

Securitized Products Briefing: Second Quarter 2024

Grinding Out Gains

Phil Gioia, CFA | July 2024



Sector Summary

[Agency Mortgage-Backed Securities](#) 3

Slow and Steady

- Agency mortgage-backed securities (MBS) performance was roughly in line with U.S. Treasuries in the second quarter, with current-coupon spreads widening approximately 10 basis points (bps) from the end of the first quarter.
- While the timing of cuts to the federal funds rate (FFR) was pushed forward, Federal Reserve Chair Jerome H. Powell reiterated in June that future rate hikes remain highly unlikely. An environment of lower Treasury rates coupled with declining interest-rate volatility should support Agency MBS spread compression in the second half of the year.

[Non-Agency Residential Mortgage-Backed Securities](#) 4

Residential Credit Performance Supported by Housing Market Resilience

- Residential credit performance was positive in the quarter, driven by higher home prices, low defaults and strong demand for non-Agency residential MBS (RMBS) new issuance.
- Although most sectors experienced spread compression since 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.

[Non-Agency Commercial Mortgage-Backed Securities](#) 5

Underlying Data Paints a Different Picture Than Headlines Suggest

- Despite headlines highlighting risks to commercial real estate (CRE) fundamentals, the non-Agency commercial MBS (CMBS) market marked positive performance in the quarter as non-Agency CMBS rated AAA and BBB returned 0.7% and 2.8%, respectively.
- While headlines of CRE loans defaulting at maturity remained prevalent, we caution against painting the CRE market with broad strokes, as much of the distress has been largely idiosyncratic and isolated to individual assets in certain troubled sectors.

[Asset-Backed Securities](#) 6

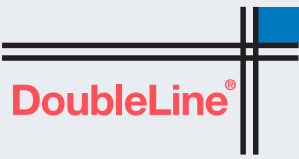
Bend, Don't Break

- Strong investor demand continued to reflect investor preference for generally shorter-duration and higher-yielding securities as well as attractive relative value compared to corporate bonds.
- Looking ahead to the second half of the year, we expect consumer delinquencies will continue to increase as high interest rates and still-elevated inflation weigh on consumers. That said, broad consumer health metrics do not signal widespread weakness.

[Collateralized Loan Obligations](#) 7

Strong Demand and Positive Technicals as CLO Market Shrinks

- Collateralized loan obligations (CLOs) continued their momentum and were one of the top-performing fixed-income asset classes in the quarter, driven by high interest income from floating-rate coupons and spread compression.
- Although spreads have tightened, CLOs remain a compelling alternative to corporate bonds, particularly in an environment where growth surprises to the upside and rates remain elevated.



Grinding Out Gains

July 2024

Fixed Income Index Performance

The second quarter echoed the first quarter of the year as lower-rated credit and floating-rate sectors outperformed traditional sectors, driven primarily by high interest income and lower interest-rate sensitivity. (Figure 1) Treasury rates rose across tenors in the period, as the two-year and 10-year Treasury yield rose 13 bps and 20 bps, respectively. Credit spreads were mixed, with higher credit quality experiencing modest widening while lower-rated credit generally underwent spread compression, particularly within areas of securitized credit, contributing to outperformance relative to corporate bonds.

2Q2024 Fixed Income Index Performance | As of June 30, 2024

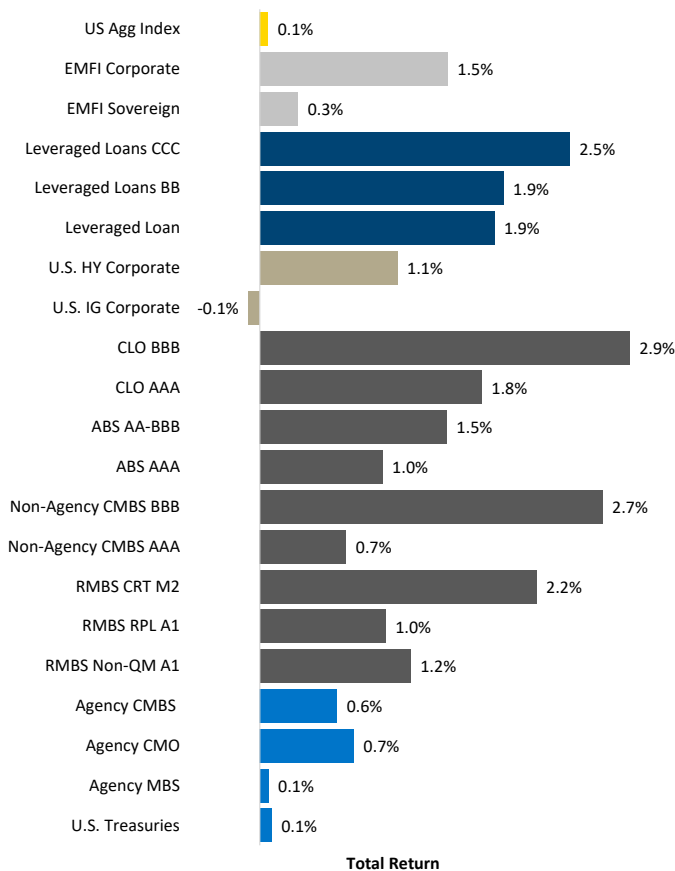


Figure 1
Source: DoubleLine, Bloomberg, BofA Global Research
Non-Qualified Mortgage (Non-QM), Re-Performing Loan (RPL), Credit Risk Transfer (CRT), Emerging Markets Fixed Income (EMFI). Indices used in this figure can be found under disclosures.

