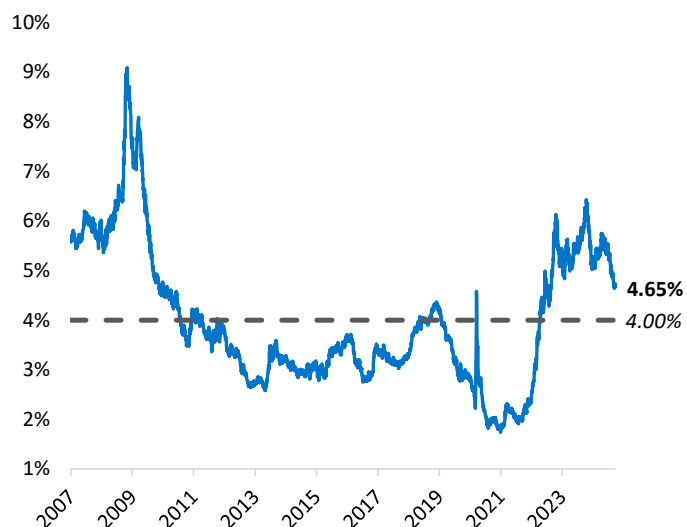


Figure 8
Source: DoubleLine, Bloomberg
Dashed line represents average yield.

Bloomberg US Corporate Index EBITDA Margin ex Financials
As of Sept. 30, 2024

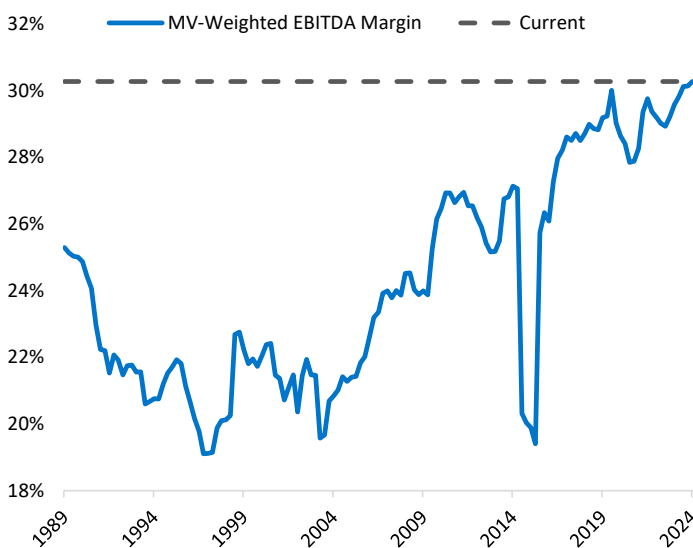


Figure 9
Source: DoubleLine, Bloomberg

U.S. High Yield Corporates

Is the Party Over?

U.S. HY corporate bonds posted a 5.28% return for the third quarter, as tracked by the Bloomberg US Corporate HY Index, driven by falling rates, high interest income and spread compression. Credit spreads on the index tightened 11 bps QoQ, ending the period at 300 bps. HY default rates continued to decline, with the 12-month par-weighted default rate falling to 0.94% from 2.08% at the end of 2023.⁶

HY issuers have received some relief from the looming maturity wall as they have continued to tap the new-issuance market, with 78% of quarterly issuance being used for refinancing.⁷ YTD new issuance through Sept. 30 was \$237.7 billion, up 78% YoY.⁸ Demand remained strong as investors continued to favor higher-yielding securities. As credit spreads have tightened, investors seeking higher yields have migrated to lower-rated bonds, which rallied significantly during the period, including HY bonds rated CCC outperforming the broader index. The rally was spurred by a higher market conviction in a soft landing as well as an idiosyncratic rally in telecom due to merger and acquisition news.

Fundamentals remained strong, with low default and net leverage ratios, and stable interest coverage ratios. (Figure 10) Despite spreads being tight on a historical basis and the index having a historically high-quality composition, all-in HY yields maintained levels above their 10-year average. (Figure 11)

With the backdrop of tight spreads but still attractive yields, DoubleLine is aiming to allocate judiciously to issuers that have disciplined management and secular tailwinds. For example, the team is constructive on cruise lines, given strong consumer demand and their focus on balance-sheet repair, and hospitals, with staffing headwinds abating, but remains cautious on companies such as metals and mining that are at higher risk of experiencing weakening economic conditions.

HY Balance Sheets | As of Sept. 30, 2024

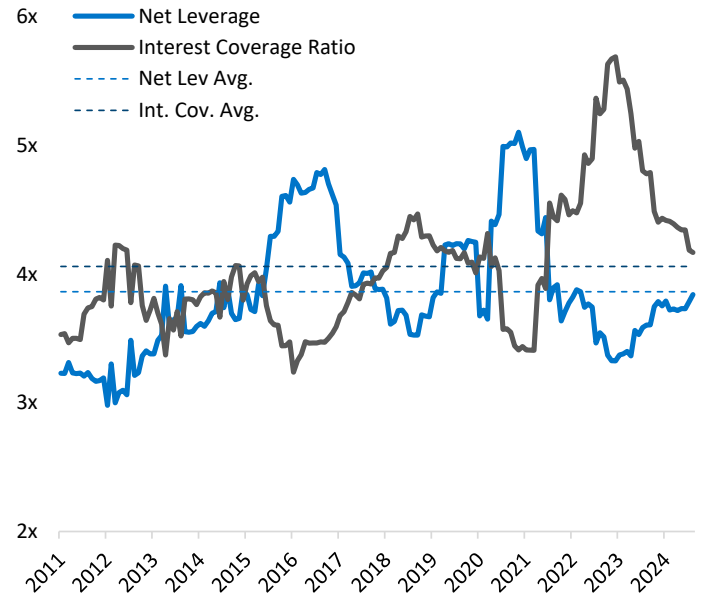


Figure 10
Source: DoubleLine, BofA Global Research

HY Yield 10-Year Average | As of Sept. 30, 2024

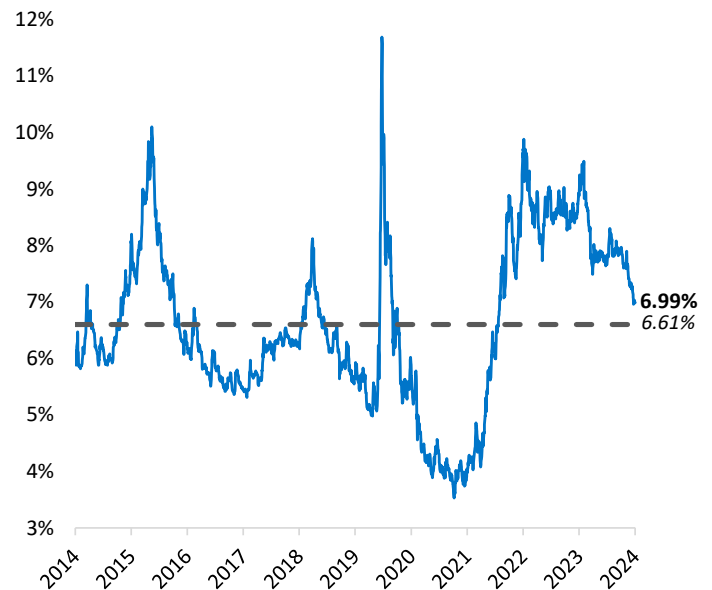


Figure 11
Source: DoubleLine, Bloomberg
Dashed line represents average yield.

