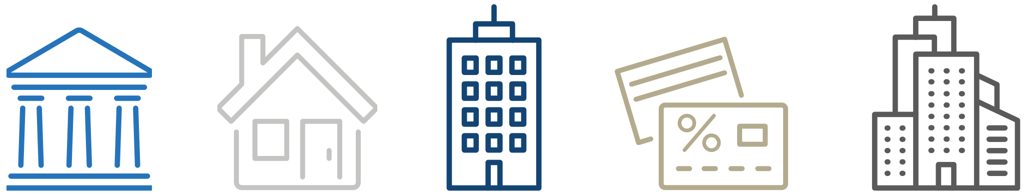
Securitized Products Outlook 2024: **Back to Basics**

Phil Gioia, CFA | December 18, 2023



Sector Summary

Peace, Love and Convexity

- Agency mortgage-backed securities (MBS) faced a perfect storm of headwinds in 2023, leading to current-coupon spreads reaching their widest levels in the post-Global Financial Crisis (GFC) era.
- We remain of the view that Agency MBS are attractive on a historical and relative value basis and expect excess returns versus U.S. Treasuries next year.

Home Sweet Home Prices

- Residential credit performance was robust in 2023, driven by higher home prices, low defaults and relatively strong demand for non-Agency residential MBS (RMBS) new issuance.
- Absent a significant change in economic conditions, we believe the market landscape will remain supportive of non-Agency RMBS performance in 2024.

Windows of Opportunity

- Commercial real estate (CRE) was in the spotlight for much of 2023 as the market struggled with a convergence of higher borrowing costs, lower valuations and economic uncertainty.
- While we expect similar trends to continue in 2024, we caution against painting the non-Agency commercial MBS (CMBS) market with broad strokes, as we believe most property fundamentals outside of the office sector are poised to enter 2024 on reasonable footing.

Balancing Act

- While our base case is for modestly weakening consumer fundamentals, we remain relatively constructive on consumer-related credit performance next year.
- Relative return potential remains particularly compelling, as many consumer asset-backed securities (ABS) are priced off the front end of the Treasury yield curve and offer attractive yield per unit of duration compared to other parts of fixed income.

Float On

- Collateralized loan obligations (CLOs) were one of the best-performing fixed-income asset classes this year, driven by high interest income from floating rate coupons and spread compression from a generally resilient U.S. economy.
- Last year, we preferred senior-rated CLOs for relative value and price stability and CLOs rated BB for carry and convexity. Heading into 2024, we believe a similar barbell can perform well.

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2023: The Year That Wasn't

2023 was supposed to be the year of traditional fixed income. Many market participants expected a U.S. recession, rates would fall and traditional fixed income would outperform riskier credit. However, as is often the case in financial markets, when many predictions align, expectations are seldom realized. Instead, 2023 was a year in which growth persisted, driven by a strong consumer; Treasury rates rose as the Federal Reserve hiked the target federal funds rate (FFR) to its highest level since 2007; and risk-taking was rewarded. *(Figure 1)*

Fixed Income Index Performance | As of November 30, 2023

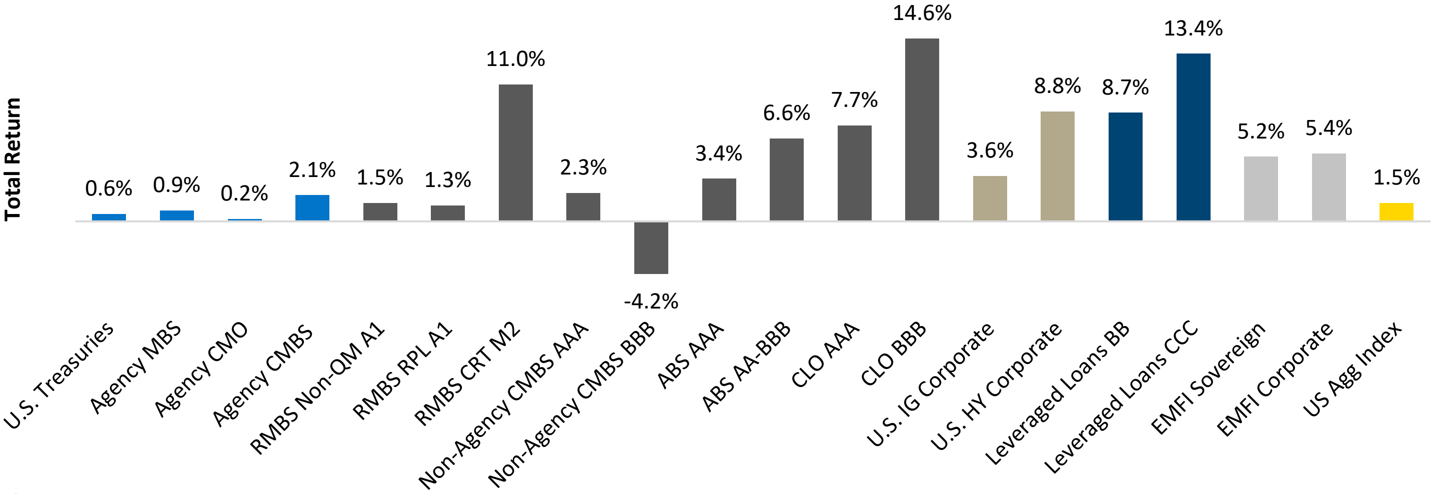

Figure 1

Source: DoubleLine, Bloomberg. Non-QM = non-qualified mortgage, RPL = re-performing loan, CRT = credit risk transfer, EMFI = emerging markets fixed income. Indexes for Figure 1 can be found under disclosures.