Securitized Products Yields

Yields across the securitized products market remain attractive, driven by wider than average spreads and pricing of front-end Treasury tenors that currently exhibit higher yields given the inverted Treasury yield curve. (Figure 2)

Securitized Fixed Income Yields | As of June 30, 2024

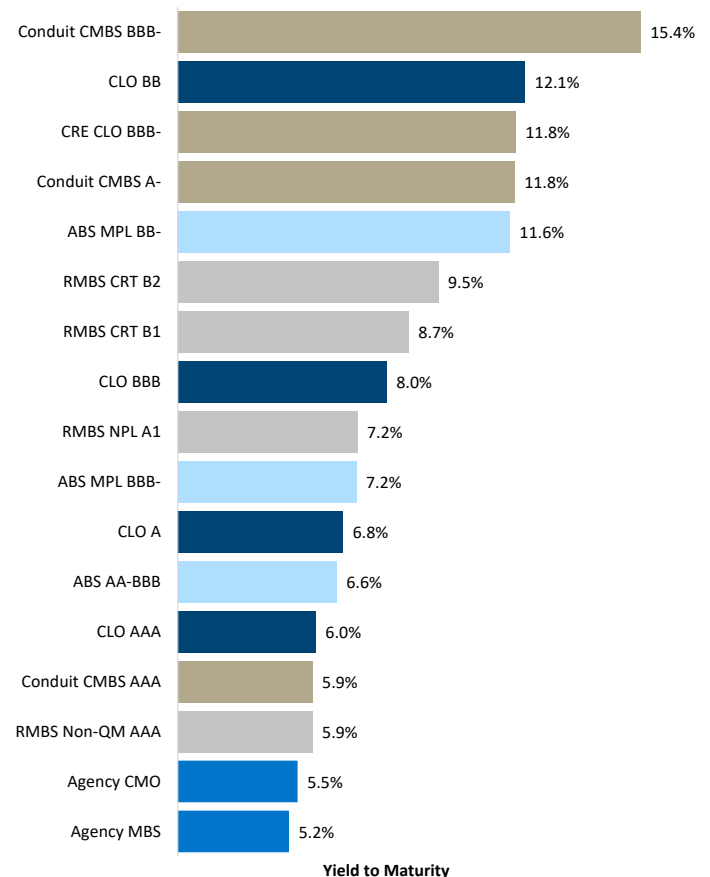
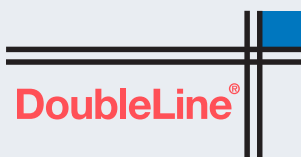


Figure 2
Source: DoubleLine, Bloomberg, BofA Global Research
Non-Qualified Mortgage (Non-QM), Credit Risk Transfer (CRT), Marketplace Lending (MPL). Indices used in this figure can be found under disclosures.



Grinding Out Gains

July 2024

Securitized Product Spreads

Spreads for many securitized subsectors remain wide of their 10-year averages, with Agency MBS and lower-rated non-Agency CMBS exhibiting the largest differential. (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
June 30, 2024	39	149	93	60	114	135	126	309	267	391	524	213	832	370
2Q24 Change	0	10	4	4	5	5	-18	10	-9	49	0	-14	-68	-13
YTD Change	-3	0	-9	-11	-38	-20	-10	-24	-36	-42	-22	-54	-222	-27
10-Year Average	47	106	122	69	100	131	145	420	341	376	502	253	497	417
Percentile Rank	18	85	7	34	68	56	46	5	4	35	66	51	85	40

Figure 3

Source: DoubleLine, Bloomberg, Wells Fargo

Data from June 30, 2014 through June 30, 2024. Investment Grade (IG), High Yield (HY), Emerging Markets Fixed Income (EMFI). Indices used in this figure can be found under disclosures. You cannot invest directly in an index.

