S&P Global Ratings

U.S. BSL CLO And Leveraged Finance Quarterly: Will A Cooling Inflationary Breeze Support Credit Resiliency?

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This report does not constitute a rating action

Third-Quarter 2024 Update | Leveraged Finance

Favorable Credit Tailwinds Anticipated On A Soft Landing And Lower Interest Rates

Amidst heightened market volatility, Federal Reserve rate cuts could provide much-needed relief to lower-rated corporate borrowers straining under the burden of high debt service costs. Speculative-grade issuers have demonstrated remarkable resiliency over the last 12 months, with improved liquidity profiles and steady operating performance. Reported median leverage is at a multiyear low of 4.9x (although still higher than 2019 for issuers rated 'B-' and lower); and although reported median interest coverage is also at a multiyear low of 2.6x, it's likely to improve in the next 12 months due to ongoing earnings growth, expected rate cuts, and lower credit spreads. We have seen the percentage of issuers with negative rating outlooks stabilize in the low-20% range and the number of upgrades outpace downgrades in June. In addition, new issuer counts are set to surpass modest 2023 levels.

Still, our Business Cycle Barometer (see "U.S. Business Cycle Barometer: Recession Risk Remains Above Historical Norm," published June 18, 2024) suggests that recession risk remains above the historical norm.

'B-' And Lower-Rated Issuers Still Face Stiff Headwinds In A Higher-For-(Even)-Longer Interest Rate Environment

High interest rates will likely remain the main stressor for potential defaults. We anticipate the default rate will come in at 4.5% through March 2025. About 15%-20% of our speculative-grade portfolio remains highly vulnerable to high credit stress (and potential downgrades) if economic growth slows and policy interest rates remain above 4% through 2025, as we expect. About 31% of our borrowers in the 'B-' ratings category have reported EBITDA interest-coverage deficits, and 34% have free operating cash flow (FOCF)-to-debt deficits of more than negative 3% (see **slide 15**).

First-Lien Recovery Rates Under Pressure From Top-Heavy Debt Structures And Ongoing Liability Management Transactions

Prospects for recovery given default on first-lien debt have declined notably since 2017 as debt structures have become more top-heavy, with a notable increase in first-lien-heavy and first-lien-only structures (see **slide 22, left side chart**). Average first-lien recovery expectations are now in the low-60% range overall, but are even lower for firms rated 'B-' and below, in the mid- to high-50% area (using the rounded point estimates that are part of our recovery ratings). More top-heavy debt structures have also pushed down estimated actual recovery rates on first-lien debt in the five-year period ending in 2022 versus historical levels (see **slide 22, right side chart**), as shown in two different recovery studies (see "Are Prospects For Global Debt Recoveries Bleak?" published March 14, 2024).

Third-Quarter 2024 Update | Broadly Syndicated Loan CLOs

CLO New Issuance Drops Off, But Resets And Refinancings Pick Up

Year-to-date through July, $114.59 billion of new U.S. collateralized loan obligations (CLOs) have been issued in the U.S. per Pitchbook LCD, making this the busiest year in the market's history so far. Even 2021, which holds the record for full-year CLO issuance at $187.49 billion, only had $93.66 billion of new issue CLOs priced at this point. But when 2024 is complete, we expect the 2021 CLO issuance record to still be standing. Record CLO issuance this year has happened amidst tepid new loan issuance, with most of the activity in the broadly syndicated loan (BSL) market consisting of loan repricings and refinancings, neither of which provide the loan supply that would normally fuel new CLO issuance. Purchases of loans in the secondary market, along with optional redemptions of existing CLOs, have provided much of the collateral for new CLO issuance this year. Absent an increase in new BSL loan supply from LBOs and M&A activity, we think the pace of new CLO issuance will moderate. This has already started, with issuance of new CLOs in June and July dropping to $11.26 billion and 13.24 billion, respectively, compared to an average run rate of more than $18 billion per month for January through May (see **slide 26**).

CLO refinancings and resets, however, aren't subject to the same collateral constraints, and we expect a very busy remainer of the year for these. Credit spreads on BSL CLO 'AAA' tranches from the largest, most liquid CLO managers have fallen below 140 basis points (bps) over SOFR, 30 points tight of where they were at the end of 2023. Combined with the dearth of CLO resets in 2022 and 2023 and the increase in loan prices, this has left the CLO market with a large volume of transactions that are good candidates for resets and refinancings. We expect the heavy volume seen in the 2024 through July ($139.94 billion per LCD) to continue.

Corporate Downgrades And CLO Credit Metrics

Despite a still uncertain credit environment and two years of higher-for-longer interest rates, BSL CLOs are holding up well. Overall credit metrics have been stable (see **slide 28**), with the average reinvesting BSL CLO 'CCC' basket at 7.26% in July 2024 versus 6.38% a year earlier. Par deterioration has been modest, with the average par-versus-target par ratio down by 66 bps over the past year (99.54% in July 2024 versus 100.12% a year earlier). The average junior overcollateralization (O/C) ratio test cushion is lower as well, but not by too much: 3.93% in July 2024 versus 4.59% a year earlier. These numbers are averages; and as has been the case for a long time, there's a vintage effect with CLOs originated prior to the arrival of the pandemic showing more signs of stress than those originated post first-quarter 2020. But even that's moderating, with the gap between the two cohorts dwindling as elevated corporate rating downgrades over the past two years putting the two sets of CLOs on a less unequal footing (see **slide 29)**.

Exposure to corporate downgrades in BSL CLO collateral pools has also moderated. Looking at obligor ratings for companies with loans held in BSL CLOs, the downgrade-to-upgrade ratio in the first quarter was 1.24 downgrades for each upgrade on a CLO par weighted basis (see **slide 33**), compared to 1.60 downgrades-per-upgrade for the two years prior (2022 and 2023). This suggests both that corporate downgrades have been moderating as companies have adjusted to operating in a higher rate environment, and that CLO managers have done a good job of managing their collateral pools.

All of this been reflected in BSL CLO tranche rating actions in recent years. With the economic shutdowns associated with the pandemic, about 13% of outstanding BSL CLO ratings were lowered in 2020. However, since then, ratings have been quite stable. Cumulatively, from 2021 through the first half of 2024, U.S. BSL CLOs saw only 99 ratings lowered out of more than 6,000 U.S. BSL CLO ratings outstanding. Only nine of these BSL CLO downgrades were on investment-grade ratings, and they were all in the 'BBB' category (see **slide 46**).

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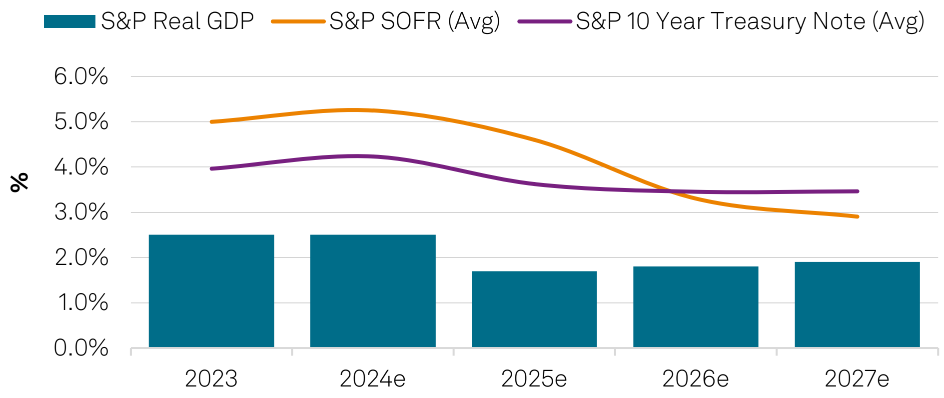
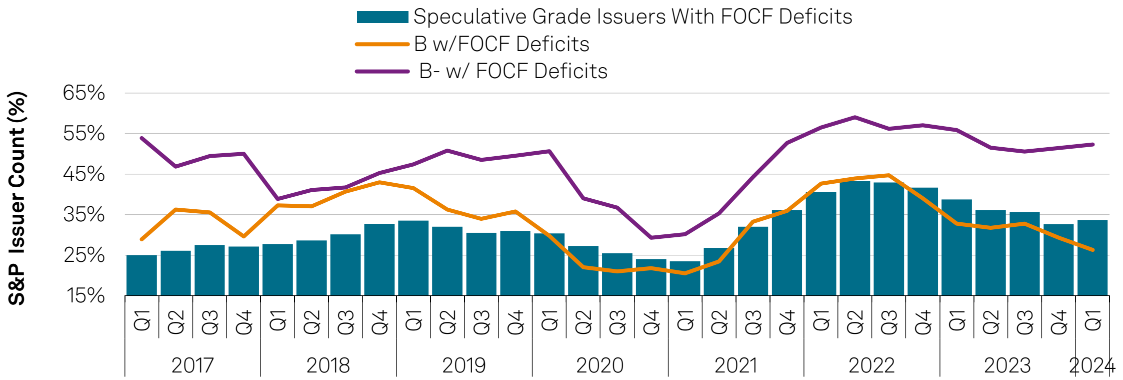
Credit Themes | What We're Watching In The Second Half Of 2024

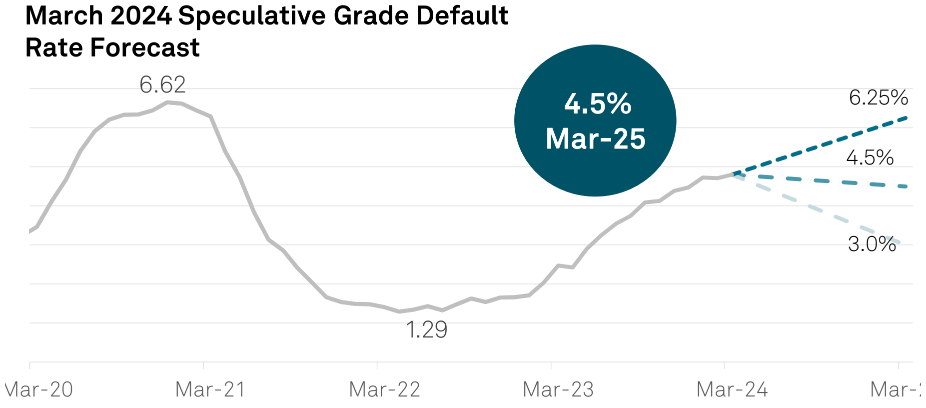
1. Can The Fed Can Achieve A "Soft" Landing?



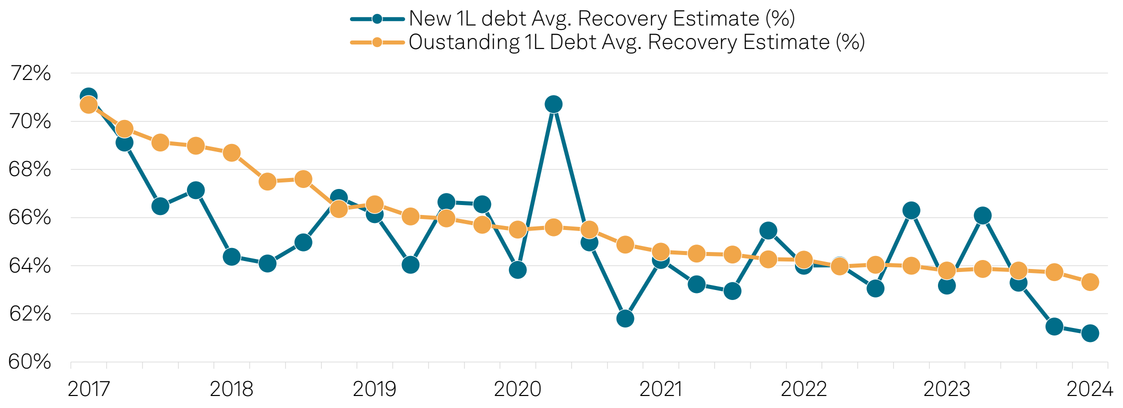
2. Is Liquidity Holding Up For 'B-' Issuers?



3. What Is The Shape Of The Default Cycle?



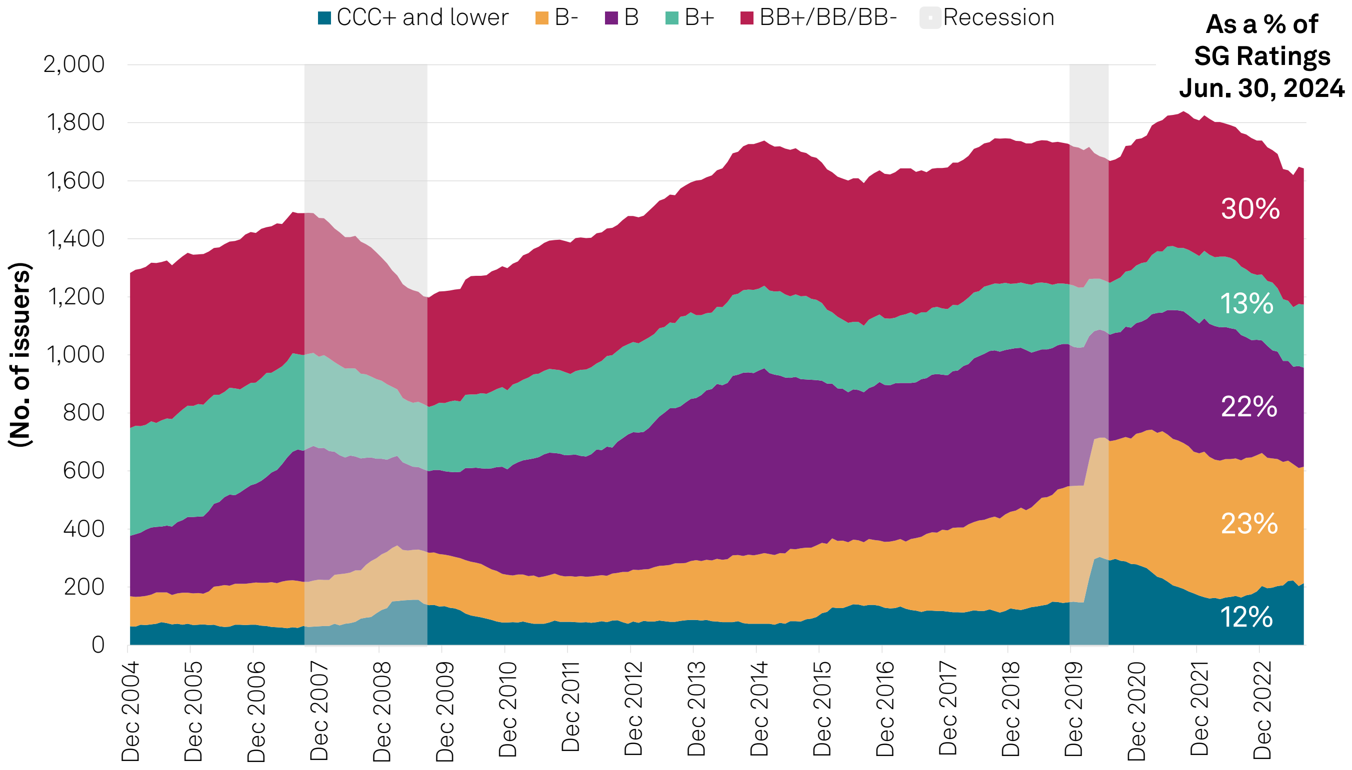
4. The Depth Of The Decline In First-Lien Recoveries?



Source: S&P Global Ratings.

Rating Trends | Issuer Growth Concentrated At Lower Rating Rungs Since GFC, Largely Due To An Influx Of Sponsor-Owned Firms

U.S. and Canada SG ratings distribution by issuer count*



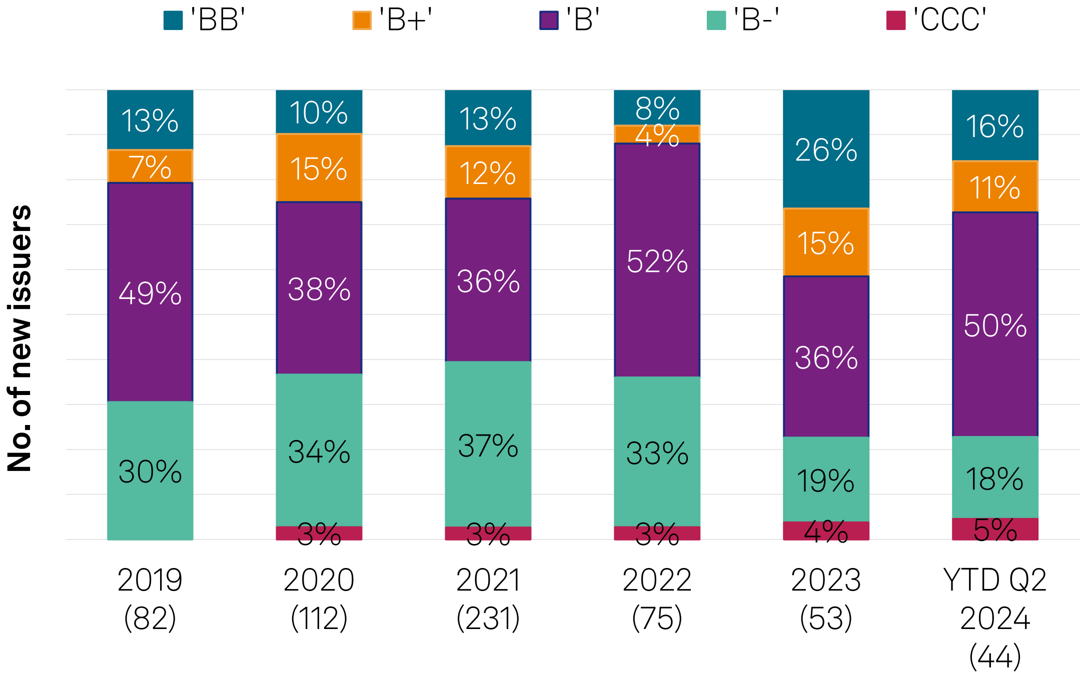
*Data through June 30, 2024. SG--Speculative grade. Source: S&P Global Ratings & CreditPro.

- About 23% of our speculative-grade issuer ratings (by issuer count) are rated 'B-'. The proportion declined 500 basis points from its 28% peak mid-2021.
- The speculative-grade issuer population fell about 4.3% for the last-12 months ending June 30, 2024. We saw a modest widening of the tails ('BB' and 'CCC' categories) in our rating distribution.
- 'CCC' category issuers account for 12.4% of our portfolio, which is high but below the COVID-19 peak of 18.7% and just below the global financial crisis (GFC) peak of 12.8%.

Rating Trends | New Issuers Counts Increasing In 2024; Muted 'B-' Issuance

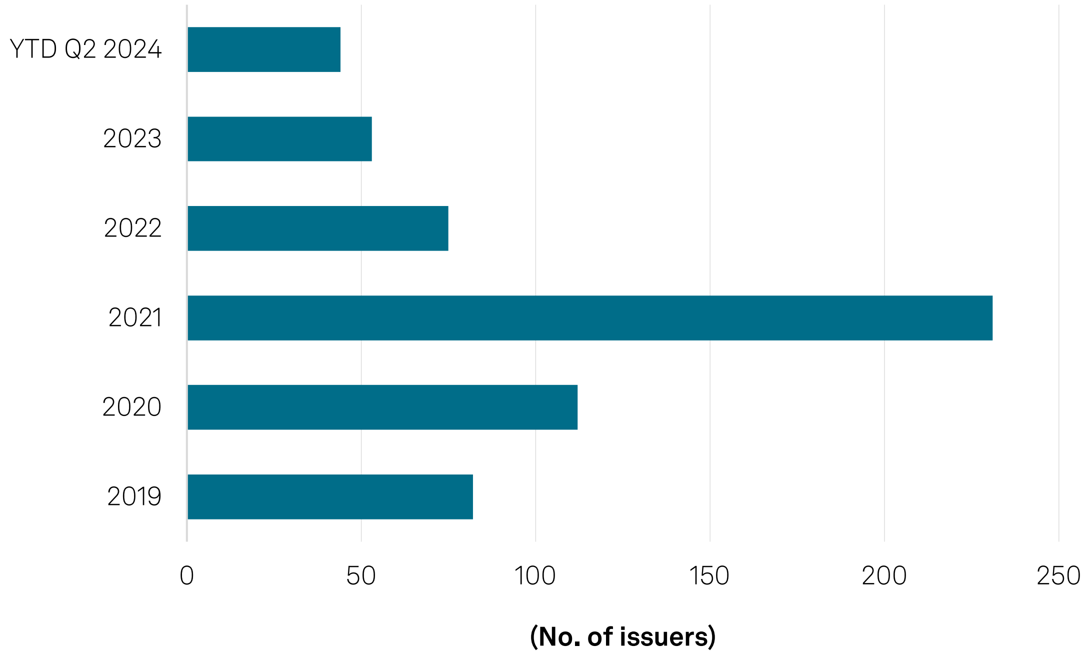
- 'B-' new issuers remains about half of 2021 levels as new issuer ratings shift towards 'B'.
- S&P Global Ratings sectors with the highest new issuer count were media, entertainment and leisure, healthcare, and high technology

U.S. and Canada distribution of new SG issuers by credit quality



SG--Speculative grade. Source: S&P Global Ratings.