U.S. Bank Loans

Attractive Yield Despite SOFR Falling

The bank loan market returned 0.71% in September and 2.04% in the third quarter, bringing YTD return to 6.54%.⁹ The Fed's 50-bp cut to the FFR in September negatively impacted the floating-rate income received by bank loan investors. However, yields remained elevated relative to other areas of fixed income. The bank loan market ended the quarter with a yield to maturity of 9.54% and a discount margin of 4.23%. Over time, lower rates could improve interest coverage metrics that have been under some recent strain from elevated short-term interest rates. (Figure 12)

The quarter was an active period for new issue, with gross volume of \$222.7 billion, up 56% YoY. A significant amount of issuance, \$100.8 billion, was from repricing amendments as borrowers took advantage of the strong market backdrop to reduce interest margins. With an active primary market, broadly syndicated loans (BSLs) have taken share from direct lending in 2024, although there was some share loss in the quarter. (Figure 13) On the demand side, retail flows generally track the 10-year Treasury, the yield of which fell in the quarter, and, accordingly, loan funds experienced outflow of \$5 billion.

The HY market, with its fixed coupons, outperformed bank loans in the period amid the rate rally. DoubleLine currently prefers bank loans given the carry advantage. At an industry level, the team favors vertical software providers with mission-critical products. We remain cautious on cable and telecommunication names with overlevered balance sheets and significant capital expenditure requirements.

Interest Coverage Metrics | As of Sept. 30, 2024

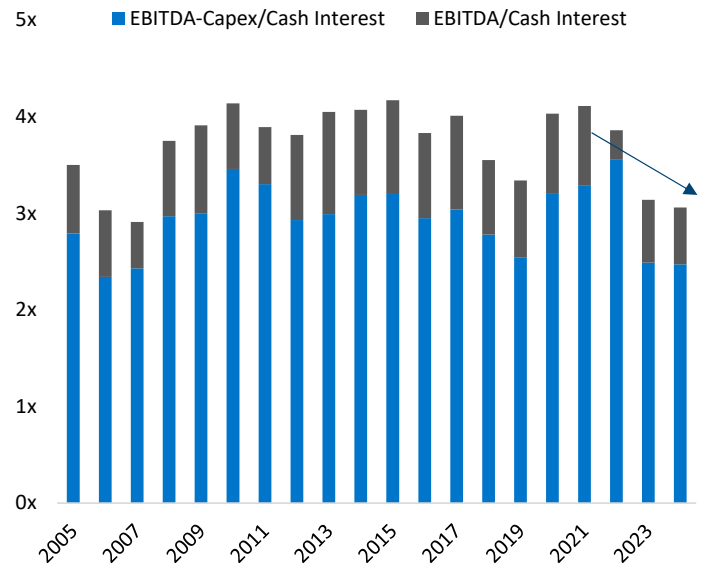


Figure 12
Source: DoubleLine, Pitchbook
Capital Expenditures (Capex)

Direct Lending vs. BSL | As of Sept. 30, 2024

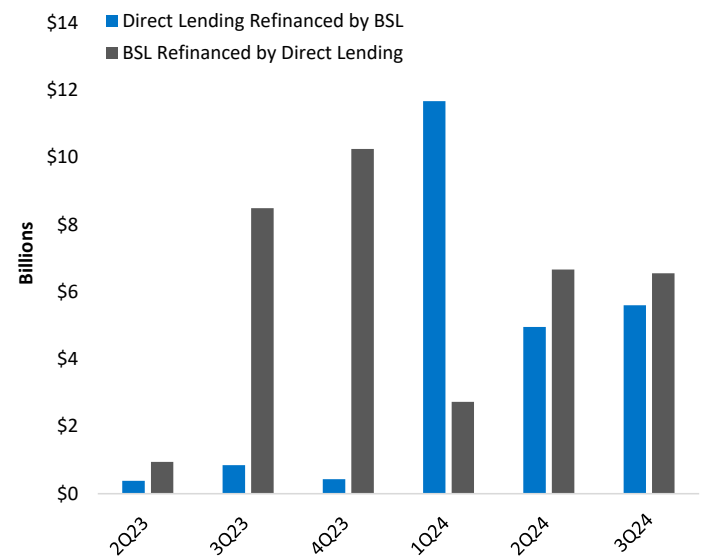


Figure 13
Source: DoubleLine, Pitchbook

Non-Agency Residential Mortgage-Backed Securities

Strong to Quite Strong

Residential credit performance was positive in the third quarter, driven by higher home prices, low defaults and strong demand for non-Agency residential MBS (RMBS) new issuance. National home prices continued to march higher and were up 5.0% YoY through August.¹⁰ (Figure 14) While supply remains constrained compared with pre-pandemic levels, there has been some thawing in conditions as housing inventories have risen to their highest levels since October 2020.

The national delinquency rate of first lien mortgages remained largely unchanged in the quarter, registering 3.3% in August.¹¹ Mortgage rates eased roughly 80 bps during the period, with the 30-year fixed-rate mortgage at 6.1%.¹² While the decline has yet to have a material impact on home sales, which were down 4.7% month-over-month in August to an annualized rate of 3.86 million units, mortgage refinances reached their highest level in almost three years.¹³ That said, it is unlikely there will be a significant refinance wave like 2021 given that over 70% of the outstanding mortgage universe comprises mortgage rates below 5%.¹⁴ (Figure 15)

Non-Agency RMBS issuance for the quarter was \$32.7 billion, bringing the YTD total to \$88 billion, up 44% YoY.¹⁵ While these deals were mostly oversubscribed, risk-off sentiment permeated the market in August, which led to some spread widening across the capital stack. Expectations for further interest-rate cuts, however, reversed most of this widening during the remainder of the quarter as investors looked to lock in higher yields. Non-Agency RMBS bonds rated IG finished the period yielding between 5% to 6% with their below-IG counterparts in the 6%-8% range. For comparison, non-QMs rated AAA traded at an approximate 7% yield this time last year. We anticipate issuance activity to slow down in the fourth quarter and any spread volatility to be driven by overall risk sentiment.

Absent a significant change in economic conditions, we believe the market landscape remains supportive of residential credit performance. Although most sectors have experienced spread compression from year-end, we believe many parts of the non-Agency RMBS market look attractive from a relative value perspective, with opportunities for strong total return potential across the capital structure.