Summary of DoubleLine Securitized Products Views

Sector	Fundamentals	Investment Focus
Agency MBS	<ul style="list-style-type: none"> Spreads remain wide by historic standards given the technical backdrop and elevated rate volatility. The most likely path forward for the Fed is rate cuts, which should lead to an environment of lower Treasury rates coupled with declining interest-rate volatility. 	<ul style="list-style-type: none"> Belly of the coupon pass-through (PT) stack that offers wider spreads relative to low coupons and exhibits better convexity profiles than current-coupon originations. Up-in-coupon PT stack (5.5% to 6.5%) that offers attractive carry, spread and relatively muted prepay activity. Discount dollar-priced collateralized mortgage obligations (CMOs) with yields in the midsingle digits that offer strong total return potential.
Non-Agency RMBS	<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. New-issue single-family rentals. Moderately seasoned credit risk transfer deals that have deleveraged.
Non-Agency CMBS	<ul style="list-style-type: none"> Industrial and multifamily properties remain healthy with stable cash flows. Office space remains challenged post-pandemic. 	<ul style="list-style-type: none"> Seasoned conduit and CRE CLOs with high multifamily exposure. Nonoffice property types. Industrial single asset, single borrower (SASB) with strong cash flows and sponsorships.
ABS	<ul style="list-style-type: none"> Industrial and hard-asset collateral continue to display strength. The consumer sector remains healthy, but delinquencies are picking up for subprime borrowers. 	<ul style="list-style-type: none"> Prime/near-prime consumer deals backed by short-term loans Hard-asset securitizations with strong liquidity profiles (ex data infrastructure) Senior tranches of legacy (pre-COVID-19) aviation ABS.
CLOs	<ul style="list-style-type: none"> Bank loan default rates have trended lower since year-end. Corporate earnings have generally come in better than expected. Technical factors remain supportive. 	<ul style="list-style-type: none"> New issue (ex refinancing (refi)/reset) transactions with clean, freshly ramped collateral pools.



Agency Mortgage-Backed Securities

Slow and Steady

Agency MBS returned 0.07% in the second quarter, roughly in line with Treasuries.¹ Current-coupon spreads ended the period at 148 bps, approximately 10 bps wider from the end of the first quarter, driven in part by elevated interest-rate volatility throughout the second quarter. Higher coupons have generally outperformed Treasuries, driven by a combination of carry and spread tightening; lower coupons have lagged due in part to technical pressures from bank portfolio reallocations.

Supply continues to underwhelm, with net issuance down roughly 17% year-over-year (YoY), driven largely by a slowdown in overall housing activity given higher prices and mortgage rates. (Figure 4) Meanwhile, demand from money managers remained strong during the quarter, as higher coupon mortgages offered attractive relative value compared to corporate bonds; the spread basis between Agency MBS current coupon and investment grade corporate bonds ended the quarter near its widest level in over 20 years. (Figure 5) We expect money managers to continue to allocate to Agency MBS in the second half of the year given the yields available in government-backed securities, helping to balance the supply-demand dynamic.

No changes were made to the target FFR during the quarter, though market participants gained insight into the committee's thinking around the future path of rates. Despite recent months of relatively encouraging inflation data, Chair Powell stated the Federal Open Market Committee (FOMC) was still not convinced it is appropriate to reduce rates and loosen policy until inflation is moving down to 2% on a sustainable basis.² Market participants now expect the first rate cut to be delivered at the November FOMC meeting while pricing in a sequential cut at the December meeting.

While the timing of rate cuts was pushed forward, Chair Powell reiterated that future rate hikes remain highly unlikely. An environment of lower Treasury rates coupled with declining interest-rate volatility should support Agency MBS spread compression in the second half of the year. In general, we believe there are several opportunities across the coupon stack for attractive risk-adjusted return. Coupons trading slightly below par may offer advantageous carry without sacrificing too much convexity while lower-coupon bonds may provide optimal optionality to increasing prepayments in the future. There are also 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 Net Issuance | As of June 30, 2024