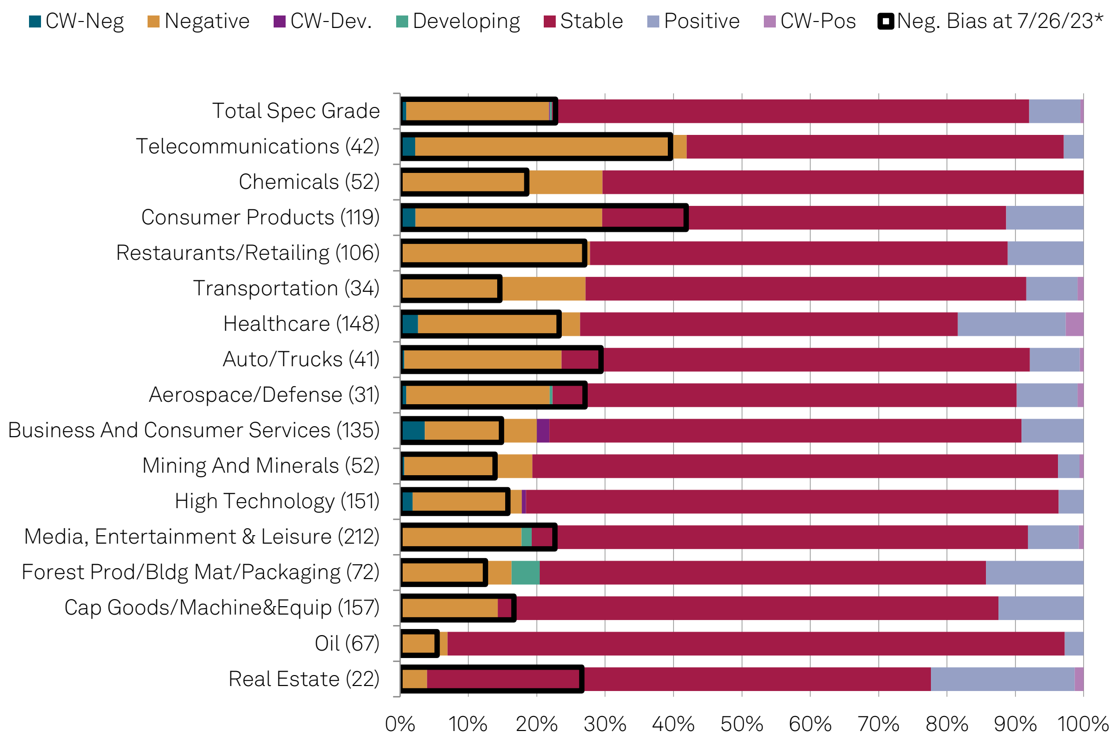
U.S. and Canada new SG issuers counts by year



SG--Speculative grade. YTD--Year to date. Source: S&P Global Ratings.

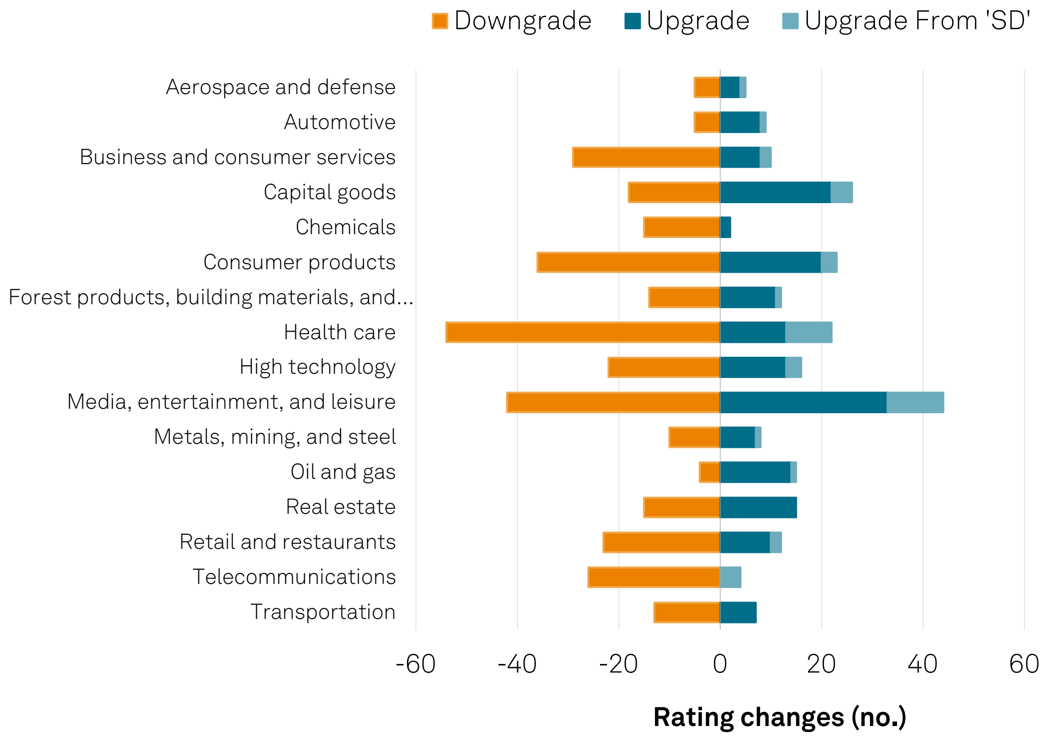
Rating Trends | SG Negative Rating Bias Has Remain Stable Over The Last 12 Months But Varies Widely Among Sectors

Speculative-grade rating outlook by sector
U.S. And Canada (as of July 26, 2024)



*Includes issuers with a negative rating outlook and issuers placed on CreditWatch negative.
Source: S&P Global Ratings U.S. and Canada ratings.

Speculative-grade issuer credit rating changes by sector*
U.S. and Canada (LTM June 2024)



*Excludes utilities, financial, and insurance services. FY--Fiscal year. Source: S&P Global Ratings U.S. and Canada ratings.

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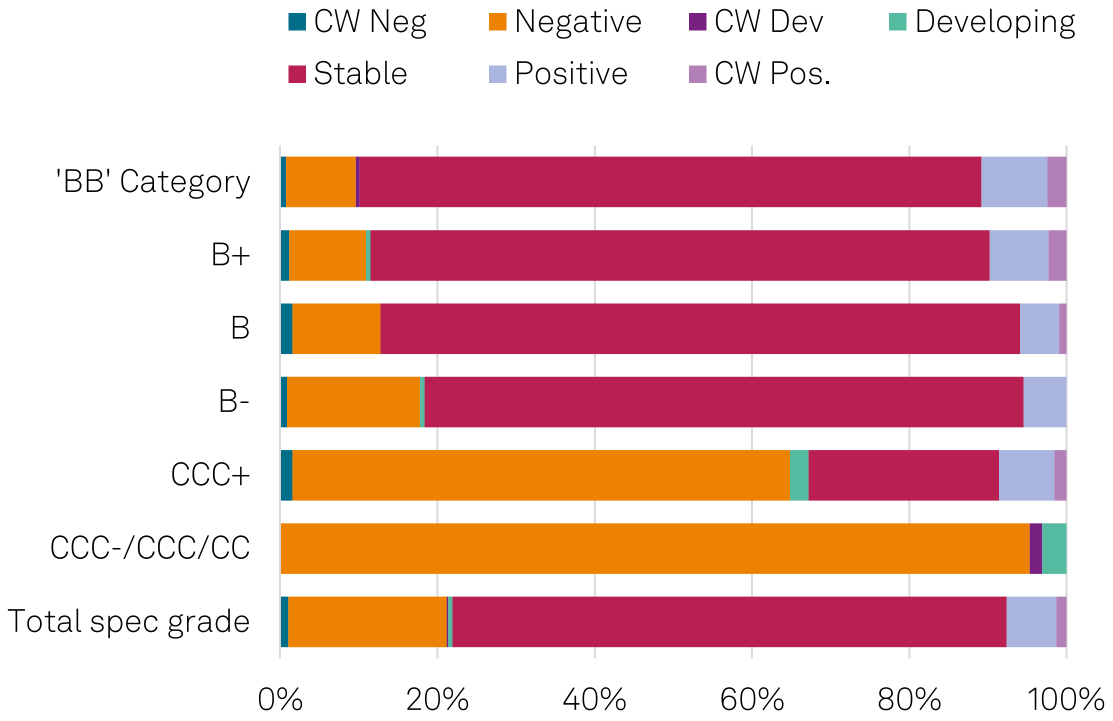
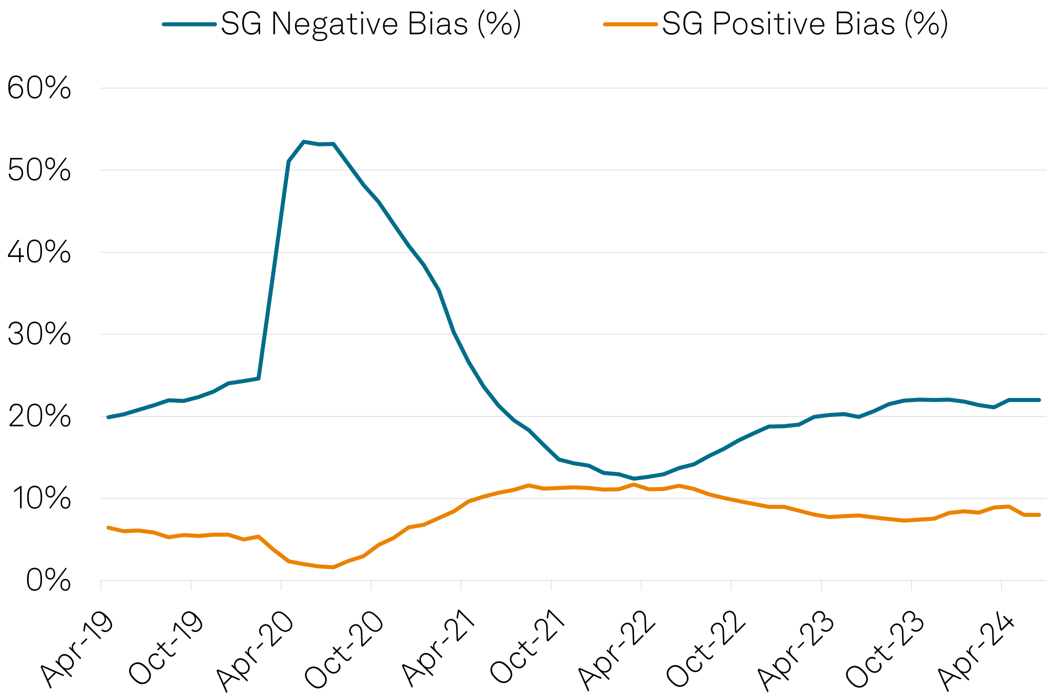
Rating Trends | Negative Ratings Bias Is Concentrated At Lower Ratings; About 74% Of 'CCC' Category Issuers Have A Negative Ratings Outlook

Speculative-grade negative ratings bias
U.S. and Canadian nonfinancial corporates



Speculative-grade negative ratings bias over time
U.S. and Canadian nonfinancial corporates



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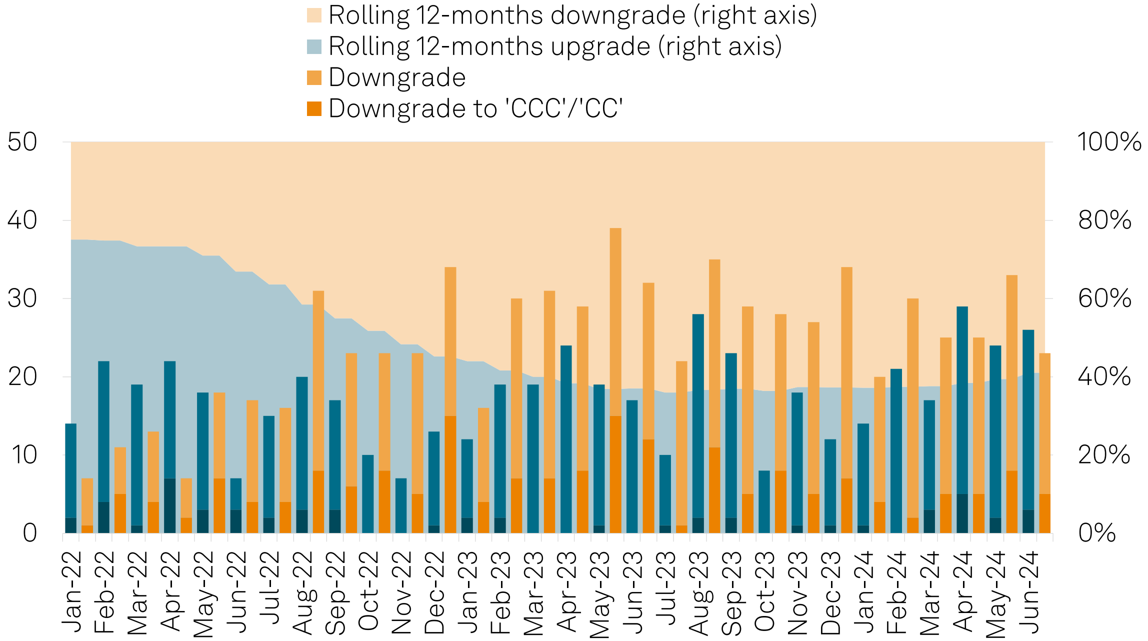
Rating Trends | Upgrades Outpace Downgrades In June, But Downgrade Volumes Remain High

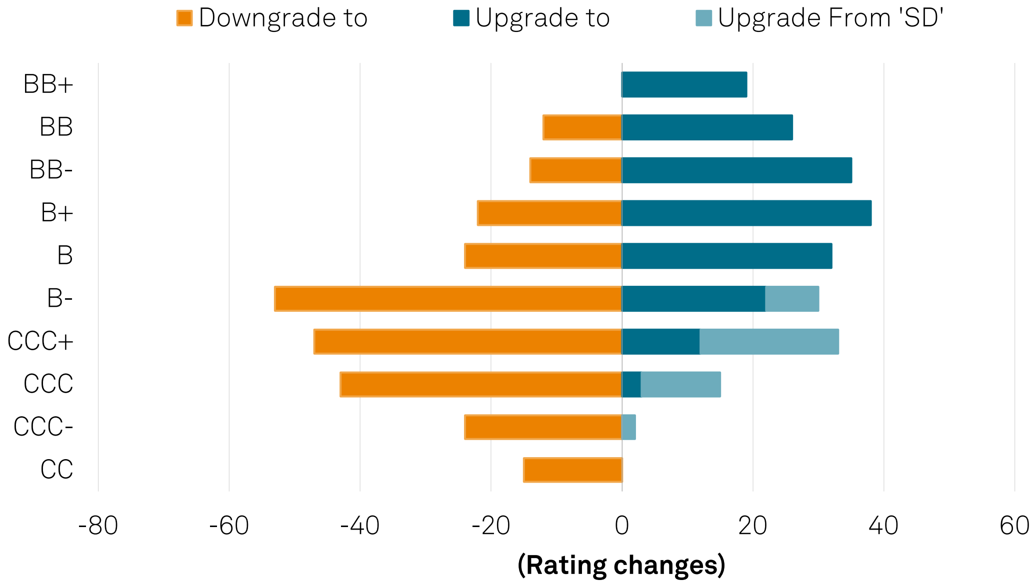
- Credit statistics for entities downgraded to--or upgraded from--the 'CCC' category are starkly different than those where the issuer credit rating was unchanged.

Speculative-grade upgrades and downgrades



Note: Statistics in the charts above excludes entities in the infrastructure and financial and insurance services sectors. Source: S&P Global Ratings U.S. and Canada ratings.

Speculative-grade issuer credit rating changes by rating: U.S. And Canada (LTM June 2024)

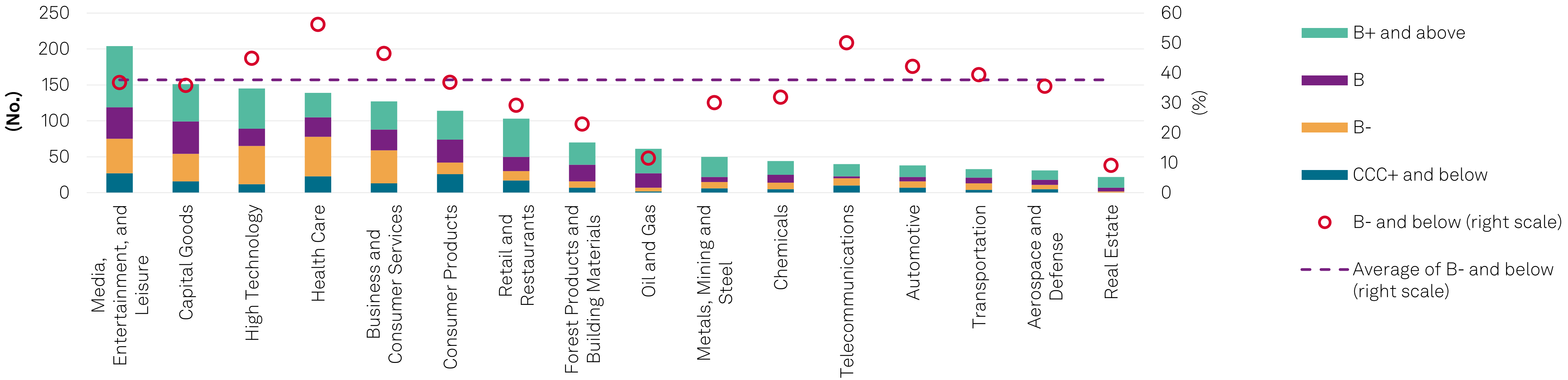


Note: Downgrade and upgrade ratings actions are 'to' the current rating. We do not include ratings that were downgraded from IG to SG and vice versa. (e.g., fallen angels and from SG to IG). IG--Investment grade. SG--Speculative grade. LTM--Last 12 months. Source: S&P Global Ratings U.S. and Canada ratings.

‘B-’ Credit Risk | ‘B-’ Issuer Counts Elevated In Sectors With High Sponsor Concentrations

- The sectors with the most speculative-grade companies tend to have high proportions of ratings of ‘B’ and lower, since this is where post-GFC ratings growth was concentrated.
- The sectors with high and above average concentrations of firms rated ‘B-’ and lower are healthcare, high technology, and business and consumer services, which have high financial sponsor ownership.

U.S. and Canada speculative-grade issuer credit rating distribution by sector*



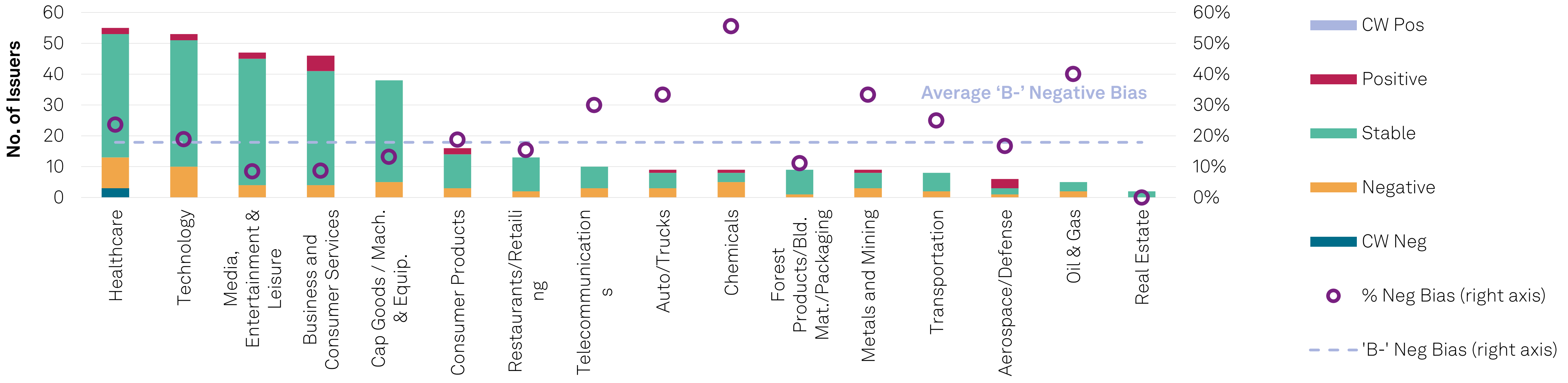
*As of July 26, 2024. U.S. and Canada corporate ratings. Source: S&P Global Ratings.

‘B-’ Credit Risk | Negative Rating Bias For ‘B-’ Issuers Fell To 18% In July From About 22% In January, But Varies Widely By Sector

- On a speculative-grade corporate rating, an outlook negative is intended to signal a one-in-three chance of a downgrade within the next 12 months.
- Chemicals is the sector with the highest percentage of issuers with a negative rating bias, but healthcare has the highest total number of issuers with a negative bias.