Home Supply vs. Prices | As of Aug. 31, 2024

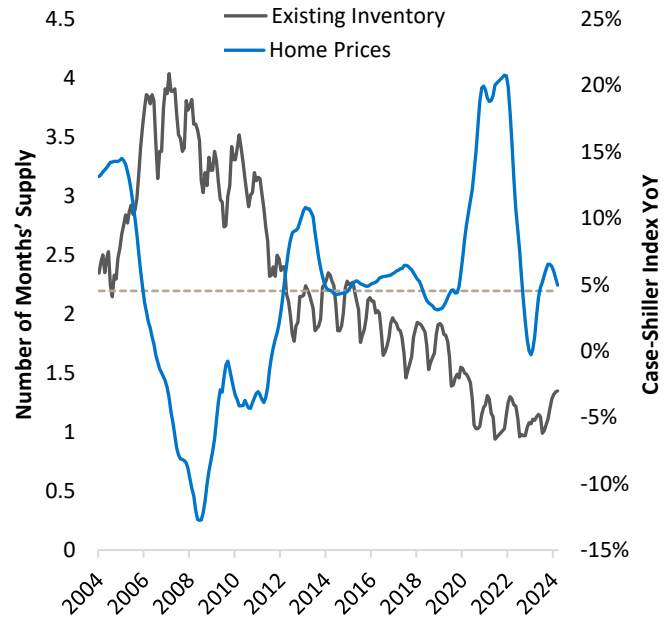


Figure 14
Source: DoubleLine, National Association of Realtors
Dashed line represents the average number of months' supply.

Mortgage Rates | As of Sept. 30, 2024

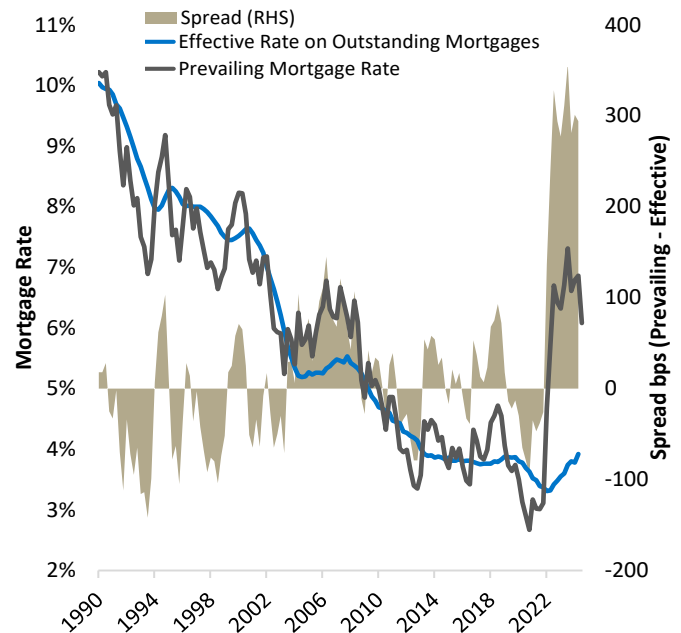


Figure 15
Source: DoubleLine, Freddie Mac

Non-Agency Commercial Mortgage-Backed Securities

Past Peak Pessimism

The non-Agency CMBS market experienced positive performance in the third quarter as non-Agency CMBS rated AAA and BBB returned 4.31% and 3.54%, respectively.¹⁶ The non-Agency CMBS credit curve continued to flatten as relative cheapness in the sector, increased fund inflows and an improved CRE outlook outweighed supply factors.

During the quarter, \$27.7 billion of non-Agency CMBS deals priced, twice the issuance registered during the same period last year.¹⁷ New-issue, private-label CMBS issuance stood at \$75.0 billion through the first three quarters of 2024, outpacing last year's total issuance of \$46.5 billion. (Figure 16) Private-label CMBS issuance volume is expected to finish the year at \$115 billion, which would be a 240% increase over 2023.

While the decline in transaction activity is slowing, commercial property prices experienced positive growth nationally in August for the first time since November 2022, with the RCA U.S. All-Property Commercial Property Price Index (CPPI) up 0.2% YoY. (Figure 17) Office properties continue to face a unique secular shift in demand that has weighed particularly heavily on valuations. The sector exhibited the largest annual decline in prices again in August, down 27.4% YoY.¹⁸

With a consensus view that the Fed's rate-hiking cycle is behind us, we expect transaction activity to pick up, allowing more borrowers to successfully refinance as valuations become clearer. This should form a feedback loop that begets additional transactions and, subsequently, greater clarity, which should lead to increased capital market activity and, ultimately, an easing of lending standards. Given still tight bank lending standards, we believe private lenders and the non-Agency CMBS market can gain market share at attractive entry points, providing another avenue for loan availability. Although lending conditions remain tight relative to pre-pandemic levels, increasing capital availability from other avenues has led to higher new-issue volumes and better-than-expected on-time payoff rates. (See: [Commercial Real Estate Update](#))

Heading into the second half of the year, we expect lenders and servicers will continue to employ modifications and extensions – practices that should result in higher recoveries than near-term foreclosures and liquidations. Borrowers with cash-flowing assets are likely to receive extensions, as are those that have experienced price appreciation in their underlying assets and are willing to put more equity in. We expect most issues will remain largely idiosyncratic and isolated to individual assets in certain troubled sectors. Property types that we anticipate investors will continue to favor include industrial, higher-quality multifamily, trophy office, resort hotel, necessity-based retail and certain segments of lodging.

Private-Label CMBS Issuance | As of Sept. 30, 2024

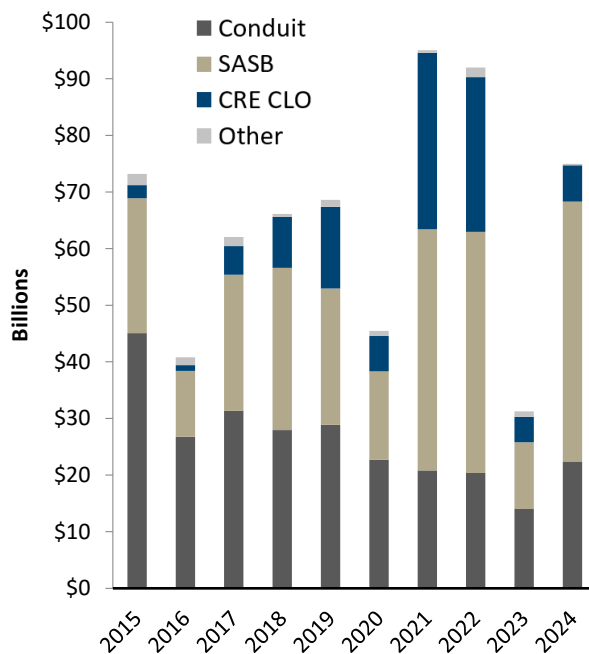


Figure 16

Source: DoubleLine, J.P. Morgan Research. Single Asset, Single Borrower (SASB).