2024: Back to Basics

Large return dispersions across fixed income have created an opportunity for investors to get back to basics. Yields for many bonds rated investment grade (IG) are in the mid- to high single digits. Further down the capital structure in credit quality, yields range from high single digits to low teens. *(Figure 2)* This allows for investors to create a relatively high-quality, diversified fixed-income portfolio with a yield comparable to the long-run average return of equities. The bigger benefit, we believe, is the potential to generate these returns with less volatility and drawdown compared to equities.

Securitized Fixed Income Yields | As of November 30, 2023

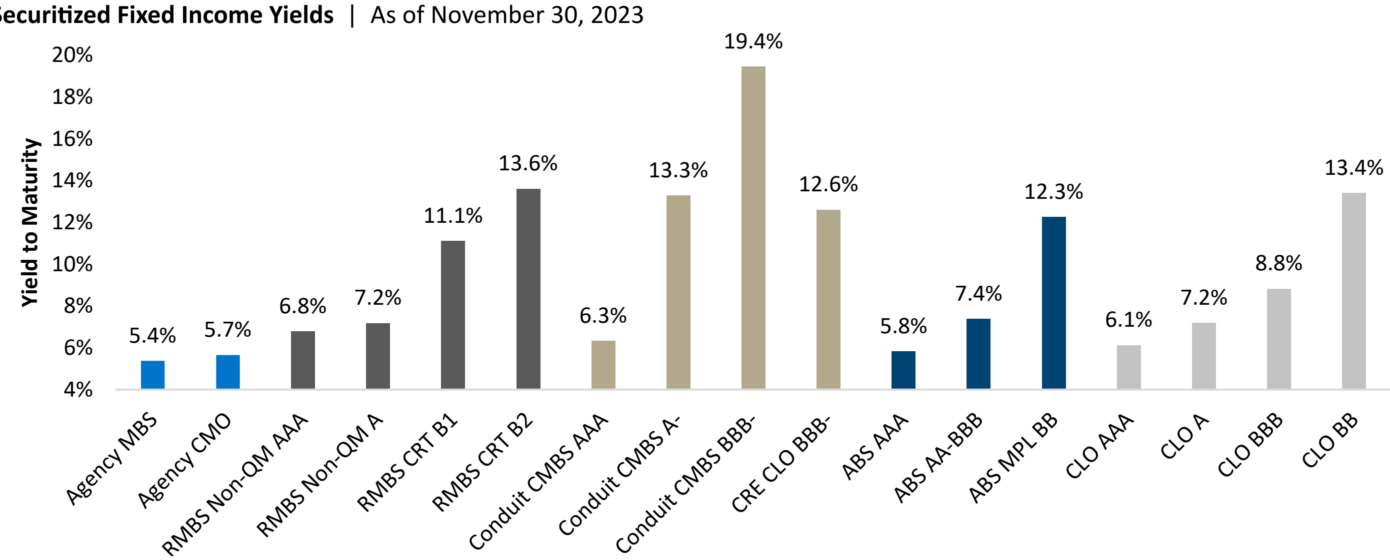

Figure 2

Source: DoubleLine, Bloomberg. Non-QM = non-qualified mortgage, CRT = credit risk transfer, MPL = market place lending. Indexes for Figure 2 can be found under disclosures.

Summary of DoubleLine Securitized Product Views

Sector	Fundamentals	Investment Focus
Agency MBS	• Mortgage spreads remain wide by historic standards given the technical backdrop of Fed quantitative tightening (QT), positive net supply, elevated Treasury rate volatility and bank runoff. • A steeper Treasury curve likely leads to higher net interest margins for banks and, incentivizing a move out of cash and into MBS.	• Belly of the coupon pass-through stack (3.0% to 4.5%) that offers wider spreads relative to low coupons and exhibits better convexity profiles than current-coupon originations. • Discount dollar-priced collateralized mortgage obligations (CMOs) with yields in the midsingle digits that offer strong total return potential.
Non-Agency RMBS	• 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.	• New-issue non-qualified (non-QM) mortgages. • New-issue single-family rentals. • Moderately seasoned credit risk transfer (CRT) deals that have deleveraged.
Non-Agency CMBS	• Industrial and multifamily properties remain healthy with stable cash flows. • Office space remains challenged post-pandemic.	• Seasoned conduit and CRE CLOs with high multifamily exposure. • Nonoffice property types. • Industrial single asset, single borrower with strong cash flows and sponsorships.
ABS	• Industrial and hard-asset collateral continue to display strength. • The consumer sector remains healthy, but delinquencies are picking up for subprime borrowers.	• Prime/near-prime consumer deals backed by short-term loans. • Hard-asset securitizations with strong liquidity profiles (ex data infrastructure).
CLOs	• Stability remains amid increased borrowing costs to the underlying bank loans. • Bank loan downgrades outpace upgrades. • Defaults in levered loans remain muted.	• Deals exiting reinvestment period. • Discount dollar-priced new-issue CLOs.

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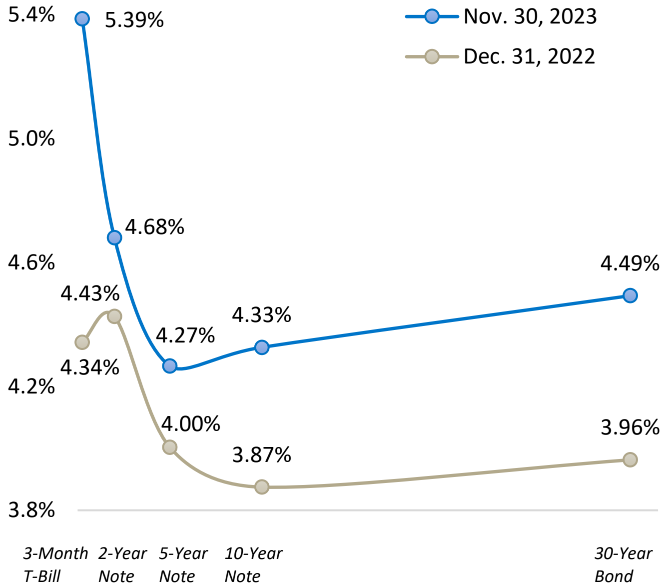
What We're Expecting in 2024

U.S. Treasury Curve to steepen as short-end rates fall faster than long-end rates.