Ratings bias of companies rated ‘B-’ by sector*

U.S. and Canadian nonfinancial corporates

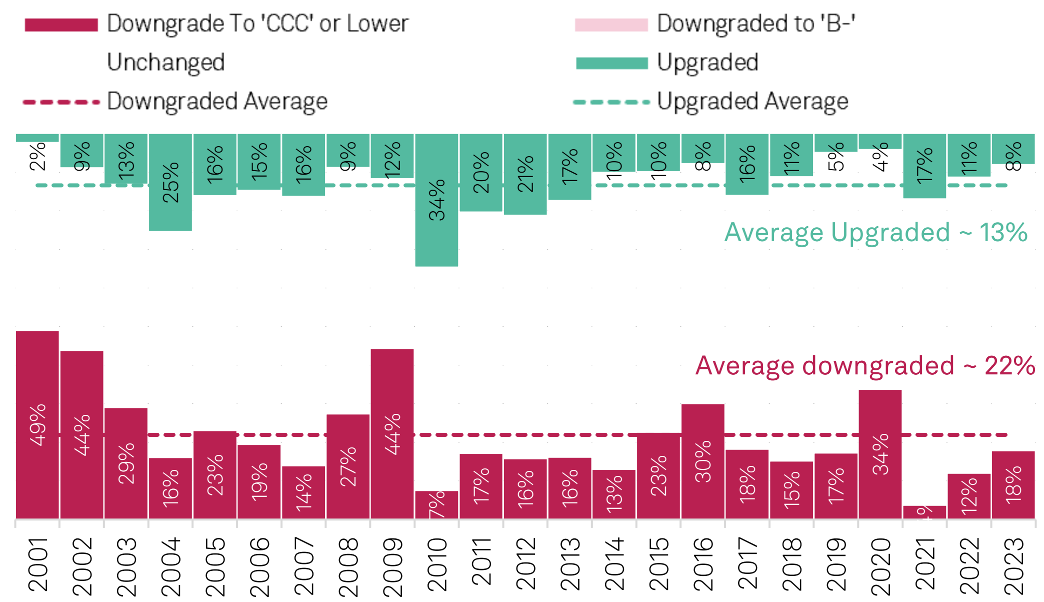


*As of July 26, 2024. Source: S&P Global Ratings Credit Research & Insights.

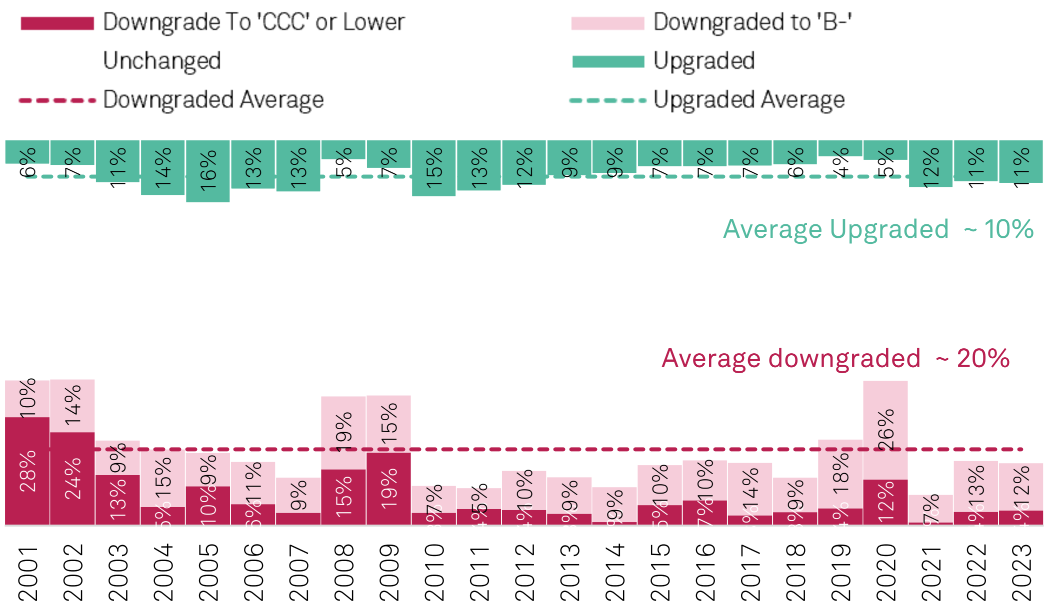
‘B-’ Credit Risk | ‘B-’ Downgrades Often Outpaced Upgrades By Average Of 8.5 Percentage Points And Median Of 4.9

- Average one-year downgrades to the 'CCC' category or lower for ‘B’ and 'B-' firms were 8% and 22%, respectively. The median since 2001 for ‘B’ and ‘B-’ were 5% and 18%, respectively.
- Peak downgrades for 'B' and 'B-' firms were 34% and 44%, respectively (both in 2001). Upgrades rose quickly the following year.
- ‘B-’ downgrades grew to 18% in 2023, which was amplified by the historical trend toward a higher proportion of ‘B-’ issuers within our speculative-grade rating portfolio.

Movement of ‘B-’ issuer pool from start–to–end of year



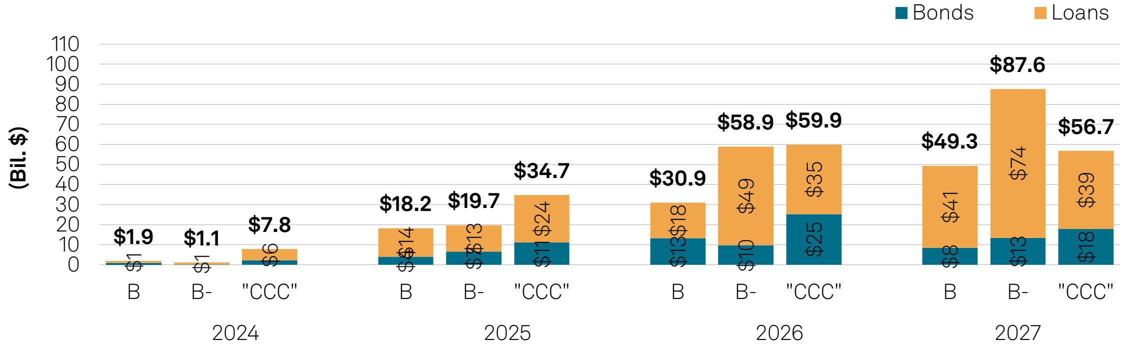
Movement of ‘B’ issuer pool from start–to–end of year



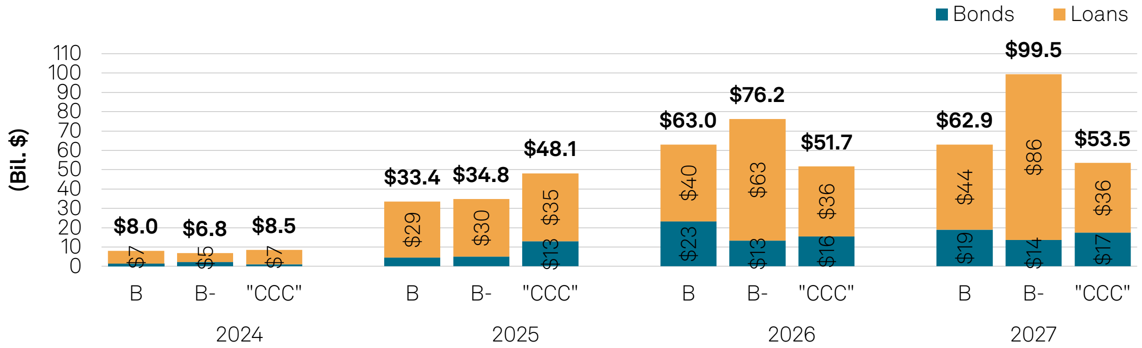
Source: S&P Global Ratings U.S. and Canada ratings – CreditPro repository.

Maturity Wall | 'CCC' Refinancing Needs Remain High With A Focus On Media, Healthcare, And Telecom

Debt maturities as of July 1, 2024

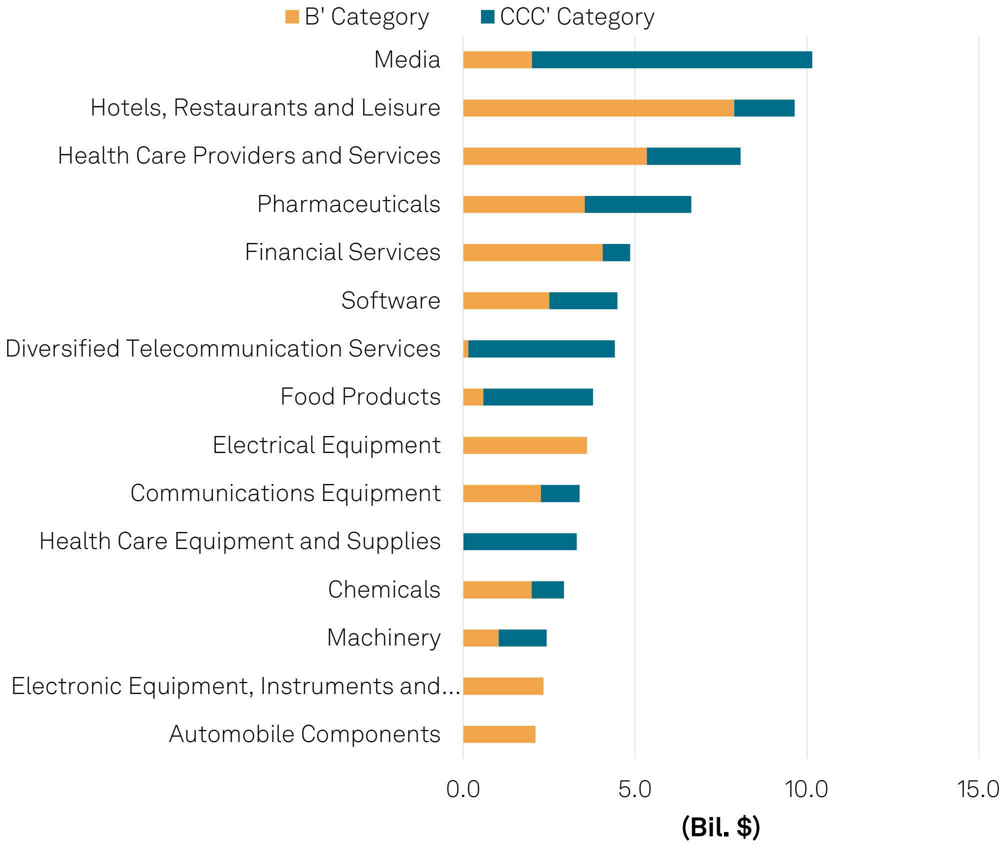


Debt maturities as of Jan. 17, 2024



Note: Includes U.S. nonfinancial corporate issuers' speculative-grade bonds and loans. Excludes revolving credit facilities. Source: IHS Markit & Refinativ Data.

'B+' and lower debt maturing through 2025 (U.S. bil. $)*



*Data as of July 1, 2024. Includes U.S. nonfinancial corporate issuers' speculative-grade bonds and loans. Excludes revolving credit facilities. Source: IHS Markit & Refinativ Data.

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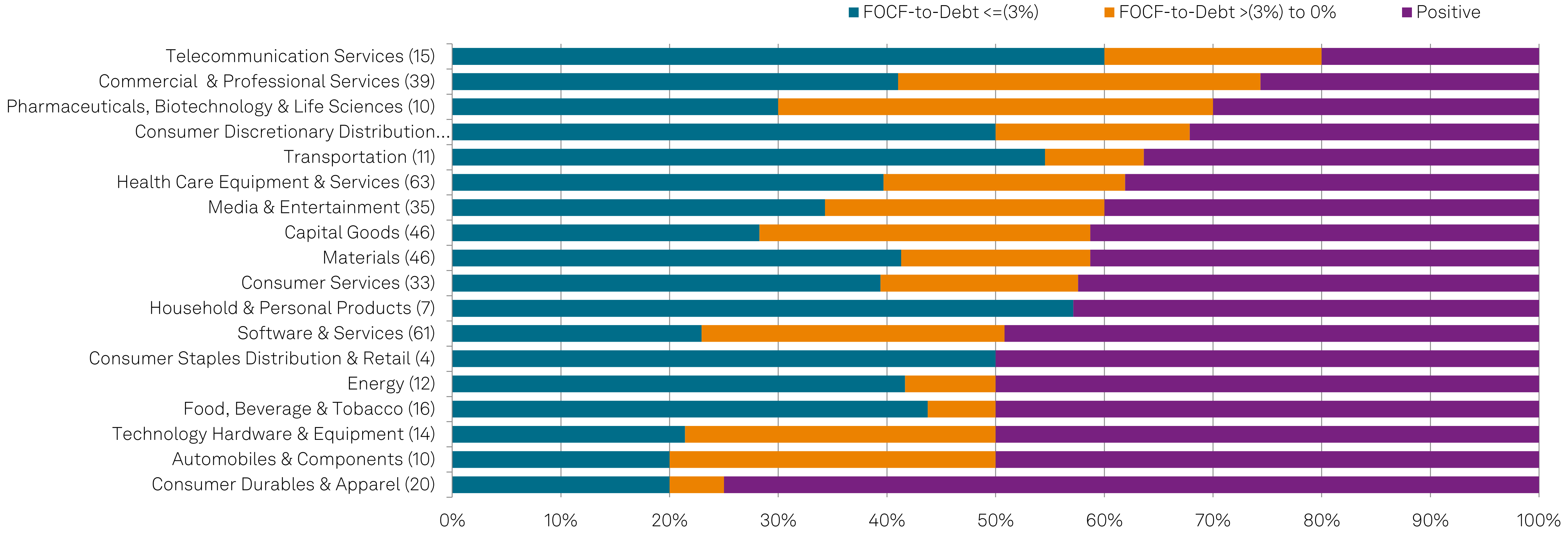
Credit Metrics | About 34% Of 'B-' Issuers Have FOCF-To-Debt Deficits Greater Than -3%; Elevated Interest Rates May Keep 'B-' Rating Pressure Elevated

Assessing 'B-' issuers at risk: free operating cash flow (FOCF)-to-debt (Q1-2024)*



*Ratings exclude financial and insurance issuers. Source: S&P Global Ratings U.S. and Canada.

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Credit Metrics | Reported EBITDA Interest Coverage Declines Have Likely Troughed At 2.6x

(Rolling 12 months periods)
Speculative-grade reported interest coverage (U.S. and Canada)

Issuer credit rating*	Entity count (no.)	Q2 2022 (x)	Q3 2022 (x)	Q4 2022 (x)	Q1 2023 (x)	Q2 2023 (x)	Q3 2023 (x)	Q4 2023 (x)	Q1 2024 (x)
BB+	104	9.1	8.7	8.6	7.4	6.7	7.0	6.5	6.4
BB	111	8.4	7.9	6.5	6.1	5.8	5.7	5.6	5.7
BB-	115	5.9	5.7	5.4	5.0	4.6	4.4	4.2	3.9
B+	122	3.8	3.9	3.8	3.6	3.4	3.2	3.2	3.1
B	170	3.4	3.4	3.4	3.1	2.7	2.5	2.3	2.1
B-	182	1.7	1.7	1.6	1.5	1.4	1.4	1.3	1.3
CCC+	79	1.5	1.5	1.3	1.2	1.1	1.0	0.9	1.0
CCC	26	1.5	1.1	0.9	0.9	0.7	0.7	0.5	0.5
Total	**917**	**3.8**	**3.8**	**3.5**	**3.3**	**3.0**	**2.7**	**2.6**	**2.6**

*Rating as of June 28, 2024. Source: S&P Global Ratings.

Credit Metrics | Reported FOCF-To-Debt Weakens In First-Quarter 2024, And Potentially Problematic For 'B-' And Lower-Rated Issuers

(Rolling 12 months periods)
Speculative-grade reported free operating cash flow to debt (%) (U.S. and Canada)

Issuer credit rating*	Entity count (no.)	Q2 2022 (%)	Q3 2022 (%)	Q4 2022 (%)	Q1 2023 (%)	Q2 2023 (%)	Q3 2023 (%)	Q4 2023 (%)	Q1 2024 (%)
BB+	104	13.3	13.6	12.7	11.9	12.3	13.2	13.2	14.8
BB	111	12.4	11.1	9.7	10.6	15.1	15.6	17.5	16.7
BB-	115	10.8	8.3	9.9	11.2	12.0	13.4	13.3	11.3
B+	122	3.4	3.8	5.6	7.0	6.9	8.5	9.7	10.2
B	170	1.8	1.3	2.5	3.7	4.0	4.4	4.6	4.3
B-	182	-0.6	-1.0	-0.4	-0.8	0.0	0.2	0.3	0.1
CCC+	79	-6.2	-6.4	-5.0	-4.1	-3.4	-2.6	-1.7	-1.6
CCC	26	-3.8	-4.9	-5.4	-5.7	-4.4	-3.4	-3.1	-2.4
Total	**917**	**3.2**	**2.8**	**3.4**	**3.8**	**4.7**	**5.2**	**5.8**	**5.1**

*Rating as of June 28, 2024. Source: S&P Global Ratings.

Credit Metrics | Many (Mostly Lower-Rated) Issuers Are Cutting CAPEX (And Working Capital) To Preserve Liquidity; Could Limit Future Growth

(Rolling 12 months periods)
Speculative-grade reported capital expenditures (U.S. and Canada)

Issuer credit rating*	Entity count (no.)	Q2 2022 (%)	Q3 2022 (%)	Q4 2022 (%)	Q1 2023 (%)	Q2 2023 (%)	Q3 2023 (%)	Q4 2023 (%)	Q1 2024 (%)
BB+	105	5.6	6.8	7.6	4.6	2.9	0.9	-1.4	-0.3
BB	114	4.4	4.4	5.1	4.1	2.9	1.7	-0.8	-0.7
BB-	122	6.8	7.6	4.1	5.5	3.9	2.5	1.9	0.1
B+	128	6.0	7.6	4.2	3.5	2.6	1.4	2.1	0.5
B	179	6.0	4.2	5.1	1.9	2.8	1.1	0.0	0.1
B-	194	4.5	4.5	4.9	1.9	1.8	0.3	0.5	-0.8
CCC+	82	4.9	1.0	-0.5	-0.4	-3.6	-4.4	-6.7	-5.9
CCC	30	-1.8	2.1	4.6	-0.3	0.1	-6.1	-11.6	-12.3
Total	**962**	**5.6**	**5.9**	**4.6**	**2.8**	**2.4**	**0.7**	**-0.5**	**-0.6**

*Rating as of June 28, 2024. Source: S&P Global Ratings.

Credit Metrics | Reported Leverage Improvements Has Moderated In Recent Quarters, But Remain High For 'B-' And Lower Issuers

Reported leverage (rolling 12 months periods)
Breakdown by rating

Issuer Credit Rating*	Entity Count	Debt/EBITDA (x) 2019	2020Q1 LTM	2020Q2 LTM	2020Q3 LTM	2020	2021Q1 LTM	2021Q2 LTM	2021Q3 LTM	2021	2022Q1 LTM	2022Q2 LTM	2022Q3 LTM	2022	2023Q1 LTM	2023Q2 LTM	2023Q3 LTM	2023	2024Q1 LTM
BB+	109	3.2	3.4	3.9	3.6	3.4	3.4	2.9	2.7	3.1	2.8	2.7	2.6	2.8	2.8	2.7	2.7	2.8	2.8
BB	117	3.3	3.5	4.0	3.7	3.6	3.7	3.1	3.1	2.9	2.8	2.9	3.0	3.3	3.1	3.2	3.1	3.0	3.0
BB-	121	4.3	4.7	5.0	5.0	5.0	4.6	3.7	3.6	3.5	3.5	3.4	3.4	3.5	3.7	3.8	3.6	3.7	3.8
B+	128	4.8	5.2	5.7	5.7	5.5	5.5	5.0	4.6	4.6	4.7	4.7	4.4	4.2	4.3	4.1	4.1	4.0	4.1
B	176	5.8	6.3	7.0	6.6	6.8	6.5	5.7	5.5	5.5	5.4	4.8	4.9	4.7	4.7	4.7	4.7	4.9	5.1
B-	211	7.4	7.8	8.3	8.0	8.4	8.6	8.2	8.6	9.1	9.3	8.9	8.9	8.6	8.6	8.4	8.3	8.1	8.0
CCC+	84	7.7	8.2	8.3	8.1	8.9	7.9	8.8	9.0	10.1	10.7	10.7	10.2	11.0	10.8	10.4	10.4	10.2	10.5
CCC	26	8.8	9.0	10.1	9.6	9.0	8.7	8.2	8.5	8.5	9.0	10.5	11.2	12.5	11.9	17.6	15.5	19.0	16.5
Total	**981**	**5.1**	**5.7**	**6.4**	**6.2**	**6.0**	**5.8**	**5.2**	**5.2**	**5.3**	**5.3**	**5.1**	**5.0**	**5.2**	**5.0**	**4.9**	**5.0**	**4.9**	**4.9**

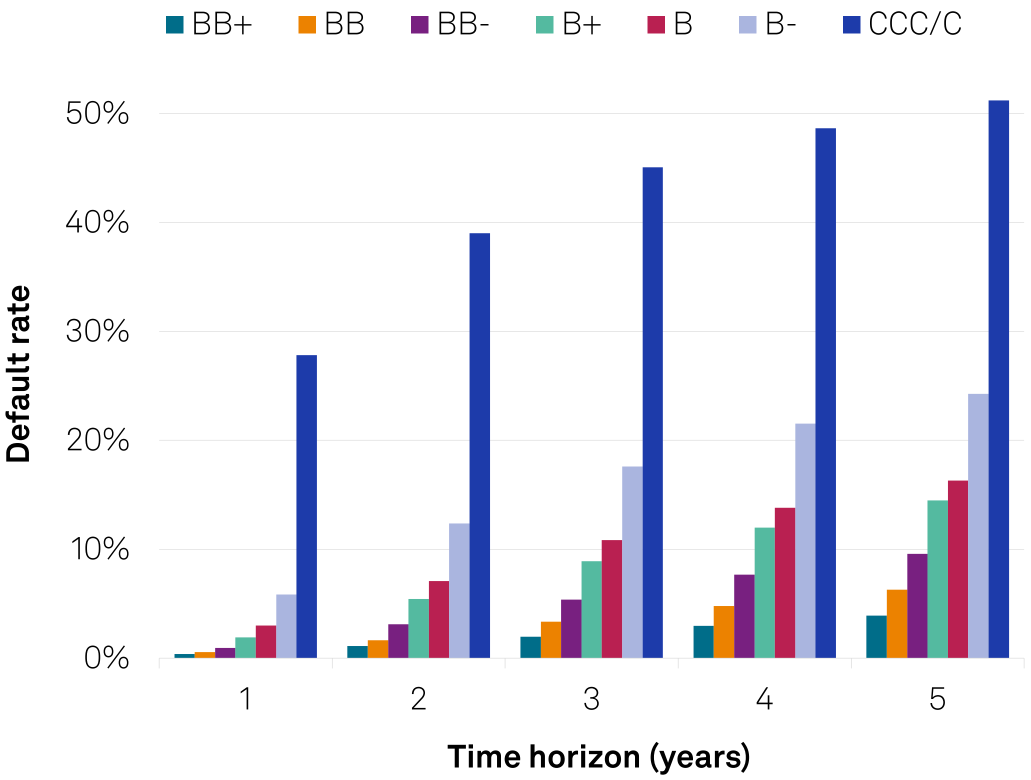
*Rating as of June 28, 2024.; LTM--Last 12 months. Source: S&P Global Ratings

Defaults | 'CCC' Rated Companies Have Higher Default Risk

- We consider companies rated 'CCC+' or lower as more likely to default than not. Avoiding a default is dependent upon favorable business, financial, and economic conditions for the obligor to meet its financial commitments.
- We view defaults for companies rated in the 'CCC' category as mostly a matter of timing. Generally, a visible default scenario would be tied to the timeframes noted below, although the timing of selective defaults (i.e. distressed exchanges) are often not predictable.
- In contrast, a company rated 'B-' is viewed as having a viable path to perform and improve its credit measures.
- Defaults and cumulative defaults are materially higher for companies with 'CCC' category ratings, even compared to 'B-' rated issuers. The cumulative default figures shown nearby do not adjust for a high level of ratings withdrawals over the time-period (more than 25%, on average, over a three-year period), as default tracking stops one year after a rating withdrawal.