CRE Property Prices | As of Aug. 31, 2024

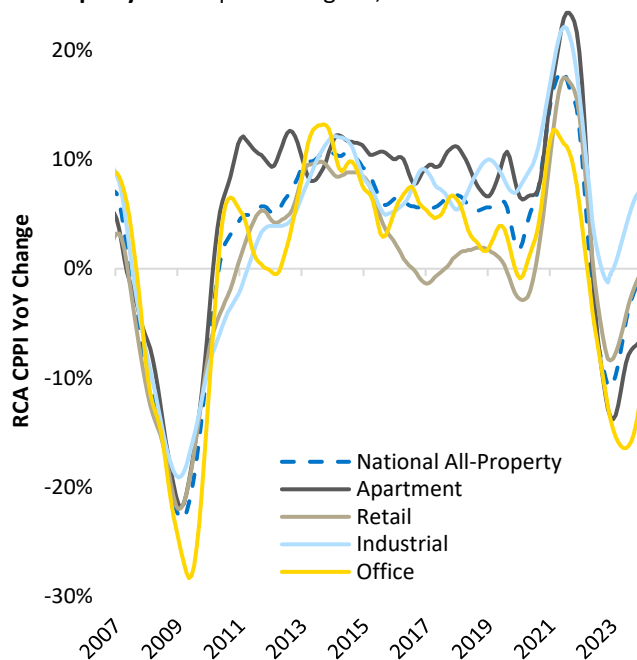


Figure 17

Source: DoubleLine, RCA

Asset-Backed Securities

Consumer Resiliency Boosts Odds of Soft Landing

Returns for ABS were positive in the third quarter as spreads tightened and credit curves flattened.¹⁹ Demand remained robust across the capital structure and subsectors amid continued strong issuance. YTD through Sept. 30, new-issue volume was \$272 billion, up 28% YoY and surpassing full-year new-issue volume for 2023.²⁰ Investor demand remained healthy and sufficient to absorb the supply given the still attractive relative value and yield pickup in ABS versus comparable corporate credit. (Figure 18)

Despite facing significant economic challenges and the threat of recession, the U.S. consumer has shown resilience, suggesting the possibility of a soft landing. (see: [The State of the U.S. Consumer](#)) This resilience can be attributed to the strength of the residential mortgage market, a robust labor market and excess savings accumulated during the pandemic. While the economic backdrop broadly remains supportive, consumer delinquencies have been rising, with a large portion stemming from lower-credit-quality borrowers. (Figure 19)

Looking ahead, we expect consumer delinquencies will continue to increase at a similar pace as high interest rates and still-elevated inflation weigh on consumers. That said, broad consumer health metrics do not signal widespread weakness. Absent a large downturn in the labor or housing markets, we do not expect significant deterioration in performance and believe shorter-duration consumer ABS priced off the front end of the Treasury curve broadly offer strong performance potential across various scenarios.

Within hard-asset ABS sectors, we expect continued growth in infrastructure-related ABS, such as digital network data centers and fiber networks that support products and services central to daily life. (See: [Investing in Infrastructure Debt](#)) Aircraft ABS in particular has been one of the strongest-performing subsectors this year as its metrics have continued to improve, with global flight volume 6% above 2019 levels.²¹ Given improving fundamentals and robust structures, senior portions of legacy aircraft ABS may provide attractive total return opportunities as deals accrete to par.

We continue to favor new-issue, post-COVID-19 ABS structures, both consumer and hard asset, that tend to offer more investor protection in the form of additional credit enhancement and stringent leverage ratios. These factors can potentially create durable structures capable of withstanding challenging economic environments should they materialize.

Yield vs. Spread | As of Sept. 30, 2024

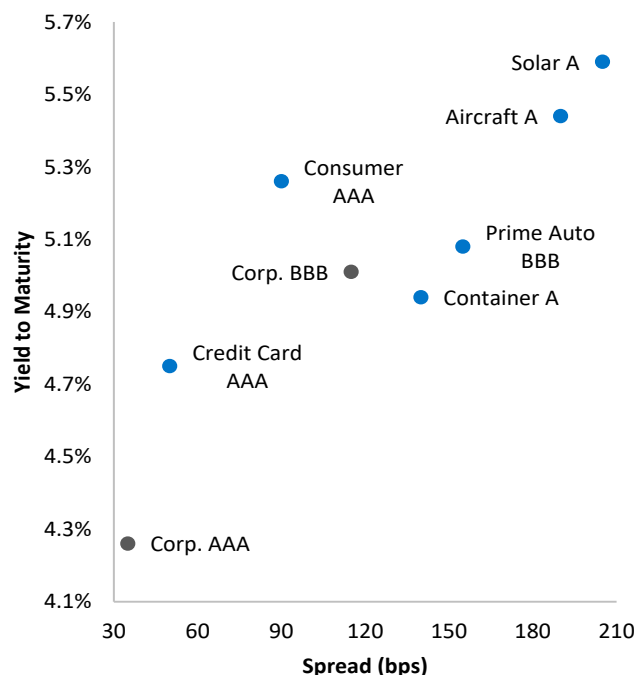


Figure 18
Source: DoubleLine, BofA Global Research

Serious Delinquency (90-Day+) by Loan Type | As of Jun. 30, 2024

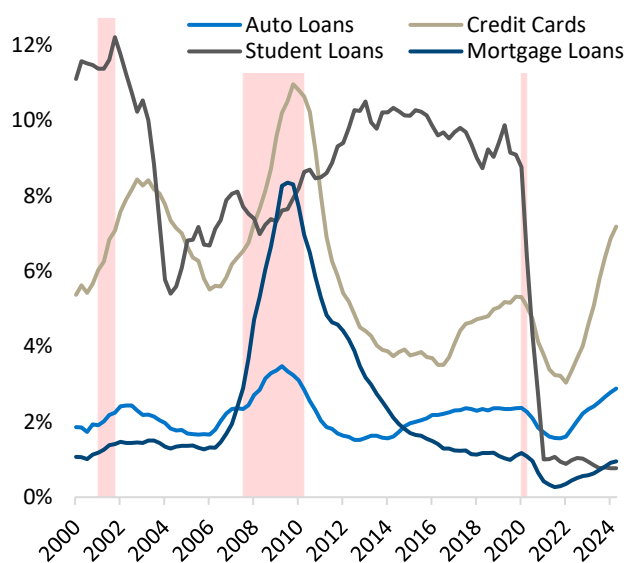


Figure 19
Source: DoubleLine, Federal Reserve Bank of New York
Red-shaded areas indicate recessionary periods. Serious delinquencies represented as 90-plus days.

Collateralized Loan Obligations

CLOs in a Rate-Cutting Environment?

CLO returns were positive in the third quarter, although the outperformance relative to fixed-rate bonds experienced in the first half of the year moderated as the Fed delivered its first rate cut and Treasury rates rallied. CLOs rated AAA and BBB returned 1.68% and 2.34%, respectively.²² Spreads modestly tightened as the discount margin for CLOs rated AAA ended the period at 124 bps, 2 bps tighter QoQ; CLOs rated BBB tightened 12 bps to 358 bps.

CLO new issuance set a record pace in the first half of the year, as spread tightening made deals more affordable for managers and a wave of refinancings sent loans back into the syndication market. To a certain degree, momentum faded in the third quarter, with CLO new issuance falling to \$40.6 billion from \$101.4 billion in the first half of the year.²³ That said, the primary market was busy throughout the summer as \$70.6 billion of reset activity priced in the quarter relative to \$72.3 billion for the first six months of the year. Much of the support for new-issue activity this year has been an unprecedented level of loan refinancings, driven largely by spread tightening at the top of the capital structure, which has contributed to some of the most-attractive new-issue credit spreads for borrowers and created sufficient incentive for refinancing and reset activities.

CLOs have been one of the best-performing fixed-income asset classes since the Fed began its hiking cycle in March 2022. (Figure 20) The question now is: How will CLOs fare as the Fed transitions from rate hikes to cuts? Despite rate cuts potentially impacting CLO debt total returns, we are optimistic on CLO performance. Broadly speaking, the start of the cutting cycle should be beneficial for leveraged loan fundamentals and, in turn, CLO fundamentals, particularly CLOs rated BB and CLO equity.