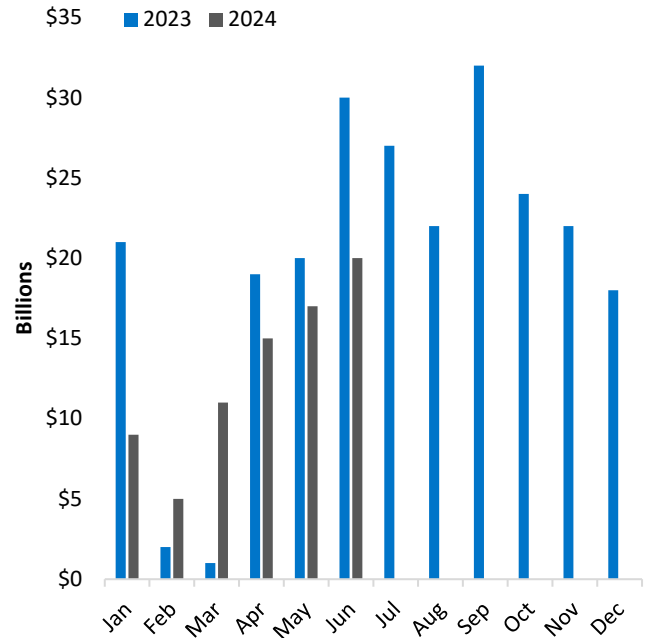


Figure 4
Source: DoubleLine, J.P. Morgan

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

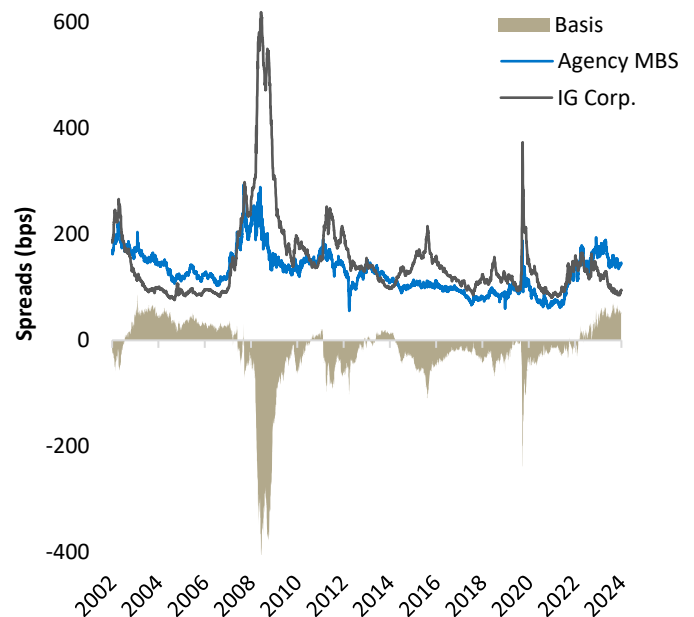


Figure 5
Source: DoubleLine, Bloomberg

Non-Agency Residential Mortgage-Backed Securities

Residential Credit Performance Supported by Housing Market Resilience

Residential credit performance was positive in the quarter, driven by higher home prices, low defaults and strong demand for non-Agency RMBS new issuance. Underlying fundamentals remained resilient as home prices continued to be supported by low housing supply driven by the lock-in effect, with approximately 75% of existing homeowners having mortgage rates of 4% or lower.³

The national delinquency rate of first lien mortgages continued to decline in the period, falling to 3.04% in May, the second lowest level on record behind 2.92% in March 2023.⁴ Although delinquencies might increase should unemployment rise, we expect that to impact recent-vintage cohorts more than seasoned borrowers with substantial equity. We also expect lending standards to remain tight, which should help limit non-Agency loss rates. (Figure 6)

National home prices reached a new peak in April and were up 1.5% year-to-date (YTD) and 6.3% YoY.⁵ (Figure 7) The rise in home prices, coupled with historically high mortgage rates, continued to hamper housing demand. Mortgage rates averaged around 7% during the quarter, which contributed to a third consecutive monthly decline in existing-home sales in May to an annualized pace of 4.1 million units.⁶ While supply remains constrained compared with pre-pandemic levels, there has been some thawing in conditions as housing inventories have risen to their highest level since August 2022.⁷

Total non-Agency RMBS issuance through the first half of 2024 was \$56 billion, nearly matching the volume for all of 2023. This robust supply has been well absorbed by the market and reverses a downward issuance trend over the prior two years. All-in yields have remained relatively range-bound this year as the rise in risk-free rates has been largely offset by spread tightening across the credit curve. With fundamentals across the U.S. mortgage market stable, we anticipate that any future spread movement within the non-Agency RMBS market will be largely driven by overall market sentiment.⁸

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.