Issuer credit rating	Anticipated time to default
CCC+	More than 12 months away
CCC	Within 12 months
CCC-	Within 6 months

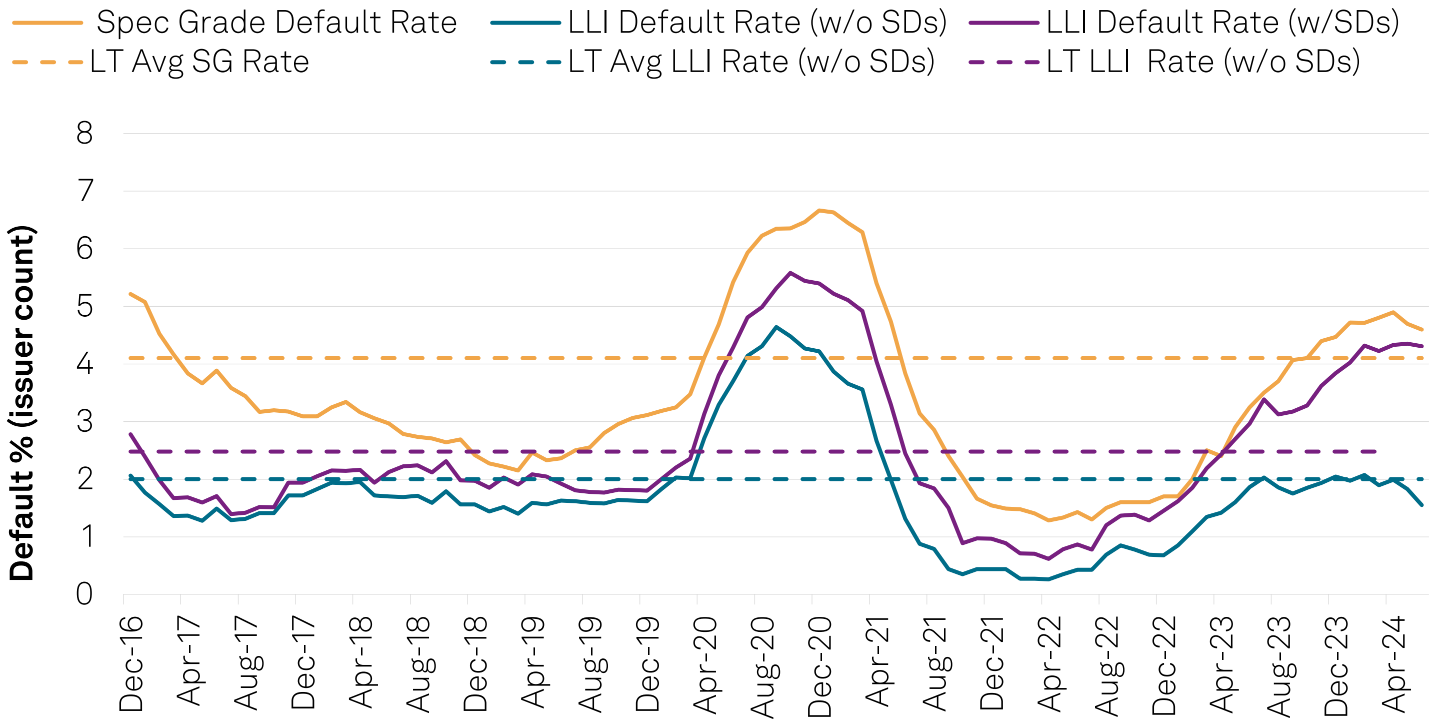
Average cumulative default rates for speculative-grade U.S. corporates by issuer rating (1981-2023)



Sources: S&P Global Ratings Credit Research & Insights and S&P Global Market Intelligence's CreditPro®.

Defaults | Leveraged Loan Default Rates Are Much Higher When 'SD' Rating Actions Are Considered, Especially From 2020 Forward

U.S. speculative-grade default rates on a trailing 12-month basis through June 30, 2024*

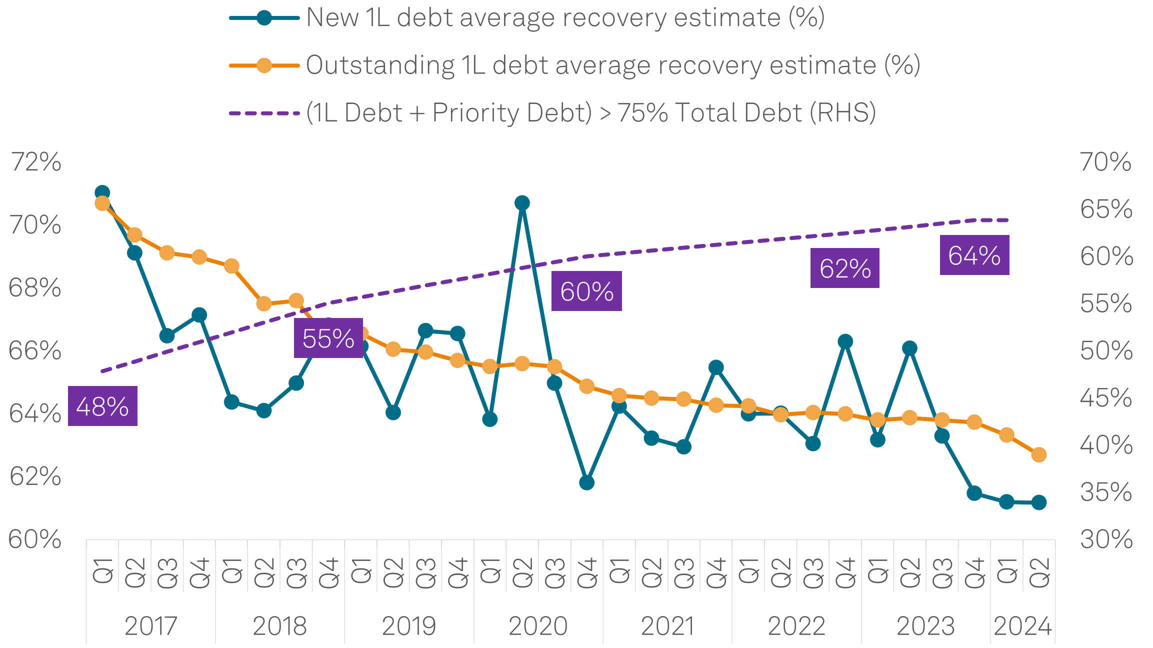


*All default measures are shown on an issuer-count basis through June 30, 2024 (although the speculative-grade default rate is preliminary). The LLI default rate is for the Morningstar/LSTA Leveraged Loan Index and is shown without selective defaults (SDs), consistent with the default definition of the index, as well as with SDs as determined by S&P Global Ratings' rating actions. Sources: S&P Global Ratings and Leveraged Commentary & Data.

- Leveraged Loan Index Defaults with and without SD actions remain starkly different.
- LCD recently began publishing a default rate for the Morningstar/LSTA Leveraged Loan Index that includes selective default (or SD) rating actions by S&P Global Ratings (from Dec. 2016 forward).
- On this basis, the default rate was meaningfully higher on June 30, 2024, at 4.31%, compared to 1.55% without SDs (both measures on an issuer-count basis).
- The gap between LL Index defaults with and without SD actions has been notably wider since 2020 and was at a peak of 276 bps on June 30, 2024.
- Since July 2020, the LL Index default rate with SDs has generally been closer to S&P Global Ratings' overall speculative-grade default rate (which also includes SDs) than to the traditional LL Index default rate.
- Given the prevalence of SD rating actions in recent years, LCD's 'dual track' LL Index default rate is a critical measure of loan defaults.

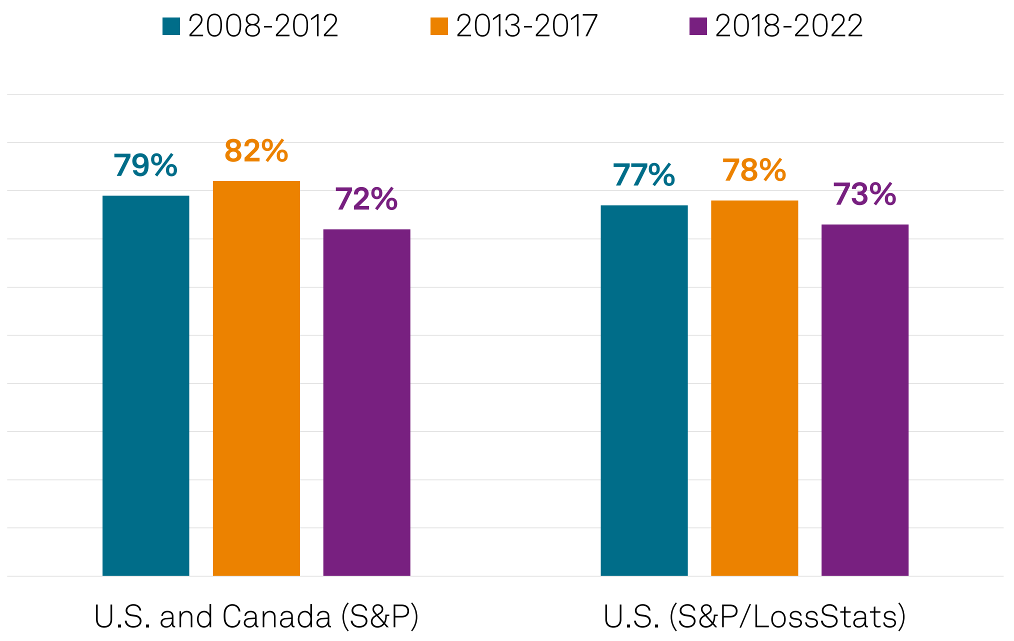
Recoveries | Future 1L Recovery Expectations And Actual 1L Recovery Rate Estimates Have Declined As Debt Structures Have Become More Top-Heavy

Expected recovery on newly issued and outstanding 1L debt based on S&P Global Ratings' recovery ratings (U.S. and Canada)*



*Data through June 30, 2024, based on the rounded point-estimates included in our recovery ratings for rated nonfinancial corporate entities in the U.S. and Canada. The data on debt structure composition is from a sample that covers large portion of the relevant rated issuers as of 1QE 2017, YE 2018, YE 2020, YE 2022, and YE 2023 (with smoothed transitions between these dates). The YE 2023 sample covers roughly 80% of the rated SG issuers in the U.S. and Canada. YE--Year end. SG--Speculative grade. Source: S&P Global Ratings.

Estimated actual first-lien recovery rates (% par) on a nominal basis*

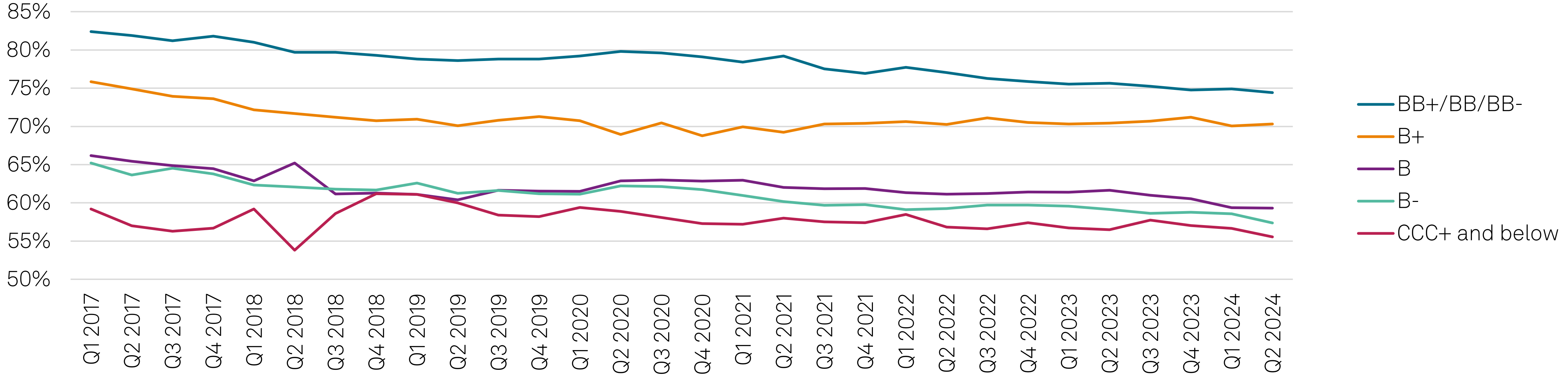


*The actual first-lien recovery estimates are on an ultimate (at the end of the insolvency or restructuring period) and nominal basis. The S&P Global Ratings data represents estimated recoveries from bankruptcy documents, while the S&P Global Ratings' LossStats data is based on the best available information using one of three calculation approaches (trading prices, settlement prices, or liquidity event pricing). Source: S&P Global Ratings "Are Prospects For Global Debt Recoveries Bleak," published March 14, 2024.

Recoveries | First-Lien Recovery Expectations Vary By Rating Level

- Average recovery expectations for first-lien debt are notably lower for companies rated 'B-' and lower.
- Higher-rated issuers, which tend to be less levered and have larger junior debt cushions, also tend to have higher recovery expectations.
- Average recovery expectations have generally drifted down since 2017.
- These recovery expectations do not account for 'event risk' related to future aggressive-out-of-court restructurings or liability management transactions.

Average recovery estimate of first-lien debt: U.S. and Canada*



*Data through June 30, 2024. based on the rounded point-estimates included in our recovery ratings for rated nonfinancial corporate entities in the U.S. and Canada. Source: S&P Global Ratings.

Recoveries | Aggressive Loan Restructurings Can Significantly Impair Recoveries For Non-Participating Lenders And Usually Don't Resolve Financial Problems

Comparison of expected recovery impairment for subordinated or non-participating lenders from select loan restructurings

-	Collateral tranfers:	Dates	RR% before	RR% after	Change 1L % par
1	J.Crew *	7/2017	40%	15%	-25%
2	PetSmart	6/2018	60%	45%	-15%
3	Neiman Marcus *	9/2019	55%	55%	0%
4	Cirque du Soleil *	3/2020	75%	75%	0%
5	Revlon *	5/2020	40%	15%	-25%
6	Party City *	7/2020	75%	45%	-30%
7	Travelport (+priming loan) **	9/2020	75%	0%	-75%
8	Envision Healthcare #1 *	4/2022	50%	30%	-20%
9	Shutterfly/Photo Holdings **	6/2023	60%	35%	-25%
10	US Renal Care #1 (transfer) **	6/2023	50%	30%	-20%

	Priming loan exchanges:	Dates	RR% before	RR% after	Change 1L % par
1	Murray Energy *	6/2018	65%	0%	-65%
2	NPC International Inc. *	2/2020	55%	40%	-15%
3	Serta Simmons *	6/2020	55%	5%	-50%
4	Renfro #1	7/2020	35%	20%	-15%
5	Boardriders	8/2020	55%	5%	-50%
6	TriMark/TMK Hawk #1 **	9/2020	55%	0%	-55%
7	GTT *	12/2020	50%	40%	-10%
8	Renfro #2	2/2021	20%	10%	-10%
9	TriMark/TMK Hawk #2 **	7/2022	60%	30%	-30%
10	Medical Depot **	7/2022	15%	10%	-5%
11	Envision Healthcare #2 *	8/2022	30%	Varied	Up to -30%
12	Mitel Networks International **	11/2022	50%	5%	-45%
13	BW Homecare/Elara Caring **	12/2022	50%	20%	-30%
14	Rodan & Fields **	4/2023	55%	40%	-15%
15	RobertShaw/Range Parent (multiple) *	5/2023	50%	0%	-50%
16	Wheel Pros **	9/2023	50%	30%	-20%
17	API Holdings III Corp. **	11/2023	55%	35%	-20%
18	GoTo Group **	2/2024	50%	5%	-45%
19	Atlas Midco./Alvaria Inc. (transfer+priming)**	3/2024	65%	Varied	Up to -60%
20	PHM Netherlands/Loparex **	4/2024	60%	Varied	Up to -60%
21	Rackspace	4/2024	50%	Varied	Up to -50%
22	Digital Media Solutions Inc. (DMS) **	4/2024	40%	Varied	Up to -40%
23	Eye Care Partners **	4/2024	50%	Varied	Up to -50%
24	City Brewing (transfer+priming)**	4/2024	50%	Varied	Up to -35%
25	Valcour Packaging / MRP Solutions	6/2024	60%	Varied	Up to -60%

Notes: * Indicates the company subsequently filed for bankruptcy. ** Indicates company either subsequently redefaulted and/or is rated 'CCC+' or lower. Excludes cases where all or essentially all lenders participated in the restructuring and realized the same impact.

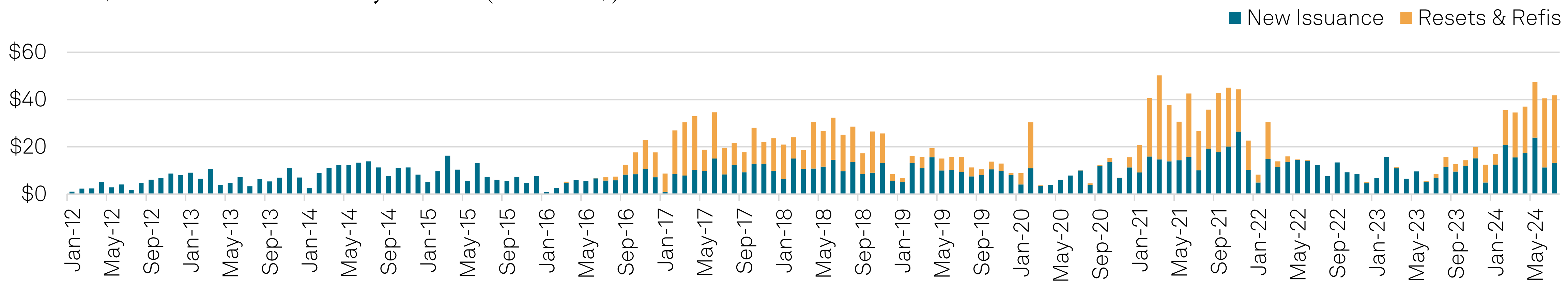
Source: S&P Global Ratings and company reports.