While lower rates can impact CLO yields, spreads broadly remain attractive, and CLOs screen cheap relative to similarly rated corporate bonds. (Figure 21) We believe there will be continued demand from relative value buyers; coupled with muted net issuance, this should bode well for technicals. Further, there have been multiple announcements of new CLO exchange-traded funds (ETFs). Flow data suggests that since the rate cut on Sept. 18, there has been approximately \$350 million of inflow into CLO ETFs.²⁴ While it is difficult to extrapolate retail money trends from one data point, it is at the very least encouraging that the beginning of rate cuts has not immediately led to retail investors rushing out of the CLO market.

CLO Corporate Bonds | As of Sept. 30, 2024

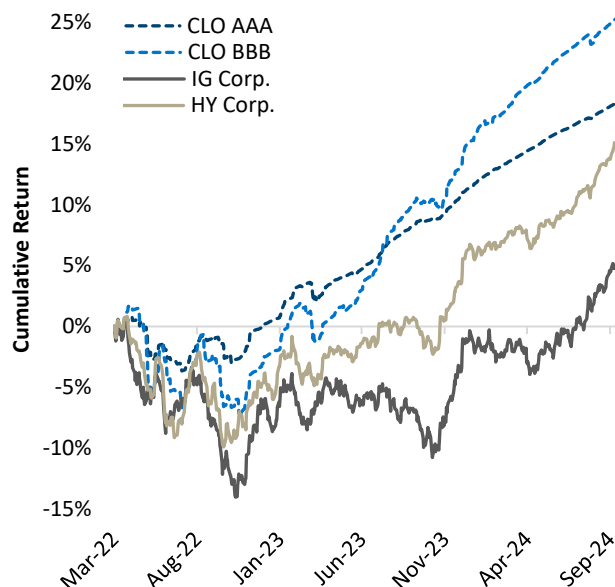
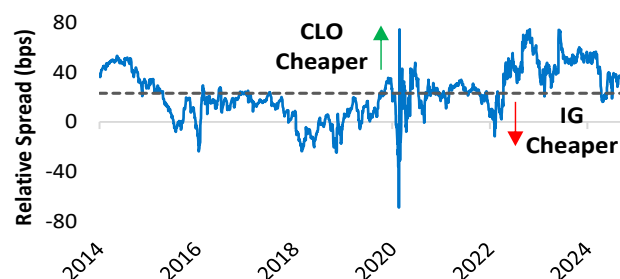


Figure 20
Source: DoubleLine, Bloomberg, J.P. Morgan

CLO AAA vs. U.S. Investment Grade Corp. | As of Sept. 30, 2024



CLO BBB vs. U.S. High Yield Corp. | As of Sept. 30, 2024

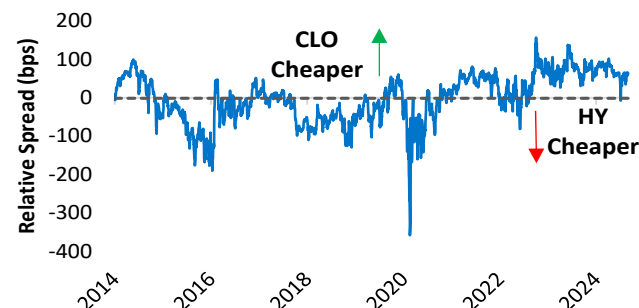


Figure 21
Source: DoubleLine, Bloomberg, J.P. Morgan

Emerging Markets Fixed Income

Good Times (Returns) Keep on Rollin'

EM sovereign and corporate bonds posted strong positive returns in the third quarter. EM sovereign bonds (EMBI GD) outperformed EM corporate bonds (CEMBI BD), returning 6.15% versus 4.48%, respectively.²⁵ The credit spread for the EMBI GD tightened 27 bps in September and 30 bps on the quarter. The credit spread for the CEMBI BD tightened 6 bps and 3 bps, respectively. EM sovereign bonds' outperformance was mainly driven by them generally having longer duration than their corporate counterparts in a period when Treasury rates fell. While EM spreads are inside their 10-year averages, all-in yields remain attractive.

EM corporate issuance reached \$114 billion in the quarter, above the five-year average and almost double the \$60 billion in the same period last year. YTD, EM corporates have priced \$323 billion, supported by positive market sentiment.²⁶ South Korea overtook China as the largest country of EM corporate issuance, contributing \$45 billion YTD. The increased volume has been easily absorbed due to a diverse pipeline of issuers. Net financing for September turned positive to the tune of \$15 billion, pulling the negative net financing number to \$30 billion. The combined negative net financing over 2023 and 2024 has created a supportive technical environment for the asset class. (Figure 22) EM bond flows were negative \$13.5 billion YTD as of Sept. 30. However, the net negative financing and potential re-introduction of crossover assets (DM into EM) could produce a positive technical backdrop for EM for the remainder of the year.

EM growth largely surprised to the upside in the first half of 2024, leading to spread compression and positive returns. In the third quarter, a falling rate environment contributed further to positive YTD returns. DoubleLine believes it is likely EM growth that will slow as we head into 2025, but not alarmingly so. EM fundamentals remain stable to strong, with leverage and other credit metrics on the stronger side of the historical range as well as significantly better than DM comparables. EM corporates maintain a conservative and disciplined approach to their balance sheets and are largely avoiding aggressive shareholder-friendly activities or large-scale mergers and acquisitions. As a result, the net rating action has been positive. (Figure 23)

The DoubleLine EM team is overweight Latin America relative to benchmarks, as the region typically offers attractive return-per-unit-of-risk profiles with less geopolitical risk. DoubleLine remains constructive on the asset class while recognizing positive future returns will likely be driven by coupon and rate moves, rather than any significant tightening of credit spreads.

We believe the current environment is when active management will have an opportunity to identify market dislocations, participate in the new-issue market and differentiate among credits through bottom-up fundamental analysis. The DoubleLine EM team finds that higher-quality HY names (BB rated) with short to medium maturities provide attractive return-per-unit-of-risk profiles at this juncture.