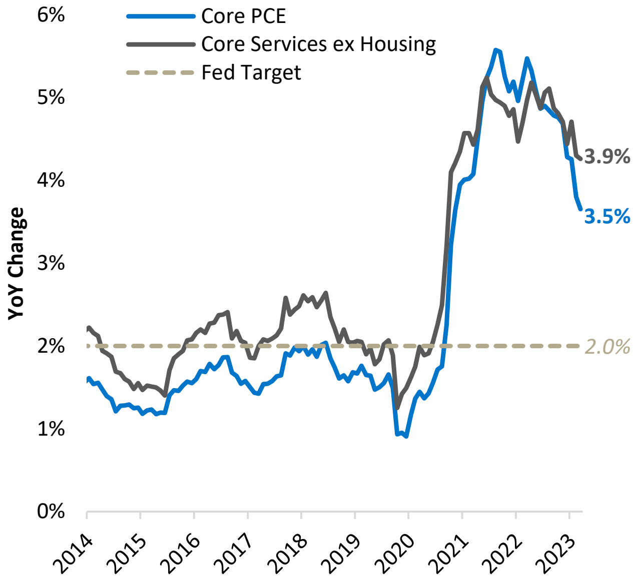
U.S. Treasury Curve | As of November 30, 2023



Source: DoubleLine, Bloomberg

U.S. core PCE to continue to trend lower but likely remain above the Fed's 2% target.

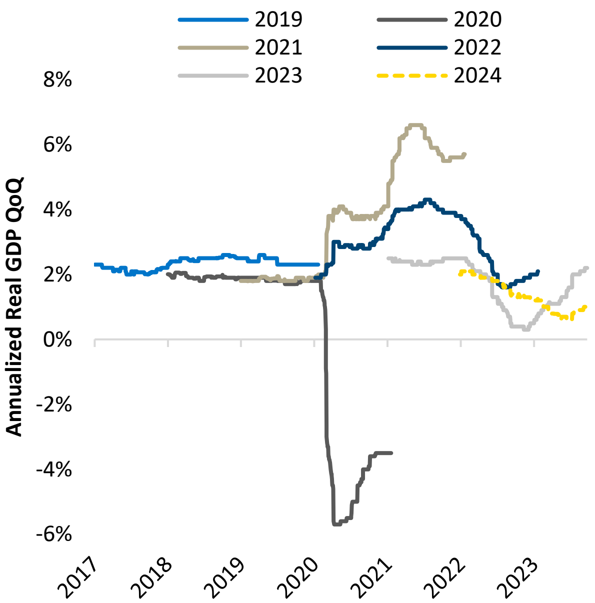
U.S. Core PCE | As of October 31, 2023



Source: DoubleLine, Bloomberg. YoY = year-over-year

U.S. growth to remain positive, albeit slower relative to 2023.

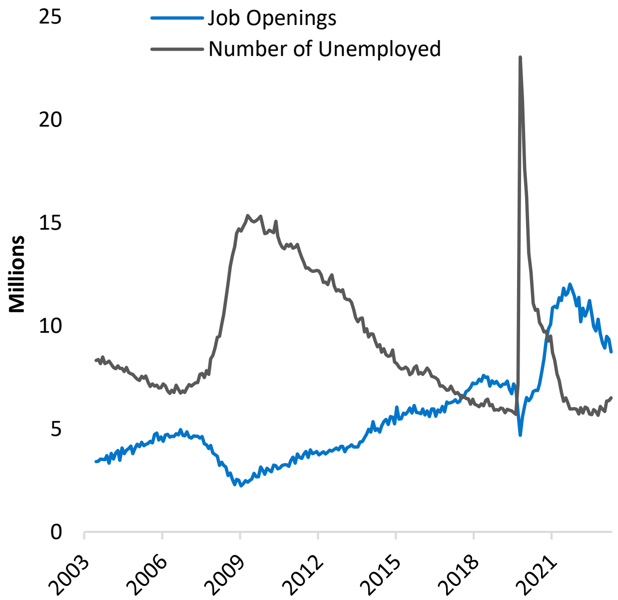
U.S. GDP | As of November 30, 2023



Source: DoubleLine, Bloomberg. GDP = gross domestic product, QoQ = quarter-over-quarter. 2024 represents the Bloomberg Economist Forecast.

Labor market to soften as unemployment increases.

U.S. Labor Market | As of October 31, 2023



Source: DoubleLine, Bloomberg

Agency Mortgage-Backed Securities

Peace, Love and Convexity

Agency MBS faced a perfect storm of headwinds in 2023, leading to current-coupon spreads reaching their widest levels in the post-GFC era. *(Figure 3)* Spread widening was driven in part by technicals, as QT, supply via Federal Deposit Insurance Corp. (FDIC) sales from Silicon Valley Bank and Signature Bank and overall reduced bank demand left money managers as the primary buyer. Further contributing to spread moves was elevated interest-rate volatility and an inverted yield curve. The net result was a year of highs and lows, with the current coupon trading in a range of 75 basis points (bps).

The Fed is likely to wrap up its most aggressive hiking cycle of the past 40 years. Since March 2022, the Fed increased the target federal funds rate 525 bps to an upper-bound of 5.5% to combat high inflation. Over this period, Treasury rates rose 200 bps to 500 bps across tenors as the curve materially bear flattened and then inverted. While inflation is not quite at the Fed's 2% annual target rate, the steady downward trajectory has the fed funds futures market pricing in rate cuts in 2024. *(Figure 4)* Lower rates and an environment of lower rate volatility should be supportive of Agency MBS spreads next year.