Further Reading: U.S. Leveraged Finance

- Private Markets Monthly, June 2024: How Aggressive Out-Of-Court Loan Restructurings Threaten Institutional First-Lien Recovery Prospects, July 3, 2024
- 2023 Annual U.S. Corporate Default And Rating Transition Study, May 28, 2024
- U.S. Leveraged Finance Q1 2024 Update, May 23, 2024
- Resilient Growth, Resilient Yields, And Resilient Defaults To Bring The U.S. Speculative-Grade Corporate Default Rate To 4.5% By March 2025, May 16, 2024
- Q2 2024 Global Refinancing Update: Window Of Opportunity May Be Closing, April 24, 2024
- Sixth Annual Study Of EBITDA Addbacks, March 27, 2024
- Are Prospects For Global Debt Recoveries Bleak?, March 14, 2024
- High Interest Rates And Massive Debt Burdens Will Pressure U.S. Telecom And Cable Speculative-Grade Ratings In 2024, Feb. 26, 2024
- U.S. Leveraged Finance Q4 2023 Update:, Feb. 23, 2024
- PIK Refinancing: A Little Room To Breathe, Or One Step Closer To The Edge? Feb. 8, 2024
- U.S. Speculative-Grade Media Outlook 2024: A Mixed Story, Feb. 2, 2024
- Default, Transition, and Recovery: U.S. Recovery Study: Loan Recoveries Persist Below Their Trend, Dec. 15, 2023
- North American Debt Recoveries May Trend Down For Longer, Dec. 11, 2023
- Leveraged Finance: U.S. Leveraged Finance Q3 2023 Update: The Lowdown On High Interest Rates, Nov. 9, 2023
- Leveraged Finance: Creative Structuring Helps Trinseo PLC, Comes With Lowered Recovery Prospects And Higher Costs, Sept. 19, 2023
- U.S. Leveraged Finance Q2 2023 Update: Disparities Emerge By Sector, Rating, Company Size, And Debt Cushion, July 27, 2023
- Global Leveraged Finance Handbook, 2022-2023, July 17, 2023
- Credit FAQ: Risks To Leveraged Loans And CLOs Amid An Increasingly Cloudy Macroeconomic Environment, March 29, 2023
- Credit FAQ: Envision Healthcare Corp.'s Two Major Restructurings In 100 Days, Sept. 2, 2022
- A Closer Look At How Uptier Priming Loan Exchanges Leave Excluded Lenders Behind, June 15, 2021

Issuance | New Issuance Slows In June And July, While Resets And Refis Pick Up

U.S. BSL/MM CLO issuance by month (U.S. bil. $)



		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2023 through July	2024 through July	Change
New Issue	BSL CLOs	$50.11	$78.12	$117.78	$93.76	$64.01	$103.58	$112.88	$103.65	$82.21	$164.97	$116.99	$88.71	**$49.73**	**$92.07**	**85.1%**
	MM CLOs	$4.15	$4.31	$6.32	$5.15	$8.28	$14.49	$15.97	$14.82	$11.33	$22.53	$11.98	$27.10	**$13.16**	**$22.52**	**71.1%**
	Total new issue	**$54.26**	**$82.43**	**$124.10**	**$98.91**	**$72.30**	**$118.07**	**$128.86**	**$118.47**	**$93.54**	**$187.49**	**$128.97**	**$115.81**	**$62.89**	**$114.59**	**82.2%**
	MM CLO %	7.6%	5.2%	5.1%	5.2%	11.5%	12.3%	12.4%	12.5%	12.1%	12.0%	9.3%	23.4%	**20.9%**	**19.7%**	
Reset/Refi	BSL CLOs	$0.00	$0.00	$0.00	$0.00	$39.73	$161.53	$151.97	$41.33	$30.39	$237.61	$17.35	$21.55	**$1.69**	**$133.81**	**7,828%**
	MM CLOs	$0.00	$0.00	$0.00	$0.00	$0.00	$5.48	$3.92	$2.46	$1.09	$13.70	$7.42	$3.05	**$0.81**	**$6.13**	**656%**
	Total resets/refis	$0.00	$0.00	$0.00	$0.00	$39.73	$167.01	$155.89	$43.79	$31.48	$251.31	$24.77	$24.60	**$2.50**	**$139.94**	**5,500%**

BSL--Broadly syndicated loan. MM--Middle market. Sources: S&P Global Ratings and Pitchbook LCD.

CLO Metrics | New Issue CLOs Generally Have Cleaner Collateral Than Resets

U.S. BSL CLO issuance average metrics at close

	New issue				Reset			
Quarter closed	'B-' (%)	'CCC' bucket (%)	Nonperforming (%)	SPWARF	'B-' (%)	'CCC' bucket (%)	Nonperforming (%)	SPWARF
Q1 2023	26.26	2.36	0.01	2560	N/A*	N/A*	N/A*	N/A*
Q2 2023	25.46	1.96	0.02	2534	N/A*	N/A*	N/A*	N/A*
Q3 2023	24.19	2.11	0.02	2523	24.44	5.68	0.31	2647
Q4 2023	24.36	2.22	0.04	2544	24.09	5.80	0.59	2630
Q1 2024	23.82	1.61	0.02	2497	25.77	5.89	0.27	2649
Q2 2024**	23.47	2.45	0.02	2516	23.84	5.80	0.41	2636

*Sample size too small. **Some new issue/reset transactions have not issued their first trustee reports yet, based on latest data available to us as of July 1, 2024. SPWARF-S&P Global Ratings' weighted average rating factor.

- We compare new issue CLO and reset CLO portfolios for transactions closing over the past few quarters
- About half of the recently CLO reset transactions are from CLOs originated prior to the arrival of the pandemic in first-quarter 2020
- Some of these CLO resets may have had portfolios cleaned up ahead of the reset, as many of them had less than 6% 'CCC' exposure compared to the average reinvesting U.S. BSL CLO 'CCC' exposure of 6%-7% over the past year

CLO Metrics | BSL CLO Credit Metrics Are Mostly Stable

- The U.S. CLO Insights Index averages CLO portfolio metrics across a large sample of reinvesting S&P Global Ratings-rated U.S. BSL CLOs and provides a one-year lookback at performance.
- The Index includes CLOs that have been reinvesting for the entirety of the past year and is based on a cohort of transactions with at least 11 months of processed trustee reports. Therefore, numbers from prior months can change as new CLOs are added or removed from the one-year lookback period.

As of date	'B-' (%)	'CCC' category (%)	Below 'CCC-' (%)	SPWARF	WARR (%)	Watch negative (%)	Negative outlook (%)	Weighted avg. price of portfolio ($)	Jr. O/C cushion (%)	% of target par	'B-' on negative outlook (%)
7/31/2023*	28.76	6.38	0.58	2754	59.54	0.31	16.83	95.50	4.59	100.12	5.40
8/31/2023*	28.60	6.77	0.51	2753	59.55	0.32	17.39	95.90	4.54	100.09	5.78
9/30/2023*	28.79	6.82	0.47	2752	59.39	0.62	17.55	96.01	4.54	100.08	6.34
10/31/2023*	27.34	7.69	0.52	2767	59.45	0.93	17.95	95.23	4.49	100.04	5.82
11/30/2023*	26.90	7.37	0.41	2740	59.33	1.01	18.34	95.84	4.41	99.97	5.98
12/31/2023*	26.46	7.29	0.52	2729	59.66	0.94	18.07	96.76	4.37	99.94	5.67
1/31/2024*	26.31	6.64	0.94	2733	59.50	0.34	18.17	96.71	4.29	99.85	5.15
2/29/2024*	26.64	6.21	1.04	2733	59.48	0.51	16.81	97.20	4.16	99.77	5.21
3/31/2024*	26.38	7.05	0.78	2732	59.21	0.65	16.33	97.38	4.11	99.72	5.11
4/30/2024*	25.95	6.63	1.04	2741	58.93	0.94	16.13	97.05	4.03	99.66	4.89
5/31/2024*	25.70	6.81	0.52	2703	59.25	0.95	15.80	97.20	3.90	99.56	5.01
6/30/2024**	25.48	6.68	0.42	2686	58.88	1.16	15.29	96.87	3.93	99.54	4.66
7/22/2024***	25.23	7.26	0.38	2695	58.29	0.95	15.58	96.80	3.93	99.54	4.54

*Index metrics based on end-of-month ratings and pricing data and as of month portfolio data available.
**Index metrics based on Jun. 30, 2024, ratings and pricing data and latest portfolio data available to us.
***Index metrics based on Jul. 22, 2024, ratings and pricing data and latest portfolio data available to us.
BSL--Broadly syndicated loan. O/C--Overcollateralization. SPWARF--S&P Global Ratings' weighted average rating factor. WARR--Weighted averaged recover rate. Source: S&P Global Ratings.

CLO Metrics | Metrics For CLOs Originated Before And After 2020 Are Converging

CLO issued in first-quarter 2020 and before have seen more collateral stress and generally have weaker collateral metrics than CLOs issued in second-quarter 2020 and later, after the arrival of COVID-19 and the associated economic downturn. But given the stress on leveraged borrowers from higher rates in 2022 and 2023 and corporate rating downgrades, metrics for the pre- and post-pandemic CLOs have been converging.

Pre-pandemic BSL CLOs (Q1 2020 and earlier)

As of date	'B-' (%)	'CCC' category (%)	Below 'CCC-' (%)	SPWARF	WARR (%)	Jr. O/C cushion (%)	% of target par
7/31/2023*	27.48	6.93	0.92	2773	59.72	3.81	99.83
8/31/2023*	27.39	7.35	0.79	2770	59.75	3.78	99.78
9/30/2023*	27.41	7.38	0.74	2768	59.61	3.80	99.76
10/31/2023*	25.99	8.11	0.76	2777	59.72	3.74	99.71
11/30/2023*	25.48	7.78	0.63	2750	59.62	3.60	99.60
12/31/2023*	25.02	7.72	0.75	2740	59.95	3.55	99.54
1/31/2024*	24.81	7.09	1.20	2747	59.80	3.44	99.42
2/29/2024*	25.26	6.58	1.26	2742	59.82	3.35	99.30
3/31/2024*	25.12	7.31	0.99	2738	59.61	3.29	99.22
4/30/2024*	24.77	7.01	1.10	2740	59.29	3.22	99.15
5/31/2024*	24.66	7.14	0.61	2704	59.63	3.12	99.05
6/30/2024**	24.36	7.01	0.49	2684	59.34	3.15	99.05
7/22/2024***	24.17	7.52	0.44	2691	58.79	3.15	99.05

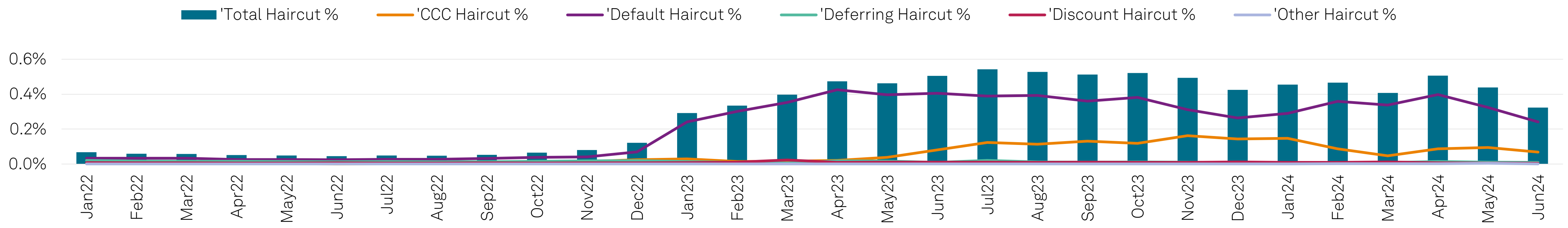
Post-pandemic BSL CLOs (Q2 2020 and later)

As of date	'B-' (%)	'CCC' category (%)	Below 'CCC-' (%)	SPWARF	WARR (%)	Jr. O/C cushion (%)	% of target par
7/31/2023*	29.18	6.20	0.47	2748	59.48	4.84	100.21
8/31/2023*	28.99	6.58	0.41	2748	59.49	4.79	100.20
9/30/2023*	29.24	6.64	0.39	2747	59.32	4.78	100.19
10/31/2023*	27.77	7.55	0.45	2763	59.36	4.73	100.14
11/30/2023*	27.36	7.24	0.33	2736	59.23	4.67	100.09
12/31/2023*	26.92	7.15	0.44	2725	59.56	4.64	100.07
1/31/2024*	26.80	6.49	0.86	2729	59.40	4.57	100.00
2/29/2024*	27.09	6.10	0.96	2730	59.37	4.42	99.93
3/31/2024*	26.79	6.97	0.71	2730	59.08	4.38	99.89
4/30/2024*	26.33	6.50	1.02	2742	58.81	4.29	99.82
5/31/2024*	26.04	6.70	0.49	2703	59.13	4.15	99.72
6/30/2024**	25.84	6.57	0.39	2686	58.72	4.18	99.70
7/22/2024***	25.57	7.18	0.36	2697	58.13	4.18	99.70

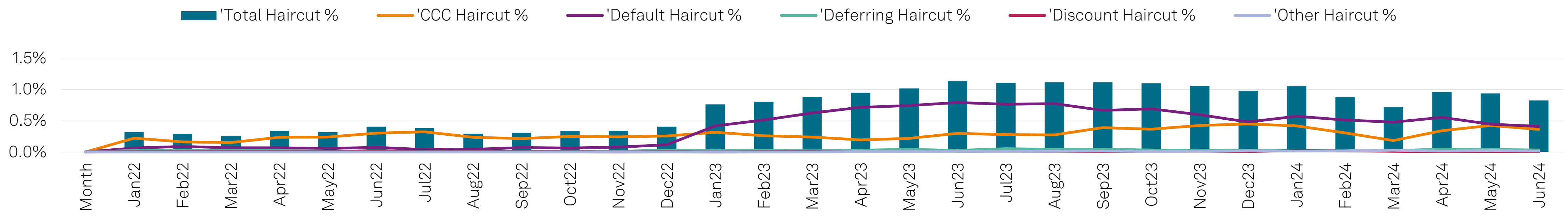
*Index metrics based on end-of-month ratings and pricing data and as of month portfolio data available.
**Index metrics based on Jun. 30, 2024, ratings and pricing data and latest portfolio data available to us.
***Index metrics based on Jul. 22, 2024, ratings and pricing data and latest portfolio data available to us.
BSL--Broadly syndicated loan. O/C--Overcollateralization. SPWARF--S&P Global Ratings' weighted average rating factor. WARR--Weighted averaged recover rate. Source: S&P Global Ratings.

CLO Metrics | O/C Haircuts Are Declining Because Of Reduction In Defaulted Asset Haircuts

Average O/C metrics for reinvesting U.S. BSL CLOs



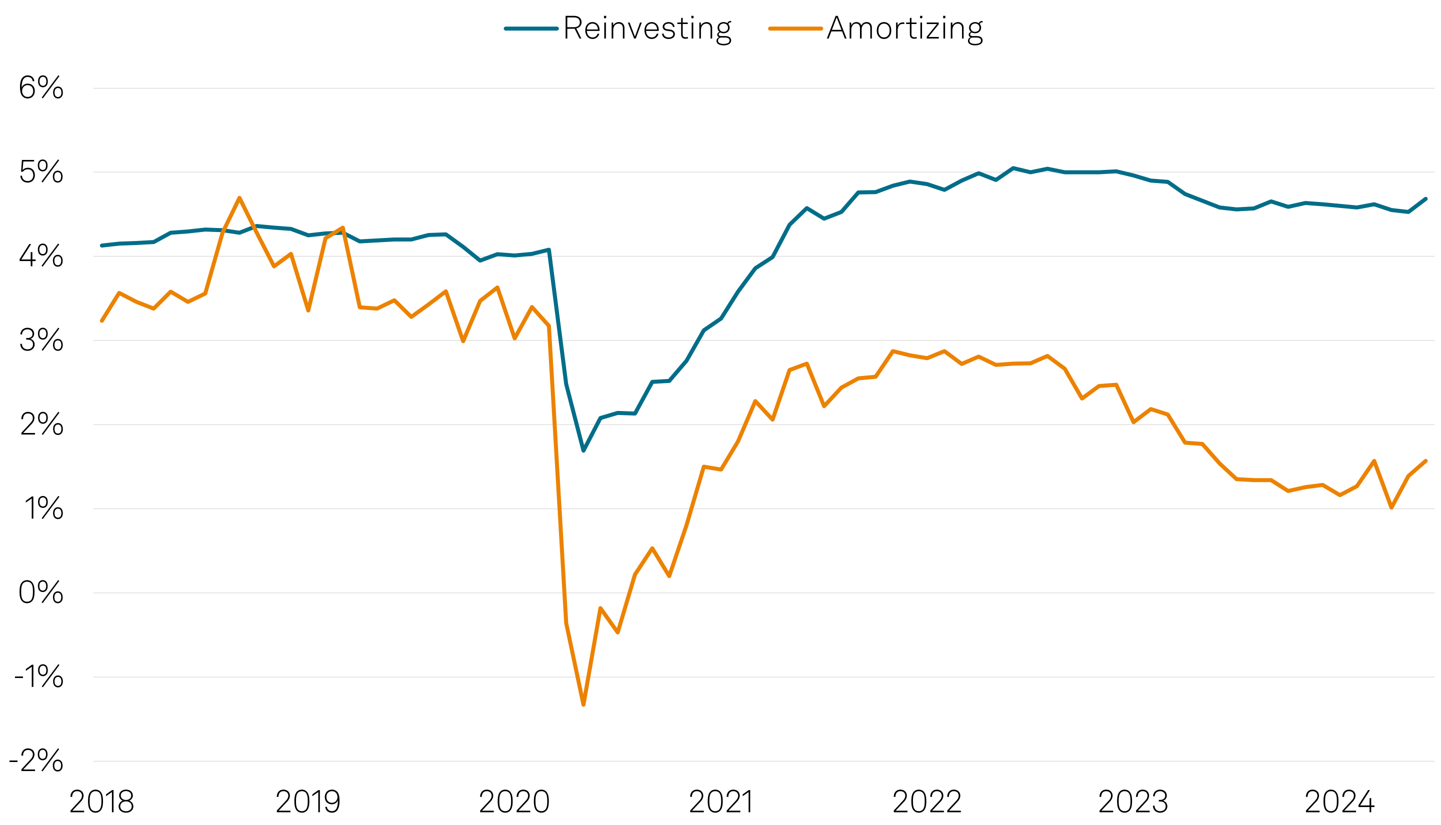
Average O/C metrics for amortizing U.S. BSL CLOs



O/C--Overcollateralization. BSL--Broadly syndicated loan. CLO--Collateralized loan obligation. Source: S&P Global Ratings.

CLO Metrics | Amortizing Transactions More At Risk Of Failing Jr. O/C Test

US BSL CLO - median 'BB' O/C Cushion

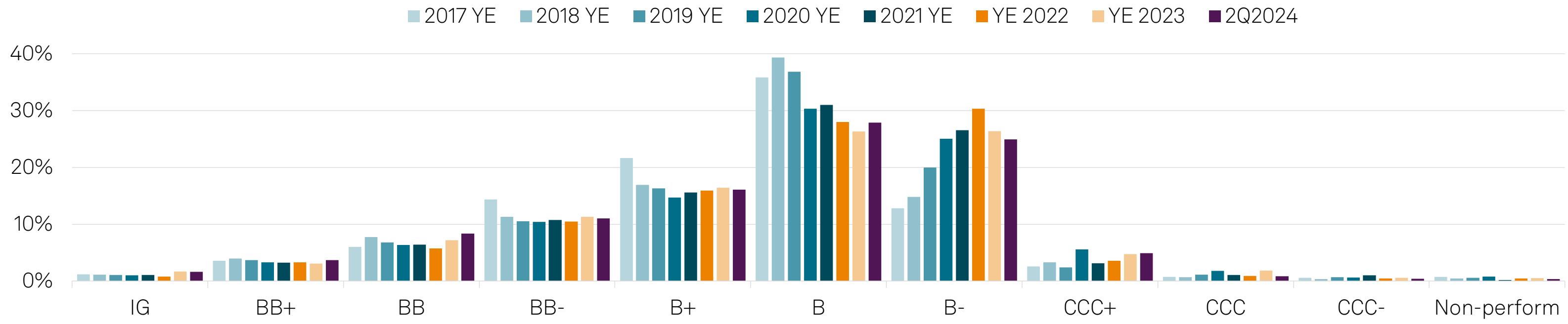


- Due to par loss and O/C numerator haircuts from default and excess 'CCC' exposures, 'BB' O/C cushions have declined since the start of 2023, across both amortizing and reinvesting transactions
- As of the end of first-quarter 2024, median 'BB' O/C cushions for reinvesting U.S. BSL CLOs remain well over 4% (pre-pandemic reinvesting transactions have notably less cushion).
- By end of second-quarter 2024, about 13% of amortizing transactions are failing their 'BB' O/C test, down from about 15% from the prior quarter.
- Given recent downgrades on a handful of widely held issuers, we expect junior O/C test volatility, particularly across the amortizing transactions.

S&P Global Ratings

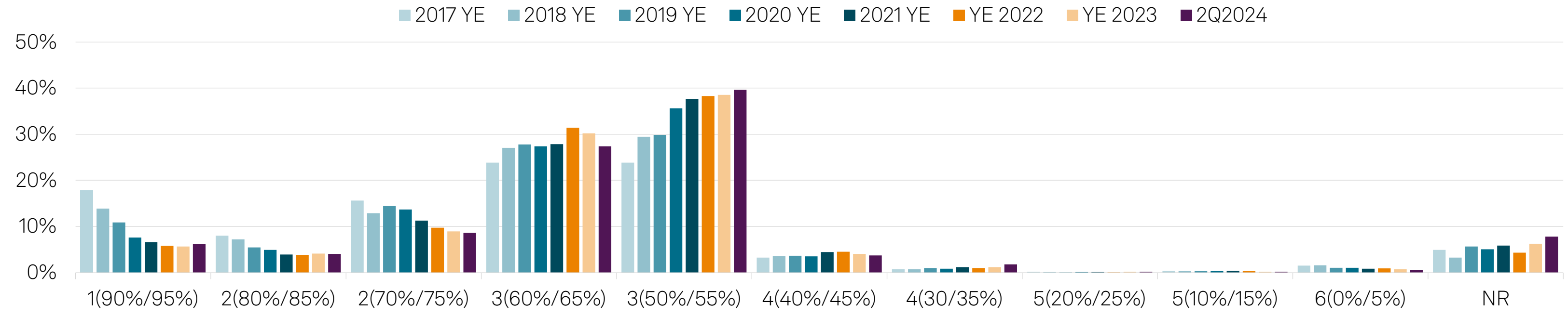
‘B-’ Assets | Loans From ‘B’ Obligors Now Outweigh ‘B-’ Assets

Rating distribution for assets in reinvesting U.S. BSL CLOs (2017-Q2 2024)*



*Latest data as of Aug. 1, 2023. YE--Year end. Source: S&P Global Ratings.