Technical: Negative Net Financing A Tailwind for EMFI

As of Sept. 30, 2024

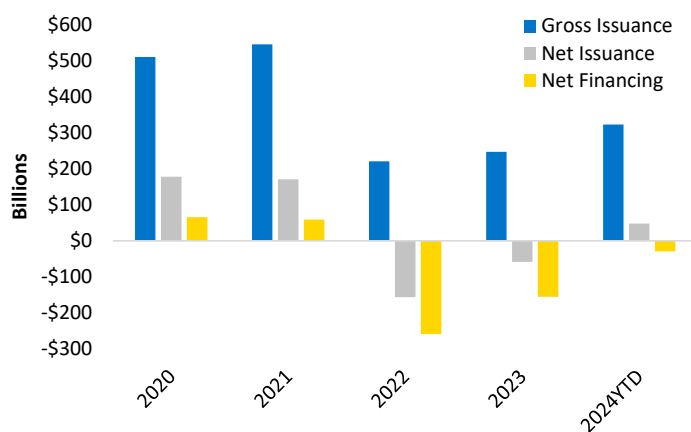


Figure 22
Source: DoubleLine, J.P. Morgan

Fundamentals: More Upgrades Than Downgrades Since 1Q23

As of Sept. 30, 2024

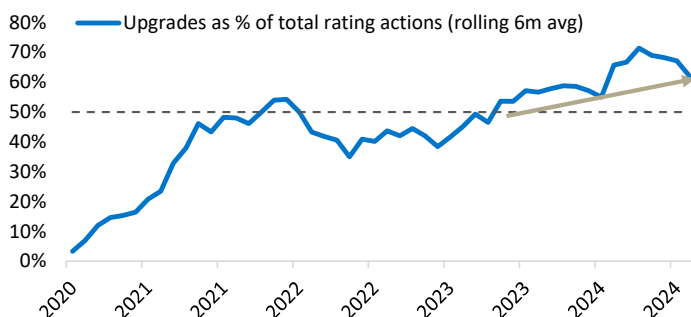


Figure 23
Source: DoubleLine, J.P. Morgan

Endnotes

- ¹ Fed Chair Jerome H. Powell's FOMC Press Conference, Sept. 28, 2024
- ² Bloomberg World Interest Rate Probability function
- ³ Bloomberg US MBS and Bloomberg US Treasury indices
- ⁴ Citi Research
- ⁵ DoubleLine, Barclays
- ⁶ J.P. Morgan Research
- ⁷ J.P. Morgan Research
- ⁸ J.P. Morgan Research
- ⁹ Morningstar LSTA US Leveraged Loan TR USD Index
- ¹⁰ S&P CoreLogic Case-Shiller U.S. National Home Price SA Index
- ¹¹ August 2024 ICE Mortgage Monitor Report
- ¹² Freddie Mac Primary Mortgage Market Survey, Sept. 30, 2024
- ¹³ U.S. Existing-Home Sales Index, Aug. 31, 2024; MBA Weekly Applications Survey, Sept. 30, 2024
- ¹⁴ Citi Research
- ¹⁵ BofA Global Research
- ¹⁶ ICE BofA CMBS indices
- ¹⁷ J.P. Morgan Research
- ¹⁸ Real Capital Analytics
- ¹⁹ ICE BofA indices
- ²⁰ BofA Global Research
- ²¹ International Air Transport Association
- ²² J.P. Morgan indices
- ²³ LCD Research
- ²⁴ Morgan Stanley Research
- ²⁵ EM sovereigns = J.P. Morgan EM Bond Index Global Diversified; EM corporates = J.P. Morgan Corporate EM Bond Index Broad Diversified
- ²⁶ J.P. Morgan

Index Definitions and Terms

Indices used in Figure 1:

U.S. Treasuries: Bloomberg US Treasury Index; **Agency MBS:** Bloomberg US MBS Index; **Agency CMO:** ICE BofA U.S. Agency CMO Index; **Agency CMBS:** Bloomberg US Agency CMBS Index; **RMBS:** Citi Research; **Non-Agency CMBS:** Bloomberg US Non-Agency CMBS Index; **ABS AAA:** Bloomberg US ABS Index; **ABS AA-BBB:** ICE BofA U.S. Fixed-Rate Miscellaneous ABS Index; **CLOs:** J.P. Morgan CLO Index; **U.S. IG Corporate:** Bloomberg US Corporate Index; **U.S. HY Corporate:** Bloomberg US Corporate HY Index; **Leveraged Loans:** Credit Suisse Liquid Leveraged Loan Index; **EMFI Sovereign:** J.P. Morgan EMBI Global Diversified; **EMFI Corporate:** J.P. Morgan CEMBI Broad Diversified; **US Agg Index:** Bloomberg US Aggregate Bond Index

Indices used in Figure 2:

US Agg Index: Bloomberg US Aggregate Bond Index; **U.S. Treasuries:** Bloomberg US Treasury Index; **Agency MBS:** Bloomberg US Agency MBS Index; **U.S. IG Corporate:** Bloomberg US Corporate Index; **U.S. HY Corporate:** Bloomberg US Corporate High Yield Index; **EMFI Corporate:** J.P. Morgan CEMBI Broad Diversified; **EMFI Sovereign:** J.P. Morgan EMBI Global Diversified; **Leveraged Loans:** Credit Suisse Liquid Leveraged Loan Index; **ABS AA-BBB:** ICE BofA U.S. Fixed-Rate Miscellaneous ABS Index; **CMBS BBB:** Bloomberg US Non-Agency CMBS Index; **CLOs:** J.P. Morgan

Indices used in Figure 3:

US Agg Index: Bloomberg US Aggregate Bond Index; **Agency MBS:** 30-Year FNCL Par Coupon Index; **U.S. IG Corporate:** Bloomberg US Corporate Index; **U.S. 1-3 Yr Corp.:** Bloomberg US Corporate Index; **CMBS:** Bloomberg US Non-Agency CMBS Index; **RMBS (Non-QM) AAA:** Wells Fargo; **CLOs:** J.P. Morgan; **U.S. IHY Corporate:** Bloomberg US Corporate High Yield Index; **EMFI Corp.:** J.P. Morgan CEMBI Broad Diversified; **EMFI Sov.:** J.P. Morgan EMBI Global Diversified; **Bank Loans:** Credit Suisse Liquid Leveraged Loan Index; **ABS AA-BBB:** ICE BofA U.S. Fixed-Rate Miscellaneous ABS Index

Agency – Mortgage securities whose principal and interest are guaranteed by a U.S. government agency such as Fannie Mae (FNMA) or Freddie Mac (FHLMC).

Asset-Backed Securities (ABS) – Investment securities, such as bond or notes, that are collateralized by a pool of assets, such as loans, leases, credit card debt, royalties or receivables.

Basis Points (bps) – Basis points (or basis point (bp)) refer to a common unit of measure for interest rates and other percentages in finance. One basis point is equal to 1/100th of 1%, or 0.01% or 0.0001, and is used to denote the percentage change in a financial instrument.

Below Investment Grade (IG)/Non-Investment Grade (Non-IG) – Term indicating a security is rated below investment grade (IG). These securities are seen as having higher default risk or being prone to other adverse credit events.

They typically pay higher yields than higher-quality bonds in order to make them attractive. They are less likely than IG bonds to pay back 100 cents on the dollar.

Beta – Measure of the volatility – or systematic risk – of a security or portfolio compared to the market as a whole.

Bloomberg US Agency Commercial Mortgage-Backed Securities (CMBS) Index – This index measures the U.S. market of Agency conduit and fusion CMBS deals.

Bloomberg US Agency Mortgage-Backed Securities (MBS) Index – This index tracks Agency mortgage-backed pass-through securities guaranteed by government-sponsored enterprises (GSEs).

Bloomberg US Aggregate Bond Index – This index (the “Agg”) represents securities that are SEC registered, taxable and U.S. dollar denominated. It covers the U.S. investment grade, fixed-rate bond market, with components for government and corporate securities, mortgage pass-through securities and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis.

Bloomberg US Asset-Backed Securities (ABS) Index – This index is the ABS component of the Bloomberg US Aggregate Bond Index, a flagship measure of the U.S. investment grade, fixed-rate bond market. The ABS index has three subsectors: credit and credit cards, autos and utility.