We remain of the view that Agency MBS are attractive on a historical and relative value basis and expect excess returns versus Treasuries next year. While some technical challenges remain with the Fed likely to continue QT and bank demand remaining subdued relative to prior years, the biggest difference is the market no longer faces FDIC sales of $100 billion in supply via the collapsed Silicon Valley Bank and Signature Bank; sales began in April and concluded in November.

We do not believe these factors represent a permanent structural shift that dislocates Agency MBS from other spread markets going forward. In fact, we believe that Agency MBS have "gotten the message" first and are poised to offer an advantageous relative risk-reward dynamic in 2024. We also see attractive relative value in Agency CMBS, as spreads have been supported by strong technicals, and the sector does not face the same Fed balance-sheet runoff issue that the single-family market does. (See: Agency MBS Update)

In general, we believe there's several opportunities across the coupon stack for attractive risk-adjusted returns. Coupons trading slightly below par offer advantageous carry without sacrificing too much convexity, while lower-coupon bonds provide optimal optionality to increasing prepayments in the future. We also see attractive opportunities in Agency CMOs, as it's possible to source lower-dollar-priced securities with positive convexity that can be broadly used to help manage duration.

Agency MBS Current-Coupon Spreads | As of November 30, 2023

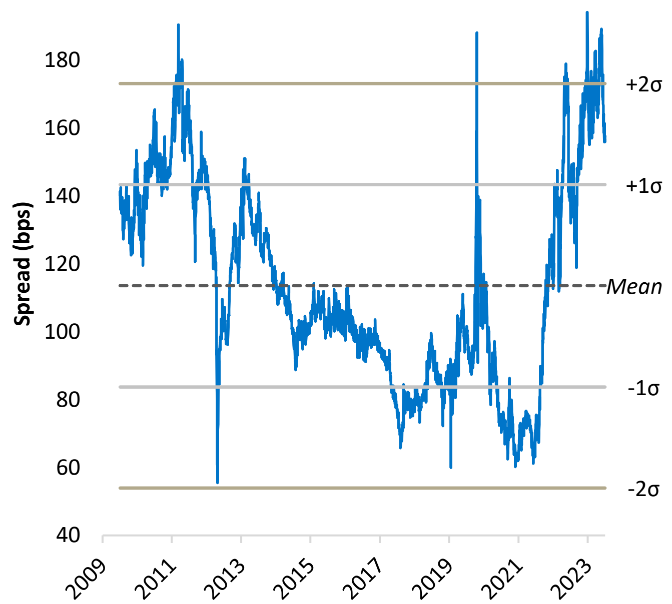


Figure 3
Source: DoubleLine, Bloomberg. σ = standard deviation

Federal Reserve Expected Policy Rate | As of November 30, 2023

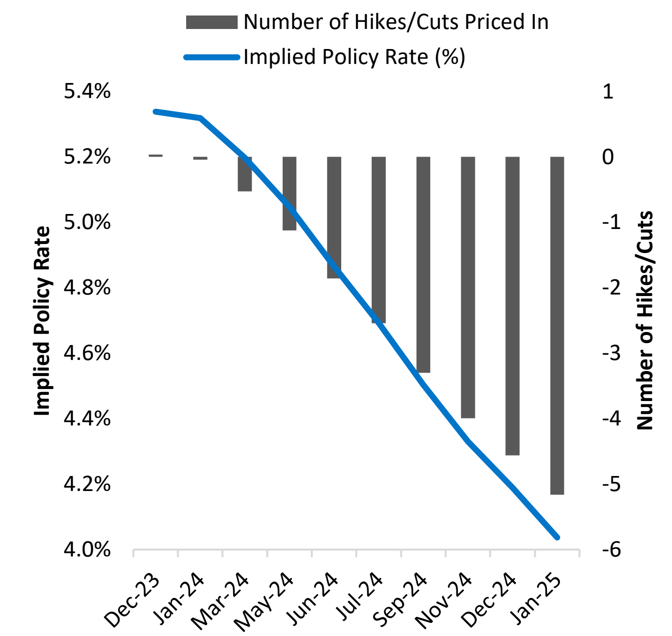


Figure 4
Source: DoubleLine, Bloomberg.

Non-Agency Residential Mortgage-Backed Securities

Home Sweet Home Prices

Residential credit performance was robust in 2023, driven by higher home prices, low defaults and relatively strong demand for non-Agency RMBS new issuance. We expect performance to remain resilient in 2024 as home prices remain supported by strong demand from increased household formation and low housing supply driven by the lock-in effect, with approximately 75% of existing homeowners having mortgage rates of 4% or lower.[1]

Although delinquencies might increase should unemployment rise, we expect that to impact recent vintage cohorts more than seasoned borrowers with substantial equity. Further, having tested the efficiency of servicing toolkits during the pandemic, we expect modification, as opposed to default, will continue to be the favored resolution process for borrowers facing financial hardships. We also expect lending standards to remain tight, which should help limit non-Agency loss rates. *(Figure 5)*

After reaching local lows in January, national home prices rose for eight consecutive months through September and were up nearly 4% YoY.[2] Limited supply helped push home prices higher, as the existing inventory of single-family homes continued to fall at an accelerated pace and remained near a 40-year low. *(Figure 6)* Limited supply should continue to provide support to home prices next year, even as affordability is likely to remain challenged.

Through the end of October, non-Agency RMBS gross issuance was $64 billion, down 50% YoY.[3] We expect a modest increase in 2024 issuance versus 2023 and believe this will be readily absorbed by the market. As such, we believe technicals will remain positive for residential mortgage credit next year.

Absent a significant change in economic conditions next year, we believe the market landscape will remain supportive of residential credit performance. In general, we believe there are opportunities for strong total return potential across the non-Agency RMBS capital structure, as many subsectors look attractive from a relative value perspective. New-issue QM bonds exhibit all-in yields of approximately 6.0% for bonds rated AAA and approximately 8% for bonds rated BBB. Seasoned CRT bonds also offer strong total return potential due to structural deleveraging, limited issuance and resilient housing fundamentals.