Recovery ratings distribution for assets in reinvesting U.S. BSL CLOs (2017–Q2 2024)*

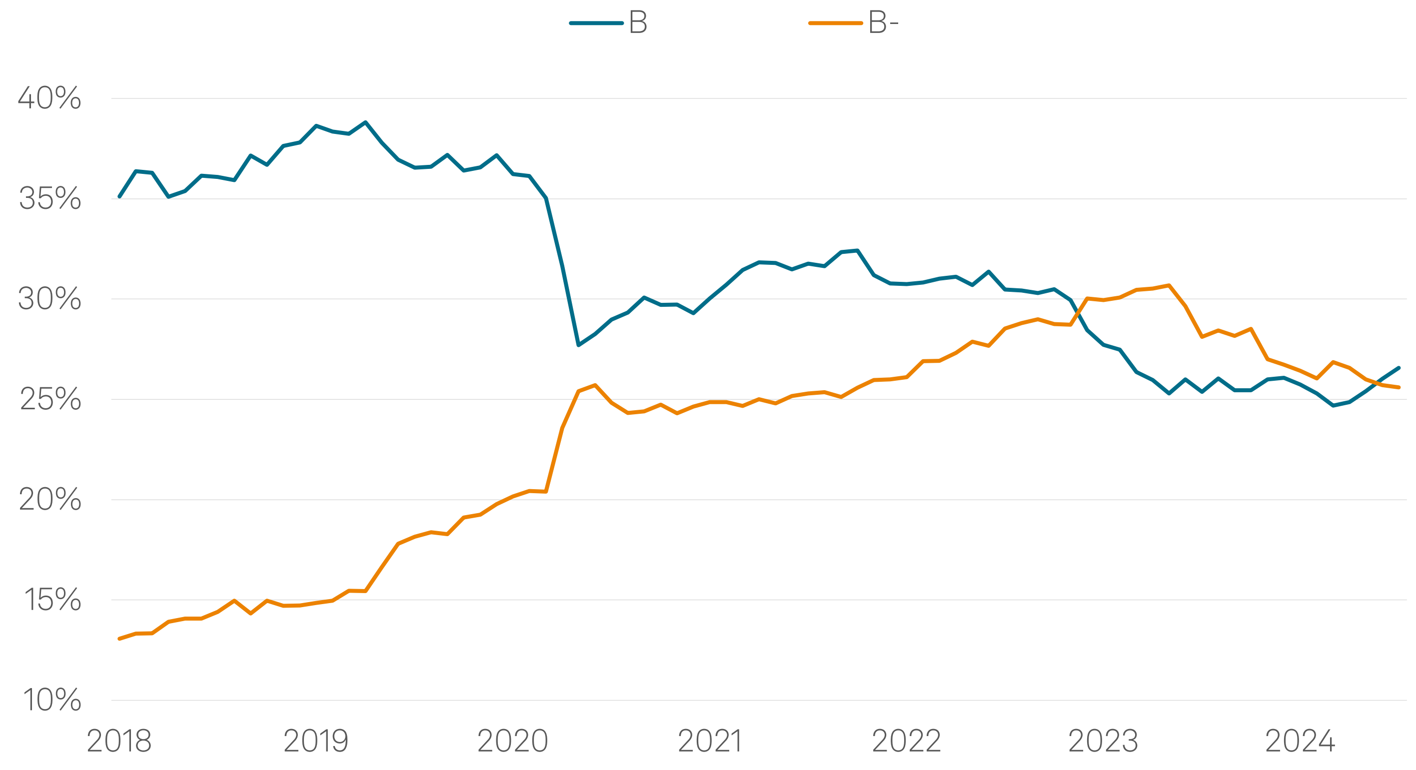


*Latest data as of April 1, 2024. NR--Not rated. YE--Year end. BSL--Broadly syndicated loan. CLO--Collateralized loan obligation. Source: S&P Global Ratings.

- **Exposure to ‘B-’ rated issuers has declined below 25%, a level not seen since mid-2021.** Historically, companies rated ‘B-’ are more likely to see a downgrade (by definition, into the ‘CCC’ range or lower) or default than loans from companies rated ‘B’ or higher, even in benign economic periods.
- Over the past several years, there has also been a significant increase in loans with a recovery rating of ‘3’. In particular, **point estimates of either 50% or 55% (i.e., the 3L category in the chart) make up over 39% of total CLO asset par**, compared with about 30% prior to the COVID-19 pandemic.

‘B-’ Assets | Exposure To ‘B-’ Assets Trends Downward; ’B’ Back On Top

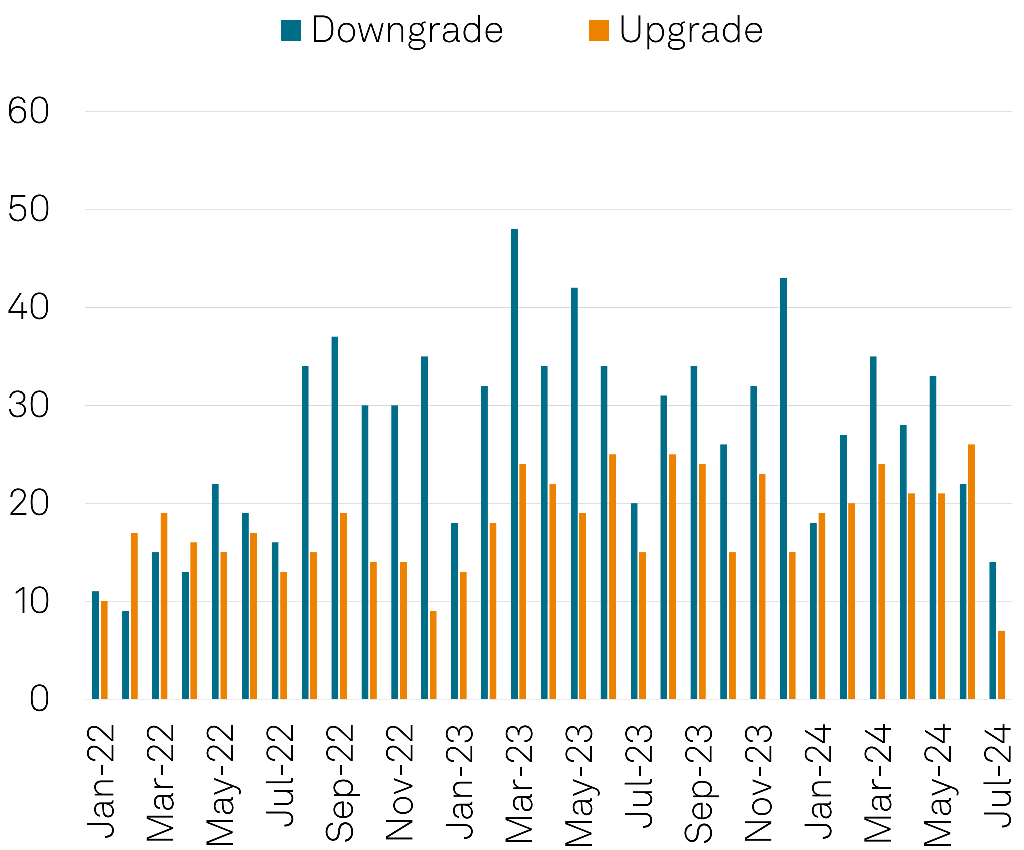
'B’ and 'B-’ exposures across rated U.S. BSL CLO portfolio exposures



BSL--Broadly syndicated loan. CLO--Collateralized loan obligation. Source: S&P Global Ratings.

- After breaching 30% in mid-2023, ‘B-’ exposures have gradually declined over the past five quarters to a level not seen since October 2021 .
- ‘B’ has now reassumed the title of the largest rating cohort across U.S. BSL CLO portfolio exposures.
- Across reinvesting U.S. BSL CLOs over the past year, about 6.1% of the ‘B-’ exposures from July 2023 exposures have experienced an upgrade to ‘B’ or above, while 10.6% are no longer held. 72% of the ‘B-’ exposures from July 2023 continue to be rated ‘B-’, while the remaining 11% have since been downgraded to ‘CCC+’ or below.

Asset Ratings | U.S. CLO Obligor Downgrades (2022-July 26, 2024)



*Through July 26, 2024. BSL--Broadly syndicated loan. CLO--Collateralized loan obligation. UG--Upgrade. DG--Downgrade. Source: S&P Global Ratings.

Downgrades on U.S. BSL CLO obligor ratings (2022–2024 Q2)

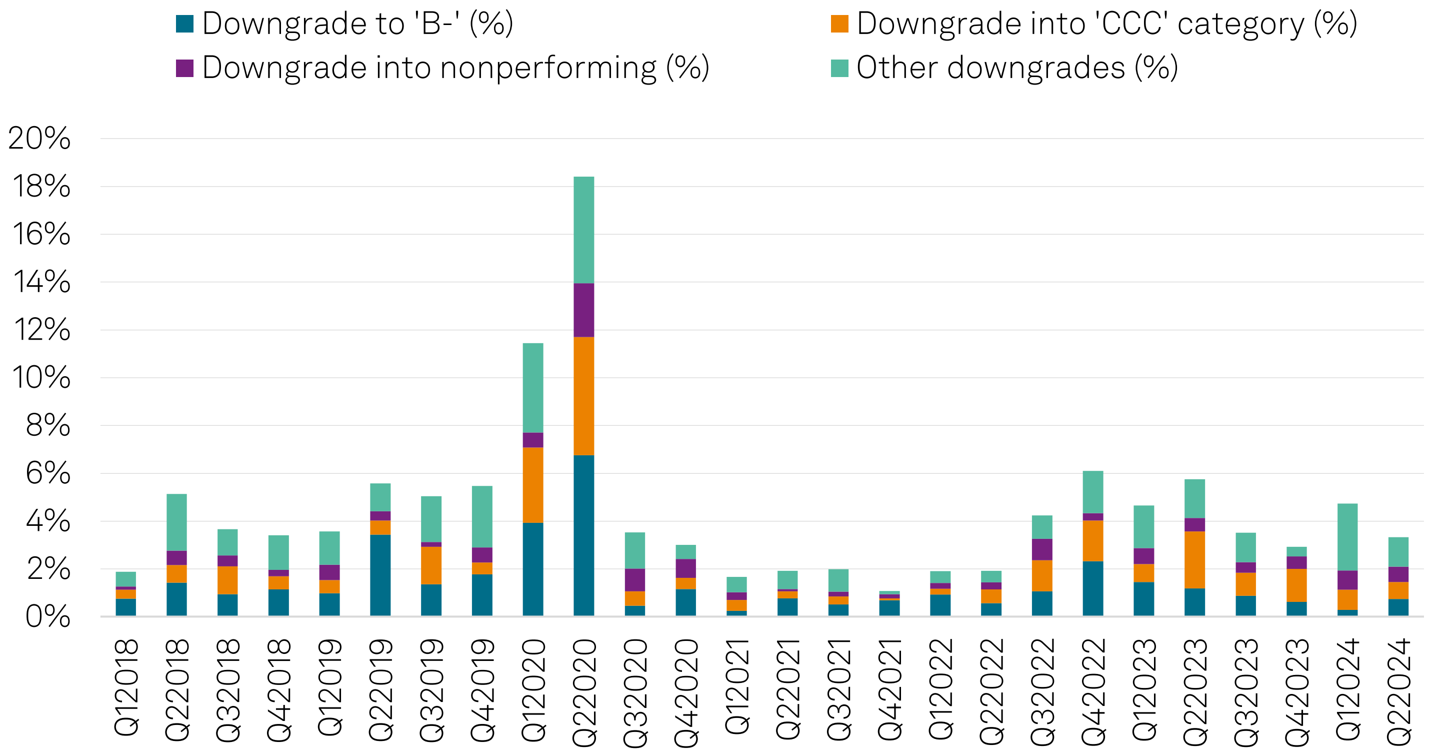
	Downgrades						Upgrades				
Qtr	DG:UG Ratio	Total DG	other DG	DG to 'B-'	DG into 'CCC' category	DG into non-performing category	Total UG	UG to 'B' or above	UG to 'B-'	UG within 'CCC' category	UG into 'CCC' category (from non-perform)
2022Q1	0.8	35	16	9	8	2	46	37	6	1	2
2022Q2	1.1	54	16	16	12	10	48	32	13	1	2
2022Q3	1.9	87	27	31	22	7	47	33	9	2	3
2022Q4	2.6	95	33	22	30	10	37	28	4		5
2023Q1	1.8	98	39	21	18	20	55	37	2	1	15
2023Q2	1.7	110	32	17	36	25	66	49	3		14
2023Q3	1.3	85	42	13	15	15	64	42	9	2	11
2023Q4	1.9	101	36	17	26	22	53	38	2		13
2024Q1	1.3	80	38	12	9	21	63	45	6	2	10
2024Q2	1.2	83	31	13	20	19	68	42	10	2	14
Grand total	**1.5**	**828**	**310**	**171**	**196**	**151**	**547**	**383**	**64**	**11**	**89**

*Through July 26, 2024. BSL--Broadly syndicated loan. CLO--Collateralized loan obligation. Source: S&P Global Ratings.

S&P Global
Ratings

Asset Ratings | BSL CLO Exposure To Corporate Rating Downgrades Moderates In Second-Quarter 2024

Average CLO assets downgraded (% total par) by quarter



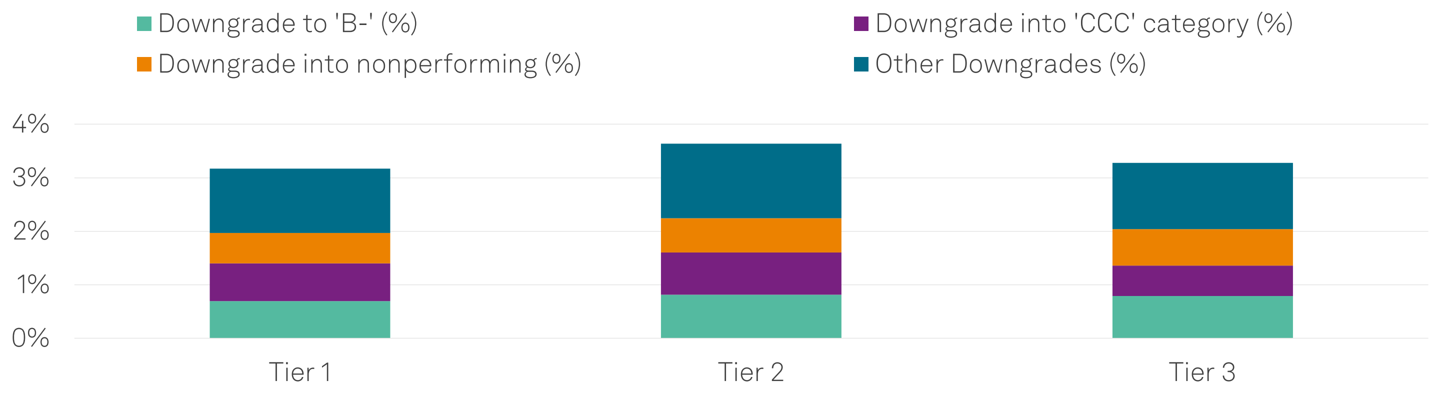
CLO--Collateralized loan obligation. Source: S&P Global Ratings.

- After several first-quarter 2024 downgrades across several widely held issuers (many of which were downgrades to 'B' or above), the proportion of U.S. BSL CLO exposures that experienced a downgrade in second-quarter 2024 has declined.
- The chart on the left shows BSL CLO collateral (by par) that has been downgraded during each quarter since 2018.

Asset Ratings | Exposure To Second-Quarter Rating Actions By Manager Cohort (By Post-Pandemic Issuance Count)

Average CLO assets downgraded

(% total par, by CLO manager group for second-quarter 2024)



Manager at close of deal	Upgrades (%)	Downgrades (%)	Downgrade to 'B-' (%)	Downgrade into 'CCC' category (%)	Downgrade into nonperforming (%)	Other Downgrades (%)	Top 250
Group 1	4.24	3.17	0.70	0.71	0.57	1.20	52.28
Group 2	4.33	3.64	0.82	0.79	0.64	1.40	49.99
Group 3	4.55	3.28	0.79	0.57	0.68	1.24	49.33
Average Total	4.38	3.33	0.74	0.71	0.64	1.24	52.61

CLO--Collateralized loan obligation. Source: S&P Global Ratings.

- U.S. BSL CLO exposures to downgrades in first-quarter 2024 decreased to 3.33% from 4.75% the quarter prior.
- We bucketed our rated U.S. BSL CLO transaction data into three cohorts based on the dollar amount of U.S. BSL CLOs the manager has closed since the start of the pandemic, as detailed in the first-quarter 2024 CLO Global Databank maintained by Pitchbook:
  - Group 1: more than $2.9 billion;
  - Group 2: between $1.2 billion and $2.9 billion; and
  - Group 3: less than $1.2 billion.
- Group 1 CLO managers tend to have higher exposure to the widely held names (top 250). These larger issuers tend to have more rating stability during periods of stress.

Asset Ratings | Exposure To Second-Quarter Rating Actions By Manager Cohort (By Post-Pandemic Issuance Count)

- U.S. BSL CLO exposures to downgrades in first-quarter 2024 decreased to 3.33% from 4.75% the quarter prior.
- Larger CLO managers tend to have higher exposure to the widely held names (top 250). These larger issuers tend to have more rating stability during periods of stress.

Average CLO assets downgraded and upgraded

(% total par, by CLO manager group for second-quarter 2024)

Manager at close of deal	No. of S&P-rated deals in sample	Upgrades (%)	Downgrades (%)	Downgrade to 'B-' (%)	Downgrade into 'CCC' category (%)	Downgrade into nonperforming (%)	Other Downgrades (%)	Top 250
Blackstone / GSO CLO Management LLC	27	4.32%	1.99%	0.26%	0.13%	0.56%	1.04%	61.72%
Oak Hill Advisors LP	24	4.50%	2.05%	1.16%	0.63%	0.00%	0.26%	54.34%
Elmwood Asset Management LLC	21	3.64%	3.80%	0.79%	0.00%	0.27%	2.74%	51.61%
PGIM Inc.	20	5.63%	5.43%	1.07%	1.26%	1.55%	1.55%	53.62%
Ares CLO Management LLC	20	3.94%	2.73%	0.75%	0.69%	0.36%	0.93%	55.02%
Deerfield Capital Management LLC	16	4.03%	3.11%	0.87%	0.78%	0.75%	0.72%	56.89%
Benefit Street Partners LLC	15	4.58%	2.22%	0.45%	0.65%	0.10%	1.01%	57.38%
Redding Ridge Asset Management LLC	14	4.97%	3.62%	0.50%	1.24%	0.04%	1.84%	65.19%
Credit Suisse Alternative Capital, LLC	14	3.17%	3.52%	1.13%	0.18%	1.53%	0.69%	50.28%
Carlyle Investment Management LLC	13	3.57%	3.28%	1.06%	0.43%	0.98%	0.82%	55.93%
Onex Credit Partners LLC	13	3.72%	3.10%	0.77%	0.02%	0.30%	2.01%	54.17%
Trinitas Capital Management, LLC	12	2.90%	2.29%	0.64%	0.83%	0.57%	0.25%	53.58%
Octagon Credit Investors, LLC	12	5.17%	5.49%	1.26%	1.80%	1.04%	1.39%	56.95%
BlackRock Financial Management Inc.	12	5.70%	3.37%	0.94%	1.02%	1.03%	0.38%	62.20%
Neuberger Berman Investment Advisers LLC	11	6.12%	3.14%	0.72%	0.54%	0.55%	1.34%	57.65%

CLO--Collateralized loan obligation. Source: S&P Global Ratings.

Asset Ratings | Exposure To Second-Quarter Rating Actions By Manager Cohort (By Post-Pandemic Issuance Count) Continued

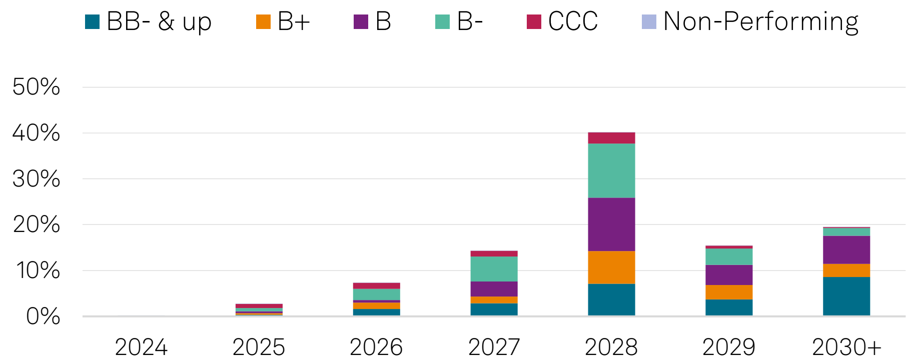
Manager at close of deal	No. of S&P-rated deals in sample	Upgrades (%)	Downgrades (%)	Downgrade to 'B-' (%)	Downgrade into 'CCC' category (%)	Downgrade into nonperforming (%)	Other Downgrades (%)	Top 250
Ballyrock Investment Advisors LLC	11	2.41%	2.64%	0.40%	0.79%	0.00%	1.45%	53.06%
Oaktree Capital Management L.P.	11	4.20%	4.35%	0.40%	1.05%	0.91%	1.99%	52.33%
Symphony Asset Management, LLC	10	5.73%	4.57%	0.72%	0.72%	1.16%	1.97%	57.47%
TCW Asset Management Co. LLC	10	4.61%	4.50%	0.77%	1.27%	0.45%	2.00%	46.23%
Sound Point Capital Management LP	10	5.16%	3.76%	0.67%	1.11%	0.86%	1.11%	55.29%
Allstate Investment Management Co.	9	4.35%	1.58%	0.05%	0.34%	0.78%	0.41%	61.20%
Bain Capital Credit LP	9	4.16%	2.14%	0.55%	0.44%	0.18%	0.97%	43.69%
Fortress Investment Group LLC	9	2.71%	3.48%	1.02%	0.11%	2.36%	0.00%	28.89%
First Eagle Alternative Credit LLC	8	4.91%	5.03%	1.30%	0.61%	1.70%	1.42%	58.53%
GoldenTree Loan Management LP	8	5.96%	2.52%	0.01%	0.81%	0.16%	1.54%	51.33%
Sixth Street CLO Management, LLC	8	4.67%	2.19%	0.08%	0.28%	0.94%	0.88%	57.27%
AEGON USA Investment Management LLC	8	5.63%	4.03%	0.38%	1.53%	0.72%	1.41%	52.56%
KKR Financial Advisors II LLC	8	5.04%	4.73%	0.86%	2.22%	0.29%	1.36%	43.72%
CVC Credit Partners U.S. CLO Management LLC	8	6.26%	4.90%	0.35%	1.19%	1.62%	1.74%	54.62%
Generate Advisors, LLC	8	2.62%	4.19%	1.11%	0.53%	0.25%	2.31%	36.49%

CLO--Collateralized loan obligation. Source: S&P Global Ratings.