Delinquencies and Lending Standards | As of March 31, 2024

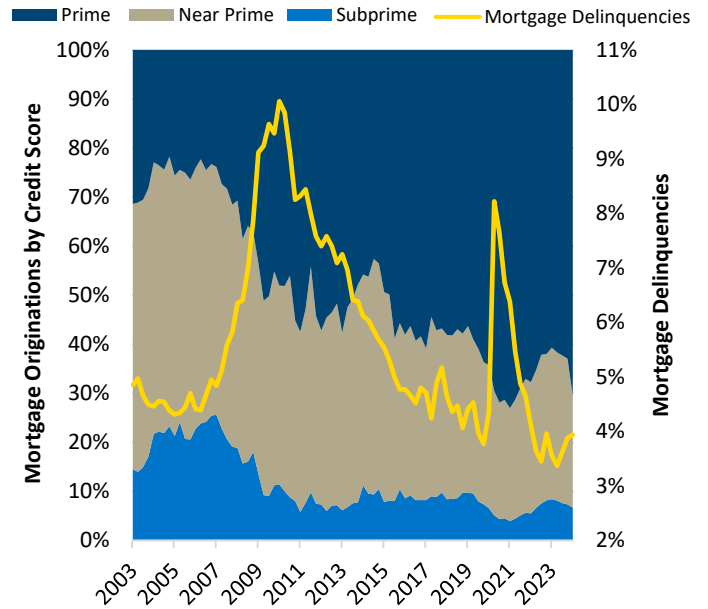


Figure 6
Source: DoubleLine, New York Federal Reserve Bank

Supply vs. Prices | As of May 31, 2024

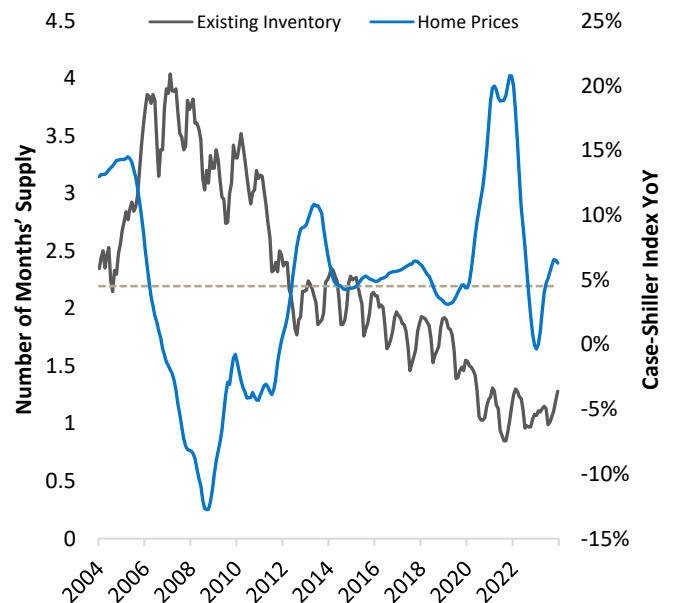


Figure 7
Source: DoubleLine, National Association of Realtors
Dashed line represents the average number of months' supply.

Non-Agency Commercial Mortgage-Backed Securities

Underlying Data Paints a Different Picture than Headlines Suggest

The non-Agency CMBS market marked positive performance in the quarter as non-Agency CMBS rated AAA and BBB returned 0.7% and 2.8%, respectively.⁹ Strong performance down the capital structure can be attributed to improved investor sentiment, contributing to non-Agency CMBS rated BBB spreads tightening 100 bps in the period. Strong investor demand and a more sanguine interest-rate outlook led to a significant increase in private-label issuance. During the quarter, \$27.7 billion of non-Agency CMBS deals priced, up 42.7% quarter-over-quarter (QoQ) and 2.4 times the issuance registered during the second quarter of 2023.¹⁰ New-issue, private-label CMBS issuance stood at \$47.1 billion for the first half of the year, already outpacing last year's issuance of \$46.5 billion. (Figure 8) Barring changes to sentiment and macroeconomic conditions, we expect momentum in the primary market to continue into the second half of the year.

Commercial property price declines continued to moderate in May as the RCA U.S. All-Property Commercial Property Price Index (CPPI) fell 2.3% YoY, the slowest rate of decline since the end of 2022. (Figure 9) 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 February, down 16.9% YoY.¹¹ The pain has been particularly acute for central business district office properties, where prices were down 30.8% YoY in May.¹² 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. Parsing through the underlying data, much of the deterioration in payoff rates was in the office sector while other property types have continued to largely pay off without issue and do not indicate a cause for concern for systemic weakness. (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.