Mortgage Deliquencies and Lending Standards
As of September 30, 2023

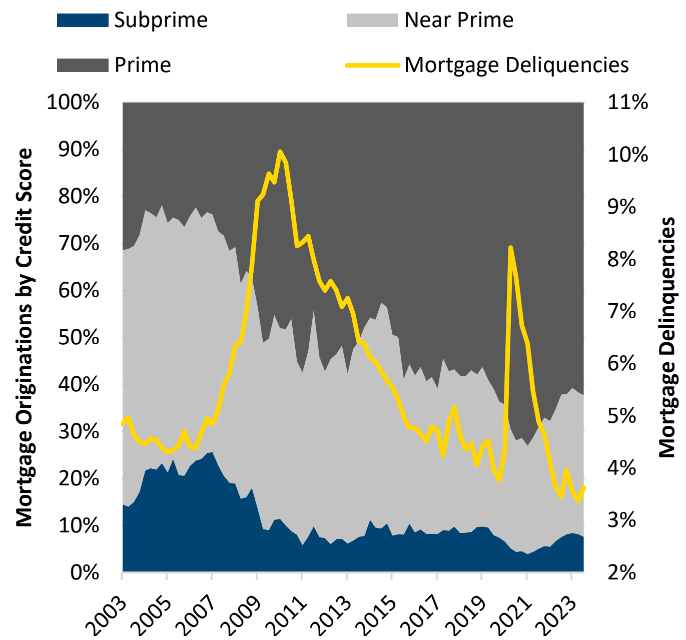


Figure 5
Source: DoubleLine, New York Federal Bank of Reserve

Existing Home Inventories | As of October 31, 2023

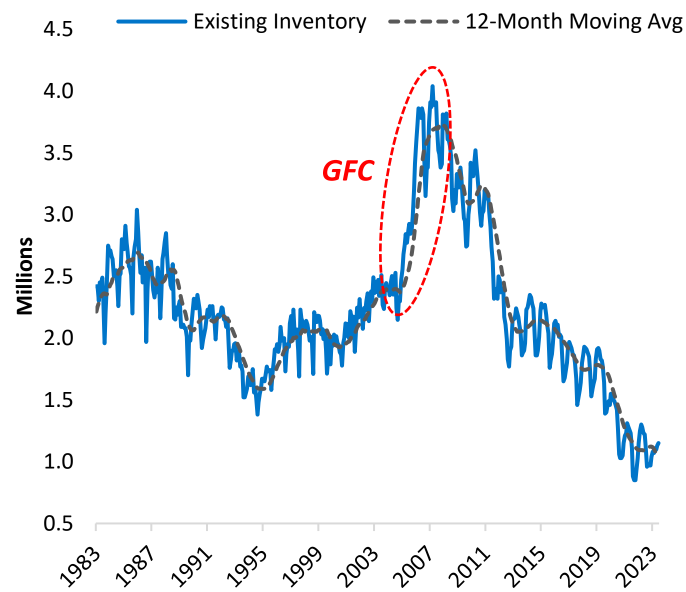


Figure 6
Source: DoubleLine, National Association of Realtors

Non-Agency Commercial Mortgage-Backed Securities

Windows of Opportunity

CRE was in the spotlight for much of 2023 as the market struggled with a convergence of higher borrowing costs, lower valuations and economic uncertainty. While we expect similar trends to continue in 2024, we caution against painting the CRE market with broad strokes, as we believe most CRE fundamentals ex office are poised to enter 2024 on reasonable footing.

Reduced property valuations and increased debt service costs are likely to push delinquencies higher in 2024, although the issues should largely be concentrated in maturing loans, floating-rate loans and loans secured with office collateral. It is likely that a growing portion of delinquent loans and/or those in special servicing will be loans unable to successfully refinance at maturity, of which a majority have been loans collateralized by office properties. *(Figure 7)*

Although delinquencies are likely to increase next year, we do not believe that higher interest rates will hinder all borrowers' abilities to refinance. We expect lenders and servicers will continue to employ modifications and extensions – practices expected to result in higher recoveries than near-term foreclosures and liquidations. Borrowers with cash-flowing assets that are willing to put more equity in are likely to receive extensions. This ties into a continued performance bifurcation between the "haves" and "have-nots." Property types that we anticipate investors will continue to favor include industrial, higher-quality multifamily, trophy office, resort hotel and stronger retail.

Rising interest rates have also weighed on deal activity, with transaction volume down 68% YoY, making it difficult to assess exactly how much prices have fallen.[4] Further clarity on the direction of Fed policy might allow the CRE market to begin to function more normally and give way to a greater number of transactions. This should give the market a better feel for valuations, forming a feedback loop that begets additional transactions and, subsequently, greater clarity.

CRE uncertainty contributed to considerable non-Agency CMBS spread widening in 2023, particularly down the capital structure. *(Figure 8)* While lower-rated CMBS have been trading at historically wide spreads, we remain cautious on these tranches until there is more clarity on fundamentals. Instead, we prefer senior-rated, seasoned conduit bonds that have delevered through time and exhibit limited extension risk and well-located nonoffice properties with strong cash flow and sponsorship as well as low refinancing risk. These bonds are unlikely to suffer losses and trade at attractive valuations to corporate bonds with additional upside potential should fundamental scenarios play out better than expectations.