Maturity Wall | Loan Maturity Wall Within BSL CLO Collateral Pools

- Refinancing activity have picked up across the corporate loan market in early 2024.
- 2030 and later maturities have increased to over 14% from just under 10% as of the start of 2024.
- Some loan issuers have done amend-to-extends, and others have refinanced into the high-yield bond and private credit markets.

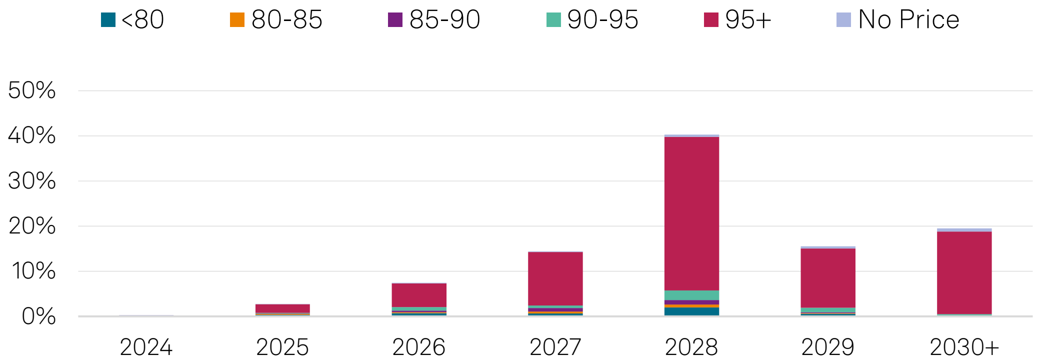
Maturity wall by obligor rating (second-quarter 2024)



BB- & up	2.2	12.2	22.0	19.7	17.7	24.0	44.2
B+	0.0	12.3	18.2	10.5	17.7	19.9	14.5
B	12.3	15.4	7.6	22.8	29.0	28.5	31.7
B-	7.8	25.8	33.1	37.7	29.3	22.9	8.6
CCC	45.3	34.0	18.0	8.8	6.0	4.3	1.1
Non-performing	32.4	0.3	1.0	0.5	0.3	0.4	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: S&P Global Ratings and LoanX.

Maturity wall by loan price (second-quarter 2024)



95+	33.9	70.2	70.4	82.2	84.6	84.3	94.1
90-95	15.3	6.0	10.9	3.9	5.3	6.4	1.6
85-90	4.3	3.2	4.2	5.5	2.4	1.2	0.2
80-85	7.6	8.1	3.1	3.0	1.6	1.3	0.0
<80	32.4	11.7	9.6	4.5	5.0	3.5	0.6
No price	6.5	0.9	1.8	1.0	1.2	3.4	3.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: S&P Global Ratings and LoanX.

Purchases And Sales | Managers Continue To ‘De-Risk’ CLO Portfolios

	Purchases			Sales		
Quarter	WARF	Avg. price	Avg. target par %	WARF	Avg. price	Avg target par %
Q1 2022	2802	98.96	10.48%	2660	99.00	5.99%
Q2 2022	2693	96.69	8.37%	2788	96.57	5.98%
Q3 2022	2699	94.14	6.17%	2847	93.87	4.37%
Q4 2022	2509	95.20	6.85%	2892	93.27	4.03%
Q1 2023	2580	97.08	8.07%	3114	93.07	4.64%
Q2 2023	2493	96.97	7.78%	3031	93.16	5.04%
Q3 2023	2459	97.52	7.09%	3000	95.08	4.44%
Q4 2023	2311	98.11	8.79%	2989	95.01	4.71%
Q1 2024	2450	98.84	8.45%	3042	94.56	4.71%
Q2 2024	2513	98.82	9.78%	2901	96.24	5.66%

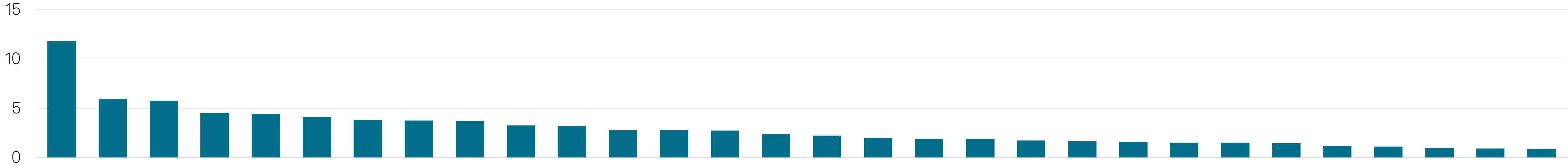
BSL CLO asset trades by company rating (second-quarter 2024)

Rating category	Purchase (% of trades)	Avg purchase price	Sales (% of trades)	Avg sale price
Investment grade	1.00%	95.11	1.01%	98.62
‘BB’ category	27.39%	99.38	20.79%	99.41
‘B+’	12.91%	99.11	15.02%	99.02
‘B’	33.77%	99.26	23.97%	99.15
‘B-’	22.20%	98.25	24.72%	97.20
‘CCC’ category	2.72%	92.25	13.55%	85.19
Nonperforming	0.00%	98.15	0.94%	39.03

WARF--Weighted average rating factor. Source: S&P Global Ratings.

- Since the start of 2023, the credit quality of the assets purchased tend to be higher (lower S&P Global Ratings’ weighted average rating factor [SPWARF]) than the credit quality of the assets sold, evidence of CLO manager efforts at de-risking.
- During the second half of 2023, average prices of both purchase and sales have increased slightly.
- The average prices of the purchases are higher than the prices of the sales, resulting in slight par loss across several transactions.
- The proportion of sales of ‘B-’, ‘CCC’, and nonperforming assets are greater than the proportion of purchases from these rating categories, further evidence of managers’ attempts at de-risking.

Industry Categories | Credit Metrics Across Top 30 GIC Industry Exposures



	Software	Healthcare providers and services	Hotels, restaurants and leisure	Capital markets	Media	IT services	Machinery	Chemicals	Diversified telecommunication services	Professional services
Assets (%)	11.79	5.94	5.76	4.51	4.41	4.11	3.83	3.77	3.74	3.25
SPWAR F(i)	3119	3124	2046	2259	2939	2439	2683	2887	3084	2665
WAP(i)	96.27	95.23	99.5	99.09	91.14	98.35	99.08	96.84	89.04	98.75
WARR (%)(i)	58.56	54.10	69.64	52.51	70.22	58.28	54.81	62.24	62.28	58.65
WAS (%)(i)	3.7	3.9	3.1	3.4	3.7	3.6	3.7	3.9	3.2	3.6
Neg. Outlook (%)	9.54	10.85	1.47	12.66	21.47	15.6	9.79	31.96	29.13	23.34
Credit Watch neg. (%)	0.84	1	0.92	0	5.46	3.1	0	0	1.64	1.83

	Commercial services and supplies	Trading companies and distributors	Specialty retail	Insurance	Containers and packaging	Health care technology	Aerospace and defense	Building products	Entertainment	Diversified consumer services
Assets (%)	3.18	2.75	2.74	2.73	2.39	2.24	1.98	1.9	1.9	1.73
SPWAR F(i)	2811	2466	2535	2776	3014	3406	2532	2659	2340	2861
WAP(i)	97	98.86	97.01	100.02	98.02	97.65	97.78	98.63	97.76	97.22
WARR (%)(i)	63.02	52.06	58.29	52.61	56.43	61.18	56.62	56.66	64.73	53.26
WAS (%)(i)	3.8	3.3	3.6	3.4	3.7	3.8	3.5	3.6	3.4	3.9
Neg. Outlook (%)	16.17	5.06	27.19		13.75	38.53	14.19	5.53	6.1	5.56
Credit Watch neg. (%)	0	0	0		0	2.14	0	0	22.98	0

	Construction and engineering	Life sciences tools and services	Automobile components	Food products	Oil, gas and consumable fuels	Ground transportation	Pharmaceuticals	Electronic equipment, instruments and components	Household durables	Passenger airlines
Assets (%)	1.64	1.57	1.51	1.5	1.44	1.19	1.13	1.02	0.92	0.9
SPWAR F(i)	2650	2783	2623	2847	1968	1994	2124	2851	2792	1862
WAP(i)	99.56	99.48	98.58	96.99	100.04	97.37	98.97	95.57	96.24	100.43
WARR (%)(i)	55.01	55.56	59.33	56.35	64.87	63.27	60.01	57.04	56.70	85.21
WAS (%)(i)	3.9	3.4	4	3.5	3.5	2.9	3.5	3.8	3.5	3.4
Neg. Outlook (%)	2.68	16.73	18.36	19.26	22.81	36.16	2.54	42.63	17.55	
Credit Watch neg. (%)	0	0	0	2.81	0	0	3.9	0	0	

CLO Research | EBITDA, Revenue, And Interest Coverage By CLO Manager Size

- Wide range in leverage, interest coverage and company sizes across the U.S. BSL CLO portfolios, representing the different areas of focus across the CLO managers.
- There are a handful of group 1 managers that have larger exposures to smaller issuers leading to lower average median revenue values (group 1).
- The average weighted average revenue of the group 1 managers are higher, indicating these larger managers also have notable exposure to very large companies (top 250).

Average of median and weighted average portfolio values

	Exposure matched to corporate metrics	Median debt to EBITDA	Median EBITDA interest coverage	Median revenues (mil. $)	Weighted average revenues (mil. $)	Median EBITDA (mil. $)	Weighted average EBITDA (mil. $)
Group 1	79.40%	5.98	2.51	2,009	4,660	368.81	781.68
Group 2	80.19%	5.86	2.59	2,167	4,418	406.59	750.81
Group 3	79.38%	5.91	2.57	2,187	4,616	399.49	803.36
Overall	79.56%	5.95	2.53	2,061	4,604	380.00	777.27

Note: Median and weighted average corporate metrics based off latest CLO portfolios available to us as of Jan. 1, 2024, which are matched to latest corporate financial data available to us; 80% match across the CLO portfolios.
Source: S&P Global Ratings.

	Proportion of manager exposures matched to corporate metrics	Median debt to EBITDA	Median EBITDA interest coverage	Median revenues (mil. $)	Weighted average revenues (mil. $)	Median EBITDA (mil. $)	Weighted average EBITDA (mil. $)
Blackstone	80.13%	6.06	2.38	2,253	5,571	370.62	1,106
Credit Suisse	78.22%	5.97	2.66	1,632	3,568	263.60	648
Ares	80.52%	6.03	2.53	2,073	5,090	340.53	1,050
Carlyle	74.69%	5.73	2.61	2,210	5,210	364.78	987
Neuberger Berman	75.49%	5.77	2.75	2,364	5,231	370.62	969
Octagon	79.67%	5.74	2.53	2,413	5,487	362.96	1,163
PGIM	80.16%	5.08	2.91	2,432	5,873	389.30	1,111
Oak Hill	84.83%	5.66	2.85	1,694	3,256	285.90	742
Sound Point	80.19%	5.91	2.59	2,201	4,667	328.16	934
CIFC	77.21%	6.11	2.42	2,179	4,594	324.78	939
Voya	78.62%	5.74	2.74	2,144	4,682	340.53	923
Benefit Street	74.77%	5.66	2.67	2,256	5,049	354.19	1,020
Onex	81.36%	5.85	2.60	2,301	4,572	366.19	920
Elmwood	81.80%	5.17	2.87	2,030	3,774	292.42	757
Bain	80.08%	5.83	2.62	1,661	3,463	274.16	736
LCM	84.11%	5.96	2.48	1,920	4,688	281.99	924
CVC	77.56%	5.62	2.81	2,525	5,090	412.21	998
HPS	74.98%	6.10	2.34	2,226	5,119	342.86	957
BlackRock	84.88%	5.74	2.77	2,370	4,944	412.97	928
Crescent	77.56%	6.22	2.42	2,782	4,959	422.30	1,036
GoldenTree	78.92%	5.40	2.83	2,591	5,005	435.41	1,019
Oaktree	75.58%	5.47	2.80	2,481	5,395	397.45	953
Aegon	84.26%	5.78	2.75	2,740	4,567	474.00	947
Fortress	72.01%	6.40	2.22	1,214	3,818	144.06	541
Barings	81.28%	5.60	2.77	2,421	4,822	351.00	1,001
KKR	86.70%	5.90	2.41	2,028	4,475	274.16	833
Marathon	77.23%	5.56	2.65	2,107	3,778	287.42	755
Palmer Square	72.71%	5.60	2.79	2,066	4,249	363.44	858
Symphony	81.13%	6.09	2.61	2,417	4,752	373.03	916

CLO Research | The Value Of Active Management (2022 Through Third-Quarter 2023)

- Turnover of assets in BSL CLO collateral pools in 2022 was just under 50% during the seven quarters between first-quarter 2022 and third-quarter 2023, meaning almost half of the loans that had been in CLO collateral pools at the start of 2022 were no longer in the collateral pools by the end of third-quarter 2023.
- To examine the impact that portfolio turnover had on CLO credit metrics, we looked at the actual change in BSL CLO credit metrics seven quarters after the start of 2022, including portfolio turnover **(table 1)**; metrics from the same BSL CLO collateral pools while assuming they were static CLOs with no trading or asset turnover **(table 2)**; and the difference between the actual CLO portfolios and hypothetical static CLO portfolios **(table 3)**.
- On average, the trades increased the proportion of loans from 'B-' companies, because, when a company saw its rating lowered to the 'CCC' range, a manager would often sell loans from that company and purchase loans from a 'B-' rated company.
- On average, all other CLO credit metrics benefitted from the trading activity: exposure to 'CCC' assets and defaulted assets was lowered, the SPWARF was lower (indicating higher average portfolio ratings), and the junior O/C test cushion was greater.

Table 1 - Actual BSL CLO Performance (Q1 2022-Q3 2023)

Metric	1/1/22	9/30/23	Change
Portfolio turnover (%)	N/A	48.13	48.13
Exposure to 'B-' assets (%)	26.58	28.44	1.86
Exposure to 'CCC' assets (%)	4.50	7.32	2.82
Exposure to defaulted assets (%)	0.13	0.60	0.47
SPWARF	2692	2769	76
Portfolio % of target par (%)	99.91	99.82	-0.09
Junior O/C test cushion (%)	4.72	3.93	-0.80

Table 2 - Hypothetical Static Pool BSL CLO Performance (Q1 2022-Q3 2023)

Metric	1/1/22	9/30/23	Change
Portfolio turnover (%)	N/A	0.00	0.00
Exposure to 'B-' assets (%)	26.58	27.26	0.68
Exposure to 'CCC' assets (%)	4.50	10.05	5.56
Exposure to defaulted assets (%)	0.13	1.28	1.15
SPWARF	2692	2888	195
Portfolio % of target par	99.91	99.91	0.00
Junior O/C test cushion (%)	4.72	3.02	-1.70

Table 3 - Manager Impact On CLO Metrics

Metric	Year-end results: managed vs. hypothetical
Portfolio turnover	48.13% higher
Exposure to 'B-' assets	1.18% higher
Exposure to 'CCC' assets	2.74% lower
Exposure to defaulted assets	0.67% lower
SPWARF	119 lower
Portfolio % of target par	0.09% lower
Junior O/C test cushion	0.90% higher

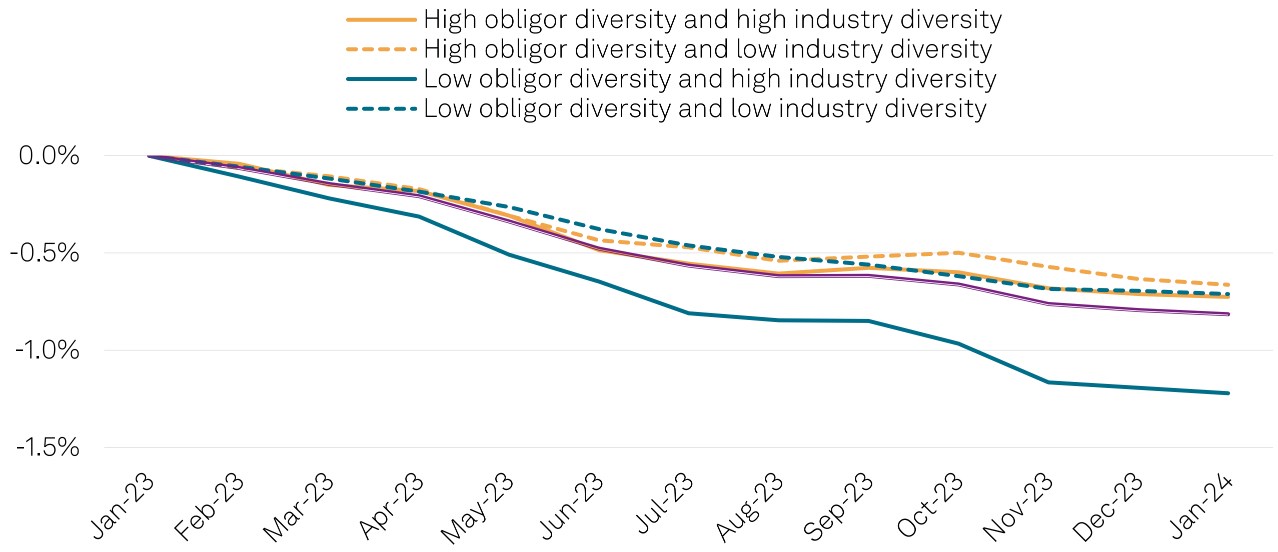
N/A--Not applicable. O/C--Overcollateralization. SPWARF-S&P Global Ratings' weighted average rating factor.
Source: Managers Matter: Active Management Of U.S. BSL CLOs During Uncertain Times Shows Its Value, published Nov. 30, 2023.

CLO Research | Assessing The Impact Of CLO Diversity

We broke our index of 492 reinvesting U.S. BSL CLOs into **four cohorts**:

- High obligor diversity and high industry diversity (141 transactions): solid yellow
- High obligor diversity and low industry diversity (105 transactions): dotted yellow
- Low obligor diversity and high industry diversity (105 transactions): solid blue
- Low obligor diversity and low industry diversity (141 transactions): dotted blue

Change in junior O/C cushion

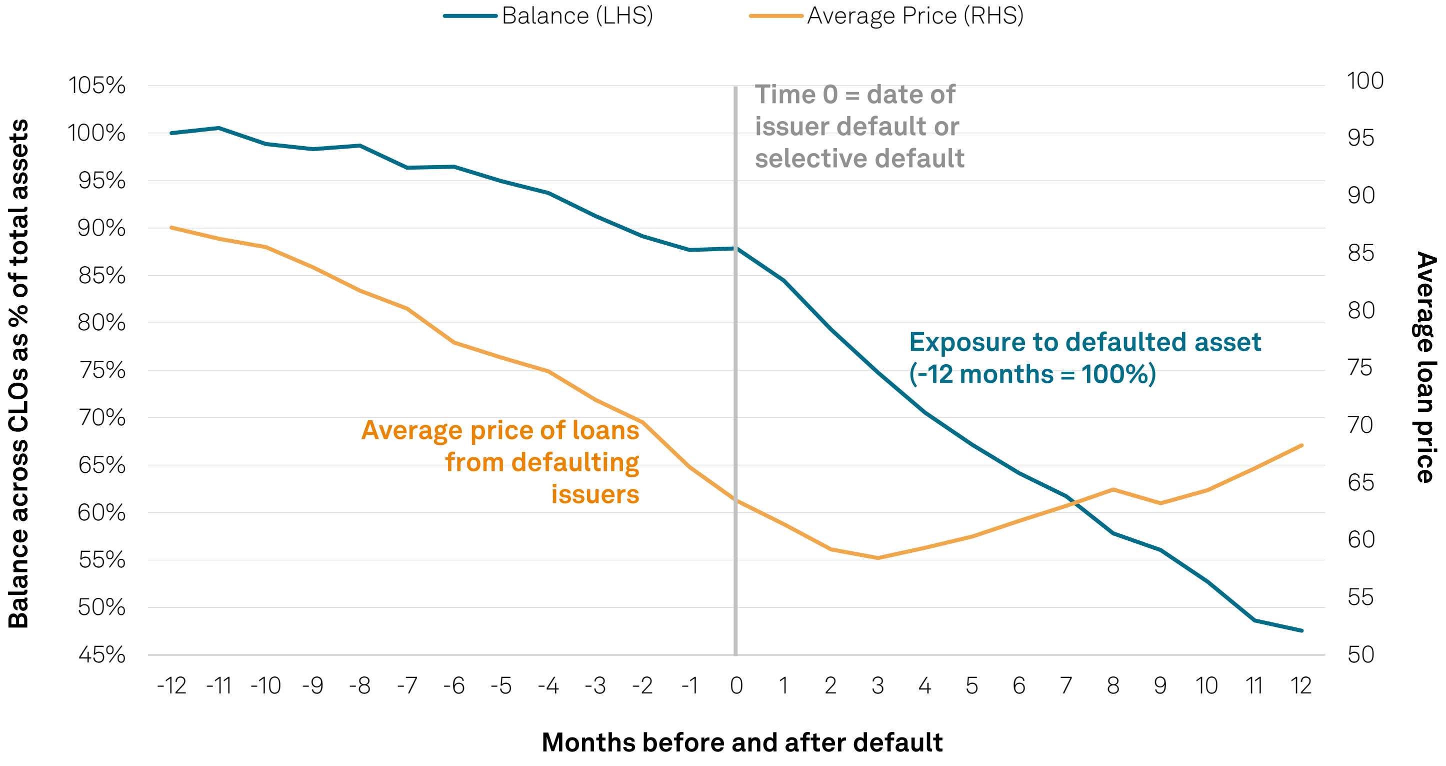


O/C--Overcollateralization. Source: "The Impact Of Asset Diversification On CLO Performance," published March 26, 2024.