First-Half Private-Label CMBS Issuance | As of June 30, 2024

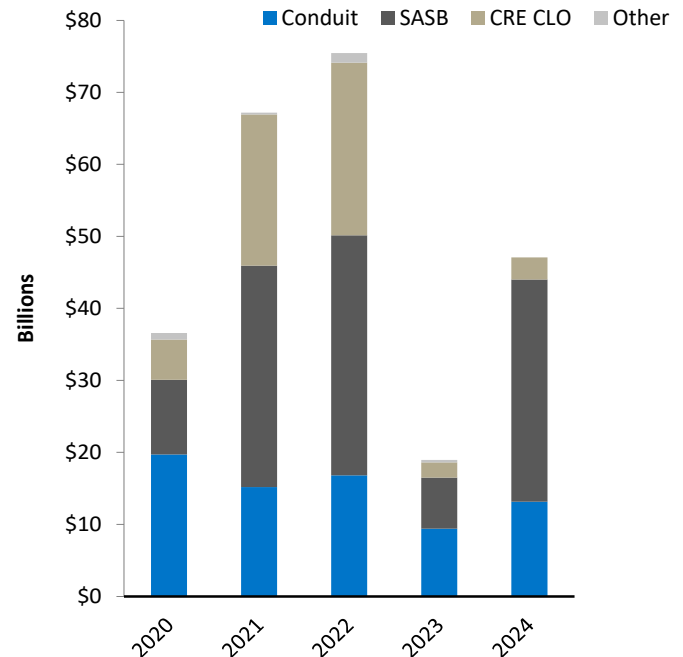


Figure 8
Source: DoubleLine, J.P. Morgan Research

CRE Property Prices | As of May 31, 2024

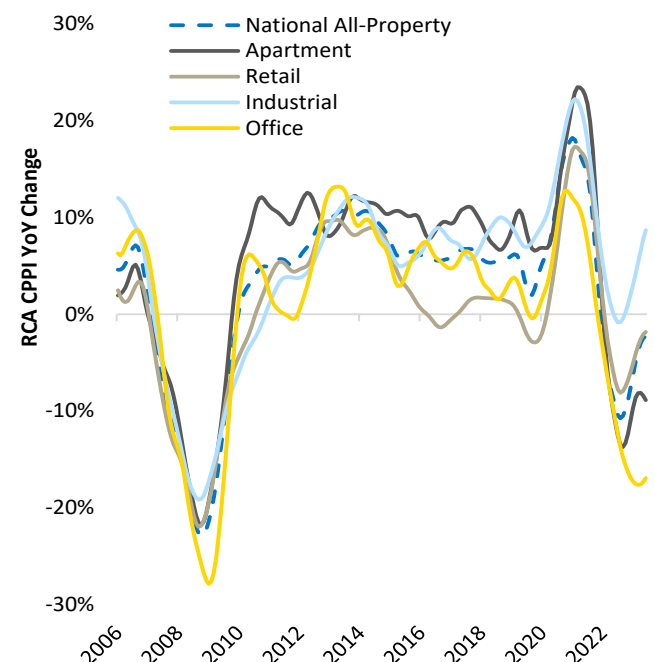


Figure 9
Source: DoubleLine, RCA

Asset-Backed Securities

Bend, Don't Break

Returns for ABS were positive in the quarter as spreads tightened and credit curves flattened.¹³ Demand remained robust across the capital structure and subsectors amid continued strong issuance, with \$95 billion of new issuance in the period, up 27% YoY.¹⁴ 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 10)

All eyes remain on the consumer, who has been the driving force of the U.S. economy. While the economic backdrop broadly remains supportive, consumer delinquencies have been rising and in certain pockets are higher relative to pre-pandemic levels. However, overall delinquencies remain low by historical standards, and the data continues to be bifurcated, as a large portion of delinquencies stem from lower-quality borrowers. (Figure 11)

Looking ahead to the second half of the year, 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, stronger-than-expected economic growth was a tailwind for issuance and performance. We expect continued growth in infrastructure-related ABS sectors, such as digital network data centers and fiber networks that support products and services central to daily life. These assets typically exhibit a longer weighted average life relative to consumer ABS and benefit from steady streams of contractual cash flows. (See: [Investing in Infrastructure Debt](#)) Aircraft ABS in particular has been one of the strongest performing subsectors as its metrics have continued to improve. Given improving fundamentals and robust structures, senior portions of legacy aircraft ABS may provide attractive total return opportunities as these deals continue to 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 June 30, 2024