Bloomberg US Corporate High Yield (HY) Index – This index measures the U.S. dollar-denominated, HY, fixed-rate corporate bond market. Securities are classified as HY if the respective middle ratings of Moody's, Fitch and S&P are Ba1, BB+ or BB+ or below. The Bloomberg US HY Long Bond Index, including bonds with maturities of 10 years or greater, and the Bloomberg US HY Intermediate Bond Index, including bonds with maturities of 1 to 9.999 years, are subindices of the Bloomberg US Corporate HY Bond Index.

Bloomberg US Corporate Index – This index measures the investment grade, fixed-rate taxable corporate bond market. It includes U.S. dollar-denominated securities publicly issued by U.S. and non-U.S. industrial, utility and financial issuers.

Bloomberg US Credit Index – This index measures the investment grade, U.S. dollar-denominated fixed-rate, taxable corporate and government-related bond markets. It is composed of the Bloomberg US Corporate Index and a noncorporate component that includes foreign agencies, sovereigns, supranationals and local authorities.

Bloomberg US Mortgage-Backed Securities (MBS) Index – This index measures the performance of investment grade, fixed-rate, mortgage-backed, pass-through securities of the government-sponsored enterprises (GSEs): Federal Home Loan Mortgage Corp. (Freddie Mac), Federal National Mortgage Association (Fannie Mae) and Government National Mortgage Association (Ginnie Mae).

Bloomberg US Non-Agency Commercial Mortgage-Backed Securities (CMBS) Index – This index measures the market of non-Agency conduit and fusion CMBS deals with a minimum current deal size of \$300 million.

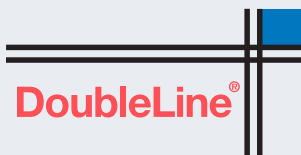
Bloomberg US Treasury Index – This index measures U.S. dollar-denominated, fixed-rate nominal debt issued by the U.S. Treasury with a remaining maturity of one year or more. Treasury bills are excluded by the maturity constraint but are part of a separate Short Treasury Index.

Bloomberg World Interest Rate Probability (WIRP) – Statistical function developed by Bloomberg that uses fed funds futures and options to assess the probability of future Federal Open Market Committee (FOMC) decisions. It seeks to calculate the chances of a rate hike at each of the FOMC meetings using futures trading data.

Broadly Syndicated Loan (BSL) – Any loan to an obligor issued as part of a loan facility with an original loan size (including any first and second lien loans in the facility) greater than \$250 million.

Bull Steepener – A change in the U.S. Treasury yield curve that occurs when short-term yields decline faster than long-term yields.

Capital Expenditures (Capex) – Funds used by a company to acquire, upgrade and maintain physical assets such as property, plants, buildings, technology or equipment. Capex is often used to undertake new projects or investments by a company, commonly with the goal of increasing the scope of or adding some economic benefit to operations.



DoubleLine Fixed Income Briefing

September 30, 2024

Collateralized Loan Obligation (CLO) – Single security backed by a pool of debt.

Collateralized Mortgage Obligation (CMO) – Refers to a type of mortgage-backed security that contains a pool of mortgages bundled together and sold as an investment. Organized by maturity and level of risk, CMOs receive cash flows as borrowers repay the mortgages that act as collateral on these securities. In turn, CMOs distribute principal and interest payments to investors based on predetermined rules and agreements.

Conduit Loans – Type of loans, also known as commercial mortgage-backed securities (CMBS) loans, that are commercial real estate loans pooled together with similar commercial mortgages and sold on the secondary market. On the secondary market, conduit loans are divided into tranches based on risk, return and loan maturity.

Consumer Price Index (CPI) – This index, compiled by the U.S. Bureau of Labor Statistics, examines the weighted average of the prices of a basket of consumer goods and services, such as transportation, food and medical care. It is calculated by averaging price changes for each item in the basket. Changes in the CPI are used to assess price changes associated with the cost of living. The CPI is one of the most frequently used statistics for identifying periods of inflation or deflation.

Credit Quality – Determined from the highest available credit rating from any nationally recognized statistical rating organization (NRSRO, generally S&P, Moody's or Fitch). DoubleLine chooses to display credit ratings using S&P's rating convention, although the rating might be sourced from another NRSRO. The rating organization evaluates a bond issuer's financial strength, meaning its ability to pay a bond's principal and interest in a timely fashion. Ratings are expressed as letters ranging from "AAA," the highest grade, to "D," the lowest grade. In situations where the rating organization has not issued a formal rating on a security, the security will be classified as "nonrated."

Credit Risk Transfer (CRT) – Pioneered by Freddie Mac in 2013, CRT programs structure mortgage credit risk into securities and (re)insurance offerings, transferring credit risk exposure from U.S. taxpayers to private capital.

Credit Suisse Liquid Leveraged Loan Index (LELI) – This index is a subindex of the Credit Suisse Leveraged Loan Index, which, with over 1,664 fully funded term loan facilities as of December 2018, is designed to mirror the investable universe of the U.S. dollar-denominated leveraged loan market. LELI contains about 284 term loan facilities as of December 2018 and seeks to track the liquid segment of the loan market. LELI includes only large loan facilities, over \$1 billion in face value, in order to sample loans that are actively traded in the secondary market.

Dot Plot – Simple statistical chart that consists of data points plotted as dots on a graph with x- and y-axes. Dot plots are well known as the method that the Federal Reserve uses to convey its benchmark federal funds rate outlook at certain Federal Open Market Committee (FOMC) meetings.

Drawdown – Peak-to-trough decline during a specific period for an investment, trading account or fund. A drawdown is usually quoted as the percentage between the peak and the subsequent trough.

Duration – Measure of the sensitivity of the price of a bond or other debt instrument to a change in interest rates.

Excess Return – Return achieved above and beyond the return of a proxy such as a benchmark index.

Federal Funds Rate – Target interest rate, set by the Federal Reserve at its Federal Open Market Committee (FOMC) meetings, at which commercial banks borrow and lend their excess reserves to each other overnight. The Fed sets a target federal funds rate eight times a year, based on prevailing economic conditions.

Federal Open Market Committee (FOMC) – Branch of the Federal Reserve System that determines the direction of monetary policy specifically by directing open market operations. The FOMC comprises the seven board governors and five (out of 12) Federal Reserve Bank presidents.

Freddie Mac Primary Mortgage Market Survey (PMMS) – This weekly national survey tracks the most-popular 30- and 15-year fixed-rate mortgages, and 5-1 hybrid amortizing adjustable-rate mortgage products among a mix of lender types. The survey is compiled Monday through Wednesday and released (as average rates and points) on Thursday.

High Yield (HY) – Bonds that pay higher interest rates because they have lower credit ratings than investment grade (IG) bonds. HY bonds are more likely to default, so they must pay a higher yield than IG bonds to compensate investors.

ICE BofA 1-3 Year U.S. Treasury Index – An unmanaged index that tracks the performance of the direct sovereign debt of the U.S. government having a maturity of at least one year and less than three years.