Conduit Loans Unable to Refinance at Maturity
As of October 31, 2023

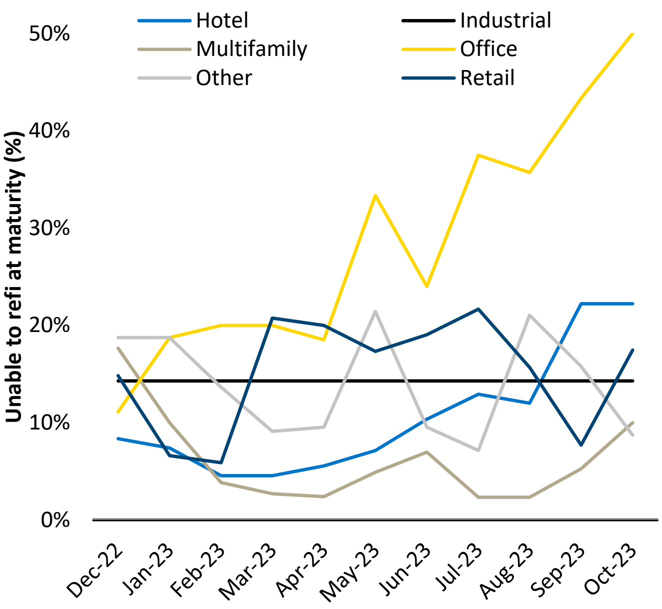


Figure 7
Source: DoubleLine, BofA Global Research

Fixed-rate Conduit Spreads | As of November 30, 2023

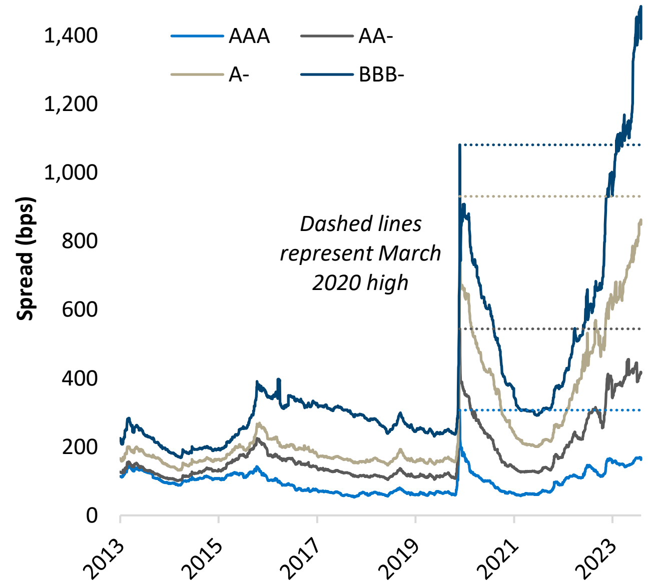


Figure 14
Source: DoubleLine, BofA Global Research
Dashed line represents the average relative spread.

Asset-Backed Securities

Balancing Act

Throughout 2023, the consumer backdrop has generally remained strong amid a tight labor market. However, consumer ABS performance has been bifurcated, as lower-income borrowers have experienced larger degrees of credit deterioration relative to higher-income borrowers. *(Figure 9)* We expect this trend will continue in 2024, as unemployment is expected to move higher. While our base case is modestly weakening consumer fundamentals, we remain relatively constructive on consumer-related credit performance next year, driven by the better credit quality of loans underwritten to tighter lending standards and resilient ABS bond structures that can potentially provide investors safety and offer attractive yield per unit of duration. (See: An Update on the U.S. Consumer)

Our expectations for continued deterioration in credit trends lead us to prefer senior-rated consumer bonds. That said, we believe ABS broadly offer attractive relative value with the potential for strong performance across various scenarios. The increasing likelihood of the Fed achieving an economic soft landing while effectively taming inflation bodes well for potential spread tightening across ABS subsectors. Relative return potential remains particularly compelling, as many consumer ABS are priced off the front end of the Treasury yield curve, which offers higher yields compared to other Treasury tenors and equates to attractive yield per unit of duration compared to other parts of fixed income. *(Figure 10)*

Within hard-asset ABS sectors, economic growth and business conditions are expected to be modest headwinds in 2024 while tighter lending standards should be supportive of overall credit performance.

Like consumer ABS, we believe there are opportunities for attractive risk-adjusted returns in hard-asset collateral next year. In general, esoteric parts of ABS offer an attractive spread pickup relative to corporate bonds; should economic growth exceed expectations, we believe there is the potential for greater spread tightening relative to more-traditional fixed-income sectors. We expect continued growth in infrastructure-related ABS sectors, such as digital network ABS like data centers and fiber networks. These assets typically exhibited a longer weighted average life relative to consumer ABS and benefit from steady streams of contractual and transparent cash flows, a defining trait of infrastructure investments. (See: Investing in Infrastructure Debt) The aircraft sector continues to mark improving metrics relative to a 2020 trough. Given the robust structure, senior portions of legacy aircraft ABS can potentially provide attractive total return opportunities, as these deals continue to accrete to par.