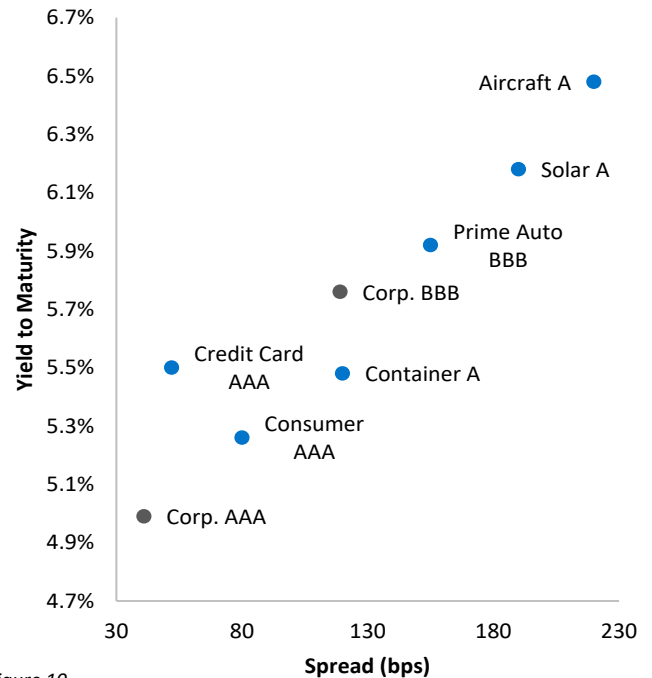


Figure 10
Source: DoubleLine, BofA Global Research

Serious Delinquency (90-Day+) by Loan Type | As of March 31, 2024

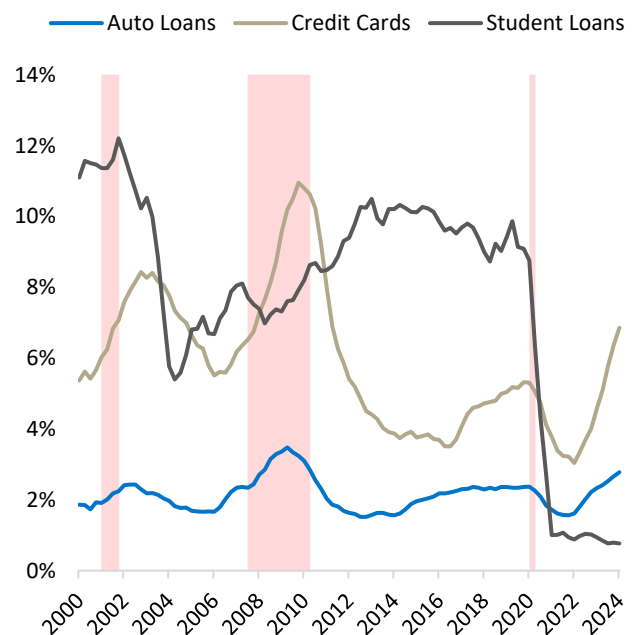


Figure 11
Source: DoubleLine, Federal Reserve Bank of New York
Red shaded areas indicate recessionary periods.

Collateralized Loan Obligations

Strong Demand and Positive Technicals as CLO Market Shrinks

CLOs continued their momentum from the first quarter and were one of the top-performing fixed-income asset classes in the second quarter, driven by high interest income from floating-rate coupons and spread compression. CLOs rated AAA and BBB returned 1.8% and 2.9%, respectively.¹⁵ Spreads tightened as the discount margin for CLOs rated AAA ended the period at 126 bps, 18 bps tighter QoQ; CLOs rated BBB tightened 13 bps to 370 bps.

Spread tightening, particularly at the top of the capital structure, has contributed to some of the most attractive new-issue credit spreads for borrowers and created sufficient incentive for refinancing and reset activities. YTD through June, U.S. CLO gross issuance was slightly north of \$100 billion, on pace to surpass 2021's record issuance of \$185 billion. However, given debt spreads having tightened meaningfully, increased reset and refi activity has contributed to negative net issuance this year.¹⁶ (Figure 12) This means CLO investors are receiving proceeds at a record pace, and they are then looking to redeploy, which we view as supportive for spreads heading into the second half of the year.

Given the pace of spread tightening across the capital structure, we expect forward-looking returns to be more subdued relative to last year. That said, we believe CLOs can continue to generate positive returns as higher short-term rates relative to prior cycles support high all-in yields across the capital structure. Although spreads have tightened, CLOs remain a compelling alternative relative to similarly rated corporate bonds, particularly in an environment where growth surprises to the upside and interest rates remain elevated. CLOs have outperformed similarly rated corporate bonds with significantly less volatility since the beginning of 2023. (Figure 13)

Fundamentals for U.S. leveraged loan issuers generally remain healthy. Default rates have trended lower since year-end, earnings have generally come in better than expected, and technical factors remain supportive. While we expect a potentially weaker macro environment in the second half of the year, we remain constructive on performance, as CLOs remain a unique asset class as a scalable floating-rate investment opportunity in a higher-for-longer interest-rate scenario.