ICE BofA U.S. Agency Collateralized Mortgage Obligation (CMO) Index – This index tracks the performance of U.S. dollar-denominated, fixed-rate Agency CMOs publicly issued in the U.S. domestic market. Qualifying securities must have at least one year remaining to final maturity, a fixed coupon schedule, an original deal size for the collateral group of at least \$250 million and a current outstanding deal size for the collateral group that is greater than or equal to 10% of the original deal size.

ICE BofA U.S. Fixed-Rate Miscellaneous Asset-Backed Securities (ABS) Index – This index tracks the subset of the ICE BofA U.S. Fixed-Rate ABS Index rated AA to BBB and includes all ABS collateralized by anything other than auto loans, home equity loans, manufactured housing, credit card receivables and utility assets.

Investment Grade (IG) – Rating that signifies a municipal or corporate bond presents a relatively low risk of default. Bonds below this designation are considered to have a high risk of default and are commonly referred to as high yield (HY) or "junk bonds." The higher the bond rating the more likely the bond will return 100 cents on the U.S. dollar.

J.P. Morgan Collateralized Loan Obligation Index (CLOIE) – This market value-weighted index comprises U.S. dollar-denominated collateralized loan obligations (CLOs).

J.P. Morgan Corporate Emerging Markets Bond Index Broad Diversified (CEMBI BD) – This index is a uniquely weighted version of the CEMBI, which is a market capitalization-weighted index consisting of U.S. dollar-denominated emerging markets corporate bonds. The CEMBI BD limits the weights of index countries with larger debt stocks by only including specified portions of those countries' eligible current face amounts of debt outstanding.

J.P. Morgan Emerging Markets Bond Index Global Diversified (EMBI GD) – This index is a uniquely weighted version of the EMBI. The EMBI tracks bonds from emerging markets (EM), and comprises sovereign debt and EM corporate bonds. The EMBI GD limits the weights of index countries with larger debt stocks by only including specified portions of those countries' eligible current face amounts of debt outstanding.

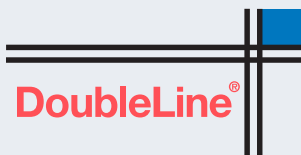
Loan-to-Value (LTV) Ratio – Assessment of lending risk that financial institutions and other lenders examine before approving a mortgage. Typically, loan assessments with high LTV ratios are considered higher-risk loans. Therefore, if the mortgage is approved, the loan has a higher interest rate.

Mezzanine Debt – Occurs when a hybrid debt issue is subordinated to another debt issue from the same issuer. Mezzanine debt has embedded equity instruments attached, often known as warrants, which increase the value of the subordinated debt and allow greater flexibility when dealing with bondholders. Mezzanine debt is frequently associated with acquisitions and buyouts, for which it may be used to prioritize new owners ahead of existing owners in case of bankruptcy.

Morningstar LSTA US Leveraged Loan TR USD Index – This index (formerly the S&P/LSTA Leveraged Loan Index) tracks the market-weighted performance of institutional weighted loans based on market weightings, spreads and interest payments.

Mortgage-Backed Securities (MBS) – Investment similar to a bond that is made up of a bundle of home loans bought from the banks that issued them. Investors in MBS receive periodic payments similar to bond coupon payments.

Mortgage Bankers Association (MBA) Weekly Applications Survey – Covers over 75 percent of all U.S. retail residential mortgage applications and has been conducted weekly since 1990. Respondents include mortgage bankers, commercial banks and thrifts. Base period and value for all indexes is March 16, 1990 = 100.



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Non-Qualified Mortgage (Non-QM) – Any home loan that doesn't comply with the Consumer Financial Protection Bureau's existing rules on qualified mortgages (QMs). Usually this type of alternative mortgage loan accommodates people who are not able to prove they are capable of making the mortgage payments. Just because it is a non-QM mortgage loan does not necessarily mean high risk or subprime mortgage risk, and in many cases these non-QM mortgage loans require a high FICO score but simply do not check all the boxes associated with a QM loan. Non-QM loans for mortgages are protected by the lender against any type of lawsuit should the borrower become unable to afford the loan.

Par – Short for "par value," par can refer to bonds, preferred stock, common stock or currencies, with different meanings depending on the context. Par most commonly refers to bonds, in which case, it means the face value, or value at which the bond will be redeemed at maturity.

Pass-Through Security – Pool of fixed income securities backed by a package of assets. A servicing intermediary collects the monthly payments from issuers and, after deducting a fee, remits or passes them through to the holders of the pass-through security (that is, people or entities who have invested in it).

Prime – Classification of borrowers, rates or holdings in the lending market that are considered to be of high quality. This classification often refers to loans made to high-quality "prime" borrowers that are offered "prime" or relatively low interest rates.

RCA Commercial Property Price Index (CPPI) – This index describes various nonresidential property types for the U.S. (10 monthly series from 2000). It is a periodic same-property round-trip investment price-change index of the U.S. commercial investment property market. The dataset contains 20 monthly indicators.

RCA U.S. All-Property Commercial Property Price Index (CPPI) – This index is a component of the suite of price indices that comprise the RCA CPPI.

Re-Performing Loan (RPL) – A mortgage that became delinquent because the borrower was behind on payments by at least 90 days, but it is "performing" again because the borrower has resumed making payments.

Rising Star – Bonds that were considered speculation grade when issued but have since improved their financials, reducing the risk of default. These bonds are now closer to the security of an investment grade bond. So while rising stars are still junk bonds, there's a chance they will not always remain junk bonds.

S&P CoreLogic Case-Shiller U.S. National Home Price SA Index – This index tracks on a seasonally adjusted (SA) basis the value of single-family housing within the United States and is a composite of single-family price indices for the nine Census Bureau divisions.

Spread – Difference between yields on differing debt instruments, calculated by deducting the yield of one instrument from another. The higher the yield spread, the greater the difference between the yields offered by each instrument. The spread can be measured between debt instruments of differing maturities, credit ratings or risk.

Subprime – Below-average credit classification of borrowers with a tarnished or limited credit history, and which are subject to higher than average interest rates. Subprime loans carry more credit risk and, as such, will carry higher interest rates.

Tenor – Length of time remaining before a financial contract expires. It is sometimes used interchangeably with the term maturity, although the terms have distinct meanings. Tenor is used in relation to bank loans, insurance contracts and derivative products.

30-Year FNCL Par Coupon Index – This index tracks the par coupons paid on 30-year Fannie Mae mortgages.

U.S. Existing-Home Sales: Housing Inventory Index – This index tracks the number of properties marked as "active" on the market or those pending sales. When a seller lists a property, it becomes counted as inventory. This data is part of the National Association of Realtors' U.S. Existing-Home Sales Index.

U.S. Existing-Home Sales Index – This index, published by the National Association of Realtors, reflects the total unit sales of homes that are already built in the United States. This is a lagging indicator tracking the U.S. housing market, which is impacted by a change in mortgage rates.

U.S. New One Family Houses Sold Index – This data, published by the U.S. Census Bureau, tracks the total unit sales of newly built homes in the United States. The index serves as a lagging indicator for U.S. market demand for houses and is impacted by the mortgage rate.

Yield to Maturity (YTM) – The total return anticipated on a bond if the bond is held until it matures. Yield to maturity is considered a long-term bond yield but is expressed as an annual rate.

Yield to Worst (YTW) – The lowest yield of a bond that can be received short of default.

You cannot invest directly in an index.

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