Unsecured Personal Loan DQs | As of November 30, 2023

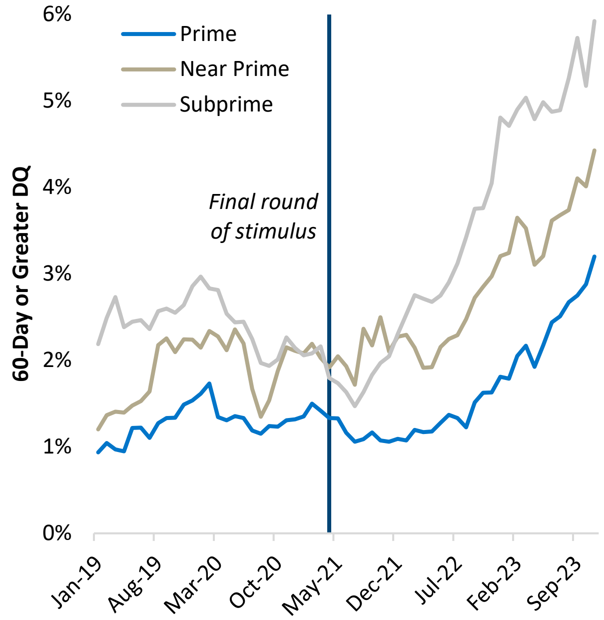


Figure 9
Source: DoubleLine, Intext, as of Nov. 30. DQs = delinquencies

ABS Sector Spreads vs. Corporate Bond Spreads
As of November 30, 2023

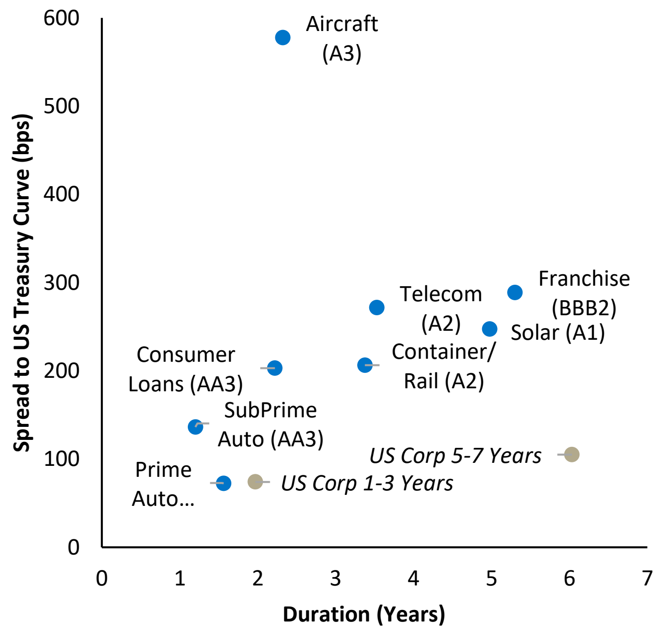


Figure 10
Source: DoubleLine, Bloomberg, ICE BofA Indexes

Collateralized Loan Obligations

Float On

CLOs were one of the best-performing fixed-income asset classes this year, driven by high interest income from floating-rate coupons and spread compression from a generally resilient U.S. economy. While we expect a potentially weaker macro environment next year and loan defaults to increase, we remain constructive on CLO performance and see potential tailwinds for the sector to again deliver strong total returns across the capital structure. That said, there might be bouts of volatility in the near term as the market digests the impact of broader macro concerns and Fed policy.

Balance sheets for most U.S. leveraged loan issuers enter 2024 in a generally healthy position. However, credit metrics have weakened this year and are expected to continue to show signs of deterioration, as interest coverage ratios might continue to decline given the lagged transmission of higher policy rates to paid coupons. While we expect credit quality to worsen, the pace at which it worsens will likely slow as the year progresses, driven by a slowdown in fundamental deterioration, maturities being addressed, and the backstop by private equity sponsors and private credit as borrowers have increasingly raised financing from direct lenders.

CLO new-issue arbitrage was challenged this year, as the lack of loan supply made it more difficult to ramp up quality assets at economically attractive prices. Despite this, CLO issuance largely remained strong throughout 2023, and we expect issuance to remain robust in 2024.

Last year, we favored senior-rated CLOs for relative value and price stability and CLOs rated BB for carry and convexity. Heading into 2024, we believe a similar barbell can perform well, as CLOs remain a unique asset class as a scalable floating-rate investment opportunity in a higher-for-longer interest-rate scenario. From a relative value perspective, CLOs remain an attractive alternative relative to similarly rated corporate bonds. *(Figures 11 and 12)*

With increasing expectations for a soft landing and technicals expected to remain supportive, we believe CLOs can continue to offer attractive risk-adjusted returns due to high all-in yields across the capital structure. That said, the threat of a shallow recession cannot be ruled out, which might keep the riskier parts of the loan market under pressure. While this would have an adverse impact on CLO equity, we believe much of that is priced in.

CLO AAA vs. IG Corp. Spreads | As of November 30, 2023

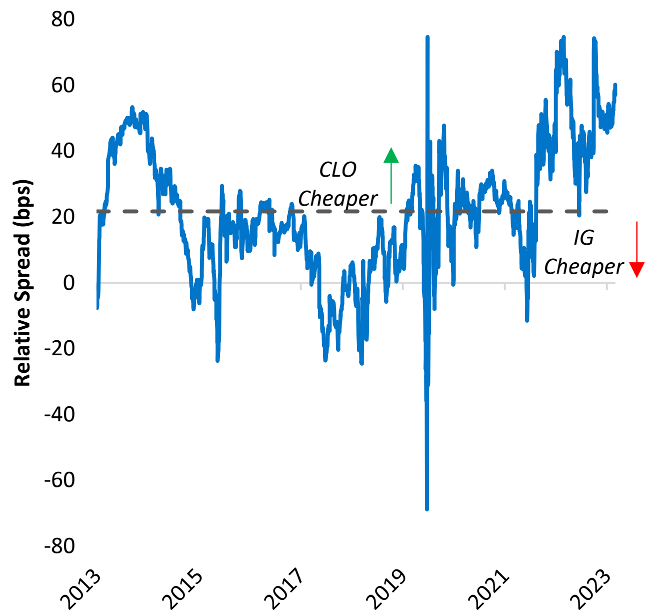


Figure 11
Source: DoubleLine, J.P. Morgan indexes, BofA indexes

CLO BBB vs. U.S. HY Corp. Spreads | As of November 30, 2023

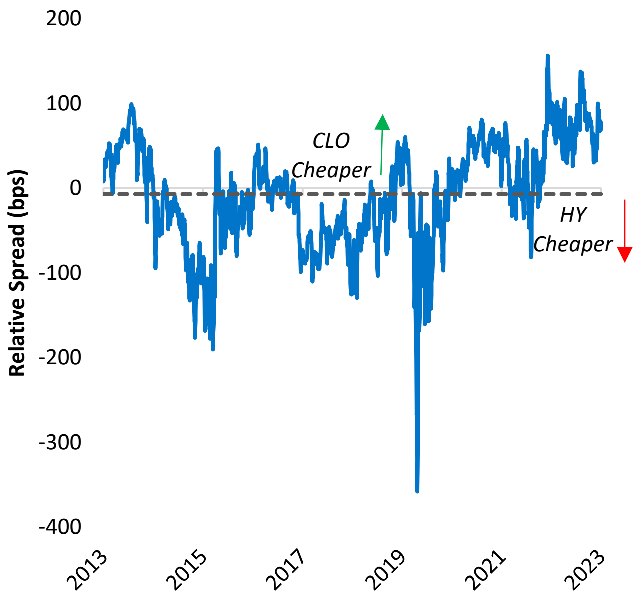


Figure 12
Source: DoubleLine, J.P. Morgan indexes, BofA indexes. HY = high yield

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Phil Gioia, CFA
Product Specialist