U.S. CLO Issuance | As of June 30, 2024

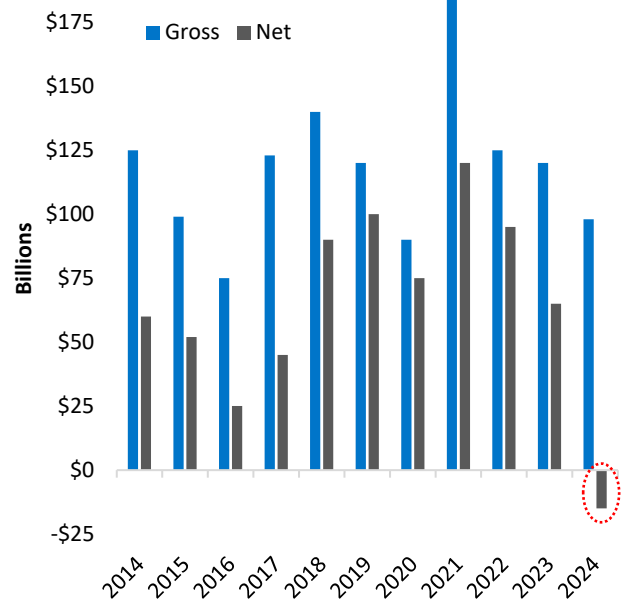


Figure 12
Source: DoubleLine, Morgan Stanley

CLO vs. Corporate Bonds | As of June 30, 2024

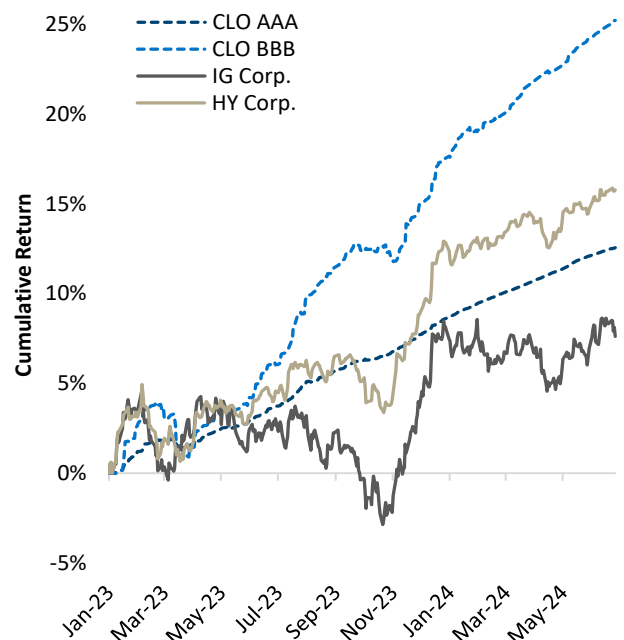
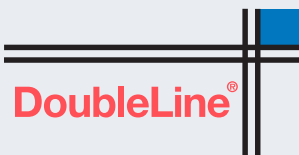


Figure 13
Source: DoubleLine, Bloomberg, J.P. Morgan



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.

Endnotes

- ¹ Bloomberg US MBS and Bloomberg US Treasury indices
- ² Chair Powell's FOMC press conference, June 12, 2024
- ³ J.P. Morgan Research
- ⁴ April 2024 ICE Mortgage Monitor Report
- ⁵ S&P CoreLogic Case-Shiller U.S. National Home Price SA Index
- ⁶ Freddie Mac Primary Mortgage Market Survey, June 30, 2024; U.S. Existing-Home Sales Index, May 30, 2024
- ⁷ U.S. Existing-Home Sales: Housing Inventory Index and U.S. New One Family Houses Sold Index, May 30, 2024
- ⁸ BofA Global Research
- ⁹ ICE BofA CMBS Indices
- ¹⁰ J.P. Morgan Research
- ¹¹ Real Capital Analytics
- ¹² Real Capital Analytics
- ¹³ ICE BofA Indices
- ¹⁴ Morgan Stanley Research
- ¹⁵ J.P. Morgan Indices
- ¹⁶ J.P. Morgan Research

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:

Agency MBS: Bloomberg US MBS Index; **Agency CMO:** ICE BofA U.S. Agency CMO Index; **RMBS Non-QM:** Wells Fargo Research; **Conduit CMBS:** ICE BofA U.S. Fixed-Rate CMBS Index; **CLOs:** J.P. Morgan CLO Index; **ABS AA-BBB:** ICE BofA U.S. Fixed-Rate Miscellaneous ABS Index; **ABS MPL:** ACHV 2023-4CP ; **RMBS NPL A1:** BofA Research; **RMBS CRT:** BofA Global Research; **CRE CLO BBB-:** BofA Global Research

Indices used in Figure 3:

US Agg Index: Bloomberg US Aggregate Bond Index; **Agency MBS:** 30-Year FNCL Par Coupon Index; **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; **HY 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. The relationship between percentage changes and basis points can be summarized as: 1% change = 100 basis points; 0.01% = 1 basis point.

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 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.

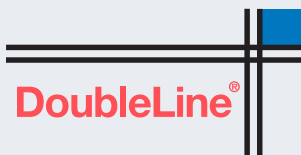
Bloomberg US Corporate High Yield (HY) Index – This index measures the U.S. dollar-denominated, HY, fixed-rate corporate bond market. Securities are classified as HY if the respective middle ratings of Moody's, Fitch and S&P are Ba1, BB+ or BB+ or below. The Bloomberg US HY Long Bond Index, including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

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.

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.

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 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 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.

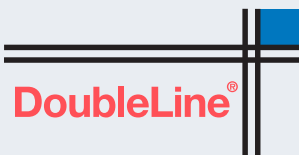
Non-Qualified Mortgage (Non-QM) – Any home loan that doesn't comply with the Consumer Financial Protection Bureau's existing rules on qualified mortgages (QMs). Usually this type of alternative mortgage loan accommodates people who are not able to prove they are capable of making the mortgage payments. 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.

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.

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



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.

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.

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.

Summary of Economic Projections (SEP) – Four times a year, the Federal Reserve releases a summary of Federal Open Market Committee (FOMC) participants’ projections for gross domestic product (GDP) growth, the unemployment rate, inflation and the appropriate policy interest rate. The summary also provides information regarding policymakers’ views on the uncertainty and risks attending the outlook. The projections provide information on the values that participants view as the most likely to prevail in the current year and the subsequent two years as well as over the longer run. The FOMC chair presents information about these projections in the press conference following the FOMC meeting for which they were prepared.

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.

Weighted Average Life (WAL) – Average number of years for which each U.S. dollar of unpaid principal on a loan, mortgage or bond remains outstanding.

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.

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