- In our prior study on CLO portfolio diversity (see "Can Too Much Diversity Have Negative Effects On CLO Portfolios?" published April 23, 2018), we found that CLO portfolios with low obligor diversity and high industry diversity experienced a higher level of credit deterioration during the GFC as well as the energy slowdown in 2016.
- We found that transactions with low obligor diversity and high industry diversity were more likely to have material exposure to the next industry that would experience stress (for example, energy and retail during the 2016 slowdown).
- We see pressure across several industries (e.g., healthcare, consumer-related, telecom, chemicals, etc.), likely resulting in an outsized negative impact to some CLO portfolios last year.
- In 2023, we find deals with low obligor diversity and high industry diversity experienced notably larger average declines in junior O/C cushions.
- This cohort of transactions experienced above average levels of par loss and default exposure in 2023.

CLO Research | When Do Managers Sell Defaulted Assets?

Average U.S. BSL CLO exposures and prices one year before and after default



BSL--Broadly syndicated loan. CLO--Collateralized loan obligation. Source: S&P Global Ratings.

- Average U.S. BSL CLO exposures to about 100 issuers that saw their ratings lowered to a nonperforming rating between Jan. 2020 and March 2023.
- Over the 12-month period prior to default, U.S. BSL CLOs, on average, reduced their exposures to 88% by the month of the default.
- Over the 12-month period after the default, U.S. BSL CLOs experienced a sharper decline in exposures, on average, reducing by just over half (48%).
- Average loan prices one year prior to default was about 87; many sellers before the default were able to recover at higher prices while sellers that sold around the time of default experienced lower recoveries.

CLO Rating Actions | No U.S. CLO 'AAA' Tranche Rating Lowered Since 2012

- No 'AAA' rated U.S. CLO tranche has been downgraded since 2012, and that was for a CLO 1.0 transaction. No CLO 'AAA' tranche has ever defaulted.
- Despite the steady corporate rating downgrades, our outlook for CLO ratings remains stable, especially for more senior, higher-rated CLO tranches, given the structural protections built into CLOs and rating cushions for most tranches.
- We do expect some CLO tranche rating downgrades, but these should mostly be from subordinate tranches of amortizing CLOs originated prior to the 2020 pandemic.

U.S. BSL and MM CLO rating upgrades and downgrades (2020-Q2 2024)

U.S. BSL CLO UG

Orig. rating category	2020	2021	2022	2023	1H2024	Total (since 2020)
AAA						0
AA	5	39	14	29	26	113
A	6	47	18	30	27	128
BBB	1	46	20	18	11	96
BB		73	24	7	1	105
B	1	45	5	1		52
Grand total	13	250	81	85	65	494

U.S. MM CLO UG

Orig. rating category	2020	2021	2022	2023	1H2024	Total (since 2020)
AAA						0
AA		3	3		11	17
A		5	4	2	12	23
BBB		4	3	3	5	15
BB		3	2	2	1	8
B						0
Grand total	0	15	12	7	29	63

US BSL CLO DG

Orig. rating category	2020	2021	2022	2023	1H2024	Total (since 2020)
AAA						0
AA	3					3
A	11					11
BBB	91	5		2	1	99
BB	282	7	5	31	17	342
B	105	5	5	15	7	137
Grand total	492	17	10	48	25	592

U.S. MM CLO DG

Orig. rating category	2020	2021	2022	2023	1H2024	Total (since 2020)
AAA						0
AA						0
A	1					1
BBB						0
BB	5				1	6
B	1					1
Grand total	7	0	0	0	1	8

BSL--Broadly syndicated loan. MM--Middle market. UG--Upgrade. DG--Downgrade. Source: S&P Global Ratings.

CLO Rating Actions | Thirty Years And 60 CLO Tranche Defaults

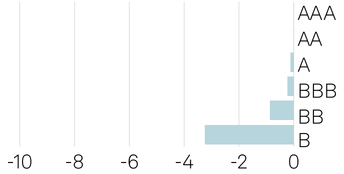
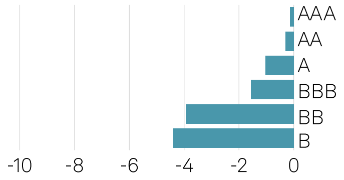
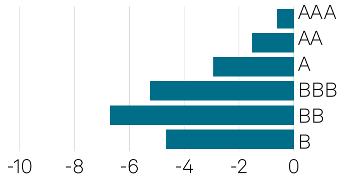
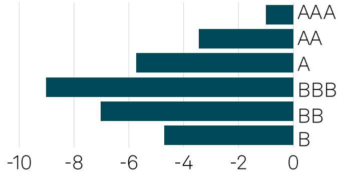
- S&P Global Ratings has rated **more than** 18,000 U.S. CLO tranches since our first CLOs in the mid-1990s. Our CLO ratings history **spans three recessionary periods**: the dot.com bust of 2000-2001, the global financial crisis in 2008-2009, and the recent COVID-19-driven downturn in 2020.
- Over that period, a total of 60 U.S. CLO tranches **have defaulted:** 40 U.S. CLO tranches from CLO 1.0 transactions originated in 2009 or before, and another 20 U.S. CLO 2.0 tranches.
- Across eight other CLO 2.0s, there are two tranches rated ‘CC (sf)’ that are **likely to default** in the future for similar reasons and another six tranches rated ‘CCC- (sf)’ that may default.

U.S. BSL and middle-market CLO 1.0 and 2.0 default summary by original rating (no.)

	CLO 1.0 transactions (2009 and prior)			CLO 2.0 transactions (2010 and later)		
	Original ratings*	**Defaults****	**Currently rated**	**Original ratings***	**Defaults****	**Currently rated**
AAA (sf)	1,540	0	0	3,840	0	1,753
AA (sf)	616	1	0	3,112	0	1,498
A (sf)	790	5	0	2,582	0	1,290
BBB (sf)	783	9	0	2,355	0	1,273
BB (sf)	565	22	0	1,919	9	1,043
B (sf)	28	3	0	396	11	182
Total	**4,322**	**40**	**0**	**14,204**	**20**	**7,039**

*Original rating counts as of Dec. 31, 2023. **CLO tranche default counts as of April 1, 2024.
Source: Thirty Years Strong: U.S. CLO Tranche Defaults From 1994 Through First-Quarter 2024, published April 2, 2024.

Scenario Analysis | Rating Stress Scenarios (May 2023 Update)

Scenario		Impact across CLO sample	Model-determined impact: average notches off current rating
5/10 scenario	372 issuers see ratings lowered, including 190 issuers that default	15% of CLO assets are rated ‘CCC+’ and below; average ‘CCC’ bucket increases to 10%; average nonperforming exposure increases to 5%; average par loss of 2.7%	
10/20 scenario	611 issuers see ratings lowered, including 304 issuers that default	30% of CLO assets are rated ‘CCC+’ and below; average ’CCC’ bucket increases to 20%; average nonperforming exposure increases to 10%; average par loss of 5.5%	
15/30 scenario	833 issuers see ratings lowered, including 372 issuers that default	45% of CLO assets are rated ‘CCC+’ and below; average ‘CCC’ bucket increases to 30%; average nonperforming exposure increases to 15%; average par loss of 8.3%	
20/40 scenario	1,038 issuers see ratings lowered, including 440 issuers that default	60% of CLO assets are rated ‘CCC+’ and below; average ‘CCC’’ bucket increases to 40%; average nonperforming exposure increases to 20%; average par loss of 11%	

- These four rating stress scenarios are identical to ones we applied for our scenario analyses published in April 2020, June 2021, and August 2022.
- They have the benefit of being transparent and simple, allowing market participants to take their view of potential loan defaults and ‘CCC’ exposure amounts and assess what the potential CLO rating impact might be.
- Producing the same analysis on outstanding CLOs over time also provides insight into how the transactions are evolving and any changes in how they respond to the stresses.
- To achieve the target 'CCC' and default exposures for each of the scenarios, we adjusted the ratings on as many obligors as needed, starting with the weakest (based on rating and then loan price), on average, across our sample of CLOs.
- Note that this can produce CLOs with a range of exposures in the stress analysis (for example, in the "5/10" scenario, some CLOs end up with more than 5% exposure to defaulting loans, and others less, but the average ends up at about 5% across the sample).
- Finally, we assume a 45% recovery rate (or par loss given default of 55%) for the purposes of these four stresses.

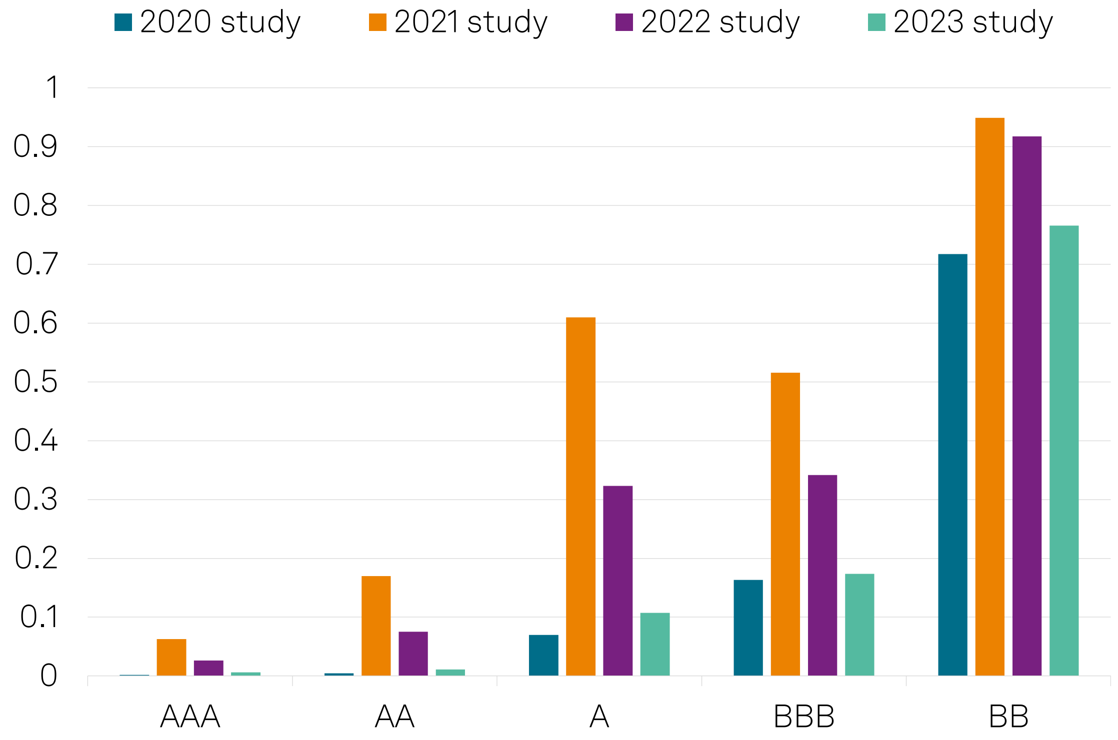
Source: Scenario Analysis: U.S. BSL CLO Rating Performance Under Four Hypothetical Stress Scenarios (2023 Update), published July 18, 2023.

Scenario Analysis | Rating Stress Scenarios (2023 Update)

Current rating category	0 (%)	-1 (%)	-2 (%)	-3 (%)	-4 (%)	-5 (%)	-6 (%)	> -7 (%)	Avg. Notches	IG (%)	SG (%)	'CCC' (%)	Default (%)
Cash flow results under "5-10" scenario (2023)													
'AAA'	99.3	0.7							(0.0)	100.0			
'AA'	98.9	1.0	0.1						(0.0)	100.0			
'A'	90.9	6.4	2.6		0.1				(0.1)	100.0			
'BBB'	80.4	17.4	1.8	0.1	0.1	0.1		0.1	(0.2)	83.2	16.8	0.1	
'BB'	49.2	33.2	8.6	4.5	2.1	0.9	0.3	1.2	(0.9)		100.0	3.2	1.2
Cash flow results under "10-20" scenario (2023)													
'AAA'	87.0	13.0							(0.1)	100.0			
'AA'	76.5	17.4	5.8		0.1	0.1			(0.3)	100.0			
'A'	39.6	23.7	33.1	1.4	1.5	0.5		0.1	(1.0)	99.4	0.6		
'BBB'	20.1	48.9	10.8	8.7	6.5	1.5	1.3	2.2	(1.6)	22.2	77.8	1.6	0.6
'BB'	6.9	13.9	12.8	12.8	11.3	11.0	5.0	26.2	(3.9)		100.0	27.3	25.6
Cash flow results under "15-30" scenario (2023)													
'AAA'	38.7	61.2	0.1						(0.6)	100.0			
'AA'	22.6	20.3	47.3	4.1	3.3	2.1		0.3	(1.5)	99.8	0.2		
'A'	5.7	4.4	45.3	8.3	17.3	15.2	1.6	2.1	(2.9)	80.8	19.2	0.6	0.1
'BBB'	0.8	10.2	8.9	13.0	15.7	11.0	6.8	33.5	(5.2)	1.9	98.1	16.5	15.7
'BB'	0.6	0.6	0.2	2.4	2.3	3.3	3.9	86.7	(6.7)		100.0	9.8	86.4
Cash flow results under "20-40" scenario (2023)													
'AAA'	11.1	82.3	4.0	1.2	1.3				(1.0)	100.0			
'AA'	6.2	2.9	31.9	7.3	14.2	31.7	1.8	3.9	(3.4)	98.7	1.3	0.1	
'A'	2.0	0.7	6.8	3.3	11.2	38.7	8.4	28.9	(5.7)	25.0	75.0	3.7	1.9
'BBB'	0.4	0.1	0.8	1.8	3.2	2.8	4.5	86.5	(9.0)	0.6	99.4	15.6	70.3
'BB'	0.5		0.2			0.2	0.2	99.1	(7.0)		100.0	0.2	99.1

Comparison of BSL CLO rating stress test results over the past four years

Average notch downgrade under "5-10" scenario



Source: Scenario Analysis: U.S. BSL CLO Rating Performance Under Four Hypothetical Stress Scenarios (2023 Update), published July 18, 2023.

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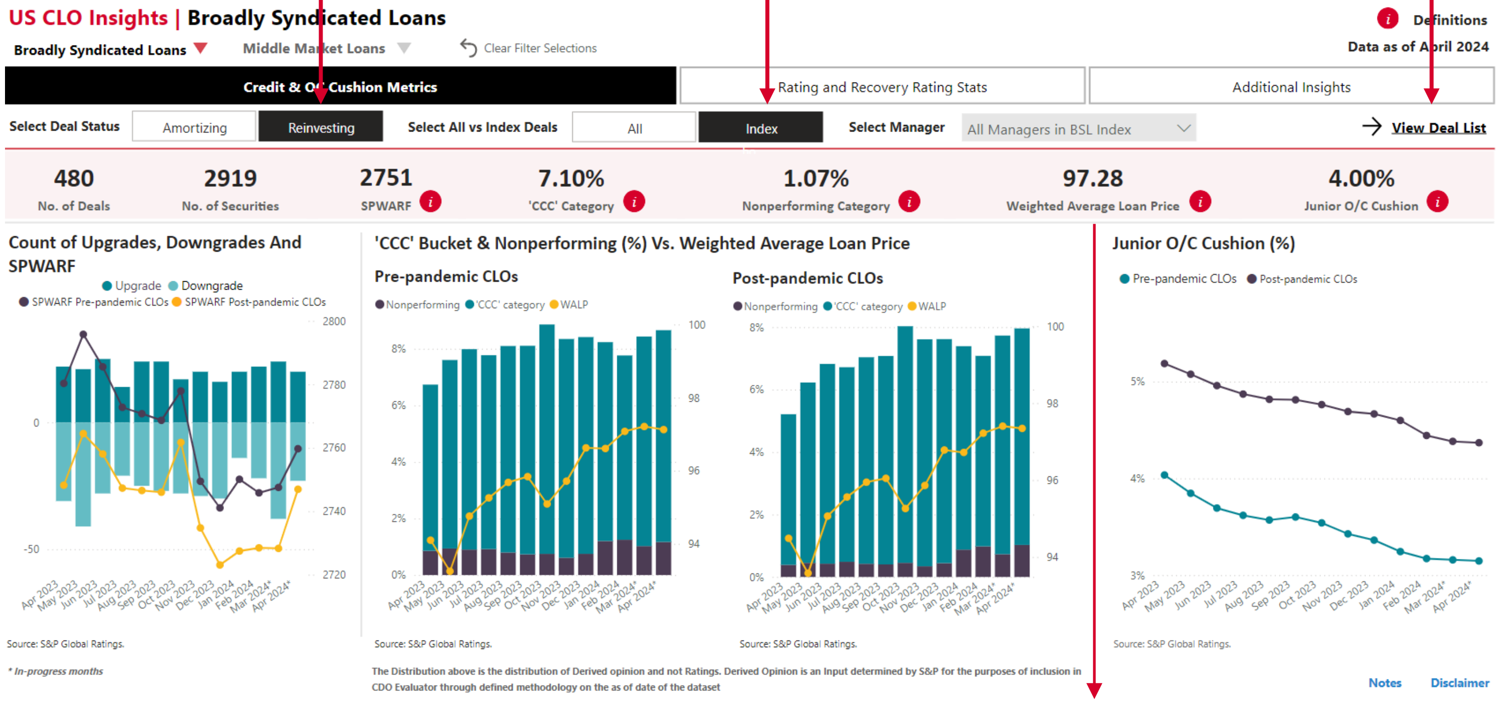
Further Reading | Collateralized Loan Obligations

- CLO Insights U.S. BSL Index: New Issue Portfolios Versus Resets; Assets From 'B' Rated Companies Back on Top, July 29, 2024
- SLIDES: Private Credit And Middle-Market CLO Quarterly: Pick Up In Performance And PIKs (Q3 2024), July 24, 2024
- U.S. BSL CLO Obligors: Corporate Rating Actions Tracker 2024 (As Of July 19th), July 23, 2024
- U.S. BSL CLO Top Obligors And Industries Report: Second-Quarter 2024, July 15, 2024
- 2023 Annual Global Leveraged Loan CLO Default And Rating Transition Study, June 27, 2024
- U.S. And European BSL CLOs: A Comparative Overview (2024 Update), May 23, 2024
- Thirty Years Strong: U.S. CLO Tranche Defaults From 1994 Through First-Quarter 2024, April 2, 2024
- The Impact Of Asset Diversification On CLO Performance, March 26, 2024
- Managers Matter: Active Management Of U.S. BSL CLOs During Uncertain Times Shows Its Value, Nov. 30, 2023
- Scenario Analysis: How Resilient Are Middle-Market CLO Ratings (2023 Update)? Oct. 16, 2023
- A Closer Look At Uptier Priming And Asset Drop-Down Provisions In U.S. CLOs, July 26, 2023
- Scenario Analysis: U.S. BSL CLO Rating Performance Under Four Hypothetical Stress Scenarios (2023 Update), July 18, 2023
- Good Intentions, Limited Impact: ESG-Excluded Sectors Proliferate In U.S. CLO Indentures, May 16, 2022

New Dashboard Available On R360!

Toggle between amortizing and reinvesting CLOs; rated and index

Create metrics for custom deal lists that can be downloaded into Excel



Compare average CLO metrics across different managers; download deal-specific data through "View Deal List" function

Source: S&P Global Ratings.

Login today or register for Ratings360 to access the dashboard. Toggle to the Market Insights menu item and select Sector Intelligence

- Interactive dashboard for both US BSL CLOs and US MM CLOs; which can both be filtered by manager.
- Provides a snapshot of key performance metrics for both asset CLO types; compare averaged aggregate metrics with the CLO metrics of a selected manager

New features:

- Toggle between amortizing and reinvesting cohorts;
- Toggle between full rated list and the index from published CLO metrics
- View Deal List function enables creation of custom deal lists which can be downloaded into Excel or PowerPoint.

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