Mr. Gioia joined DoubleLine in 2018. He is a member of the Macro Asset Allocation Team, in which he serves as a Product Specialist. In this capacity, he is responsible for various aspects of DoubleLine product marketing, investment strategy updates, portfolio communications and competitive analysis, with a focus on DoubleLine's Securitized Product strategies. Mr. Gioia is also responsible for producing market commentary and dedicated strategy content. As part of the Macro Asset Allocation team, he attends the Fixed Income Asset Allocation, Macro Asset Allocation, and Structured Product meetings. Prior to DoubleLine, Mr. Gioia was an Investment Product Manager for Fidelity Investments. He holds a B.S. in Financial Management and Business Administration with a minor in Accounting from Salve Regina University and earned a certification for the Applied Data Science Program from Massachusetts Institute of Technology. Mr. Gioia is a CFA® charterholder and holds the FINRA Series 7 and 63 Licenses.

Footnotes

1 J.P. Morgan Research
2 S&P CoreLogic Case-Shiller U.S. National Home Price SA Index
3 Morgan Stanley Research
4 Real Capital Analytics, as of Oct. 31

Indexes and Definitions

Indexes shown 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 Bond Index; U.S. HY Corporate: Bloomberg US Corporate HY Bond 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

Indexes shown in Figure 2

Agency MBS: Bloomberg US MBS Index; Agency CMO: ICE BofA U.S. Agency CMO Index; RMBS Non-QM: Wells Fargo Research; RMBS CRT: BofA Global Research; Conduit CMBS: ICE BofA U.S. Fixed-Rate CMBS Index; CRE CLO BBB- BofA Global Research; ABS AAA: Bloomberg US ABS Index; ABS AA-BBB ICE BofA U.S. Fixed-Rate Miscellaneous ABS Index; ABS MPL BB: ACHV 2023-4CP; CLOs: J.P. Morgan CLO 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. The relationship between percentage changes and basis points can be summarized as: 1% change = 100 basis points; 0.01% = 1 basis point.

Bear Flatten – When short-term U.S. Treasury interest rates rise faster than longer-term rates. This convergence is seen as a harbinger of economic contraction.

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 Aggregate Bond Index – This index (the "Agg") represents securities that are SEC registered, taxable and 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 indexes 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 Bond 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 Corporate High Yield (HY) Bond 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 subindexes of the Bloomberg US Corporate HY Bond Index.

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.

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

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.

Core PCE – Core Personal Consumption Expenditures (PCE) Price Index, published by the U.S. Bureau of Economic Analysis, measures prices paid by consumers for goods and services, excluding the volatility of food and energy prices, to gauge underlying inflation trends. It is the Federal Reserve's preferred index for tracking inflation.

Core Services ex Housing – Narrower metric than core PCE tracking the services component of core PCE but also excluding housing expenses.

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.

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.

Fed Funds Futures – Financial contracts that represent the market opinion of where the daily official federal funds rate will be at the time of the contract expiry. The futures contracts are traded on the Chicago Mercantile Exchange and are cash settled on the last business day of every month. Fed fund futures can be traded every month as far out as 36 months.

Federal Funds Rate (FFR) – 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.

Gross Domestic Product (GDP) – Market value of all final goods and services produced within a country in a given period. GDP is considered an indicator of a country's standard of living.

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 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 Commercial Mortgage-Backed Securities (CMBS) Index – This index tracks the performance of U.S. dollar-denominated, investment grade (IG), fixed-rate commercial mortgage-backed securities (CMBS) publicly issued in the U.S. domestic market. Qualifying securities must have an IG rating (based on an average of Moody's, S&P and Fitch), a fixed coupon schedule, at least one year remaining to final maturity and at least one month to the last expected cash flow.

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.

Last Cash Flow (LCF) – Last revenue stream paid to a bond over a given period.

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.

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.

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.

Quantitative Tightening (QT) – Reverse of quantitative easing (QE); a central bank that acquired financial assets under QE undertakes steps to reduce its balance sheet.

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.

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 indexes for the nine Census Bureau divisions.

Soft Landing – When an economy is able to rein in inflation while avoiding increased unemployment and recession.

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.

Standard Deviation – Measure of the variation or dispersion of a set of data from its mean or expected/budgeted value. A low standard deviation indicates that the data points tend to be very close to the mean, whereas a high standard deviation indicates that the data is spread out over a large range of values. A measure of an investment's volatility.

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.

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.

You cannot invest directly in an index.

Important Information Regarding This Material

Issue selection processes and tools illustrated throughout this presentation are samples and may be modified periodically. These are not the only tools used by the investment teams, are extremely sophisticated, may not always produce the intended results and are not intended for use by non-professionals.

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DoubleLine is an active manager and will adjust the composition of clients' portfolios consistent with our investment team's judgment concerning market conditions and any particular sector or security. The construction of DoubleLine portfolios may differ substantially from the construction of any of a variety of market indices. As such, a DoubleLine portfolio has the potential to underperform or outperform a bond market index. Since markets can remain inefficiently priced for long periods, DoubleLine's performance is properly assessed over a full multi-year market cycle.