

RESEARCH

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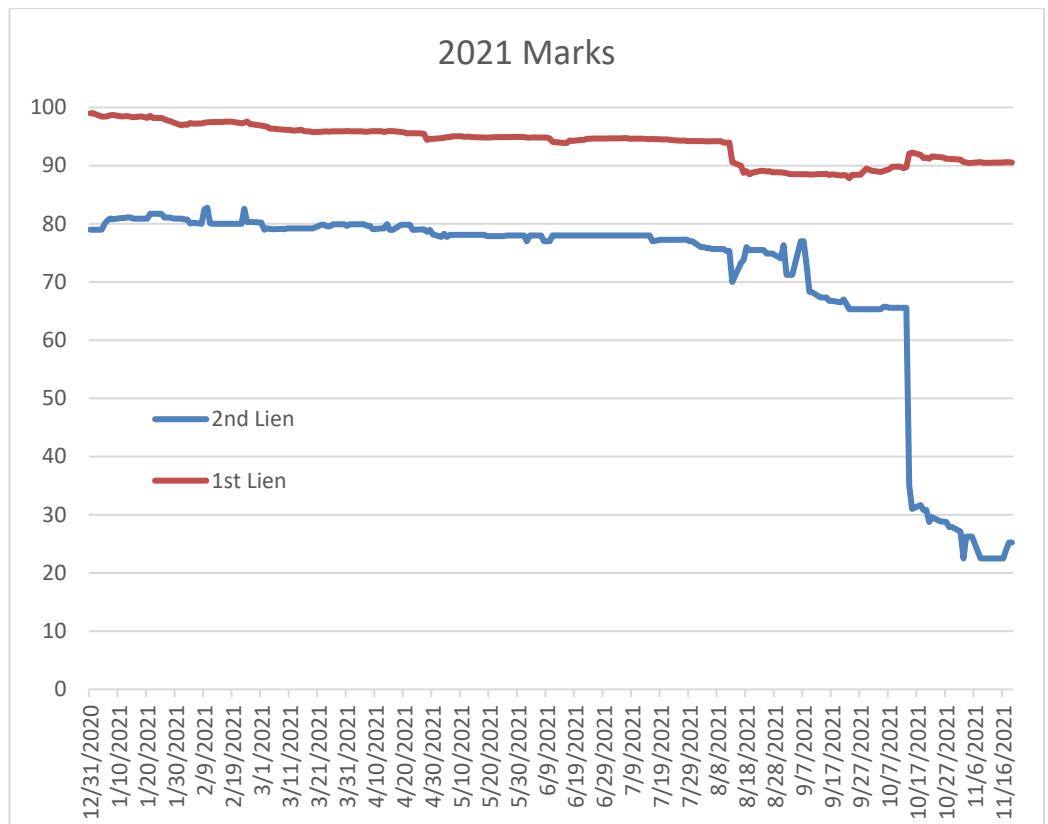
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Riverbed Technology CLO Exposure

This report shows the exposure for Riverbed Technology across CLO's from the latest available monthly surveillance report as of November 22, 2021. Riverbed just filed Chapter 11 for the second time in a year. Holdings total \$392 million across 178 CLO's by 34 CLO managers. \$95 million of the exposure is to 2nd liens. The mark on the 1st lien is \$91, but the 2nd lien is \$25. The largest holders of the 2nd lien are Apollo and CBAM. CBAM also has the largest 2nd lien exposure as a percent of total collateral. Five CLOs have more than 50bps of exposure to the 2nd lien with four of those being CBAM deals.



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CLO Managers:

Manager Name	Total Exposure	1 st Lien Exposure	2 nd Lien Exposure	Market Value	% of Manager
Apollo Credit Management	123,658,576	85,871,296	37,787,279	71.4%	0.59%
CBAM CLO Management	48,406,836	9,896,159	38,510,676	38.6%	0.39%
Neuberger Berman Fixed Income	33,914,359	33,914,360	-	90.5%	0.19%
Ellington CLO Management	29,124,434	23,741,196	5,383,238	78.5%	1.78%
Sound Point Capital Management	20,139,216	20,139,216	-	90.5%	0.10%
Invesco	18,615,555	13,100,112	5,515,439	71.2%	0.18%
Sixth Street Partners	14,992,394	14,992,394	-	90.5%	0.22%
GoldenTree Asset Management	14,924,812	14,924,813	-	90.5%	0.11%
Steele Creek Investment Management	14,515,368	14,515,367	-	90.5%	0.48%
Voya Investment Management (ING)	12,152,701	12,152,700	-	90.5%	0.06%
Pretium Credit Management	6,099,243	4,147,922	1,951,321	69.6%	0.30%
Symphony Asset Management	5,192,776	5,192,777	-	90.5%	0.10%
CFI Partners,	4,763,019	4,763,018	-	90.5%	0.29%
Five Arrows Managers	3,457,649	3,457,649	-	90.4%	0.06%
Diameter Capital Partners	3,432,771	-	3,432,771	25.2%	0.25%
DoubleLine Capital	3,001,758	3,001,759	-	90.5%	0.11%
Blackstone Liquid Credit Strategies	2,980,538	2,980,538	-	90.5%	0.01%
Marble Point Credit Management	2,955,038	2,955,038	-	90.5%	0.05%
Deutsche Asset Management	2,911,334	2,911,334	-	90.4%	2.84%
BNP Paribas	2,870,777	2,870,777	-	90.3%	0.09%
ZAIS Group	2,853,225	2,853,225	-	90.4%	0.06%
40/86 Advisors	2,402,816	2,402,817	-	90.5%	0.20%
Man Group plc	2,400,981	2,400,980	-	90.4%	0.07%
Redding Ridge Asset Management	2,214,503	273,320	1,941,184	33.4%	0.10%
Vibrant Capital Partners	2,104,997	2,104,997	-	90.5%	0.04%
Cutwater Investor Services	1,956,248	1,330,389	625,859	69.6%	0.43%
TCI Capital Management	1,767,634	1,767,635	-	90.5%	0.06%
Par- Four Investment Management	1,691,526	1,691,526	-	90.5%	0.09%
MidOcean Credit Fund Management	1,576,090	1,576,091	-	90.5%	0.05%
Columbia Management Investment Advisors	1,404,105	1,404,105	-	90.5%	0.05%
Nuveen Alternatives Advisors	1,151,038	1,151,038	-	90.5%	0.04%
HPS Investment Partners,	1,048,844	1,048,844	-	90.5%	0.01%
HarbourView Asset Management	761,075	761,075	-	90.5%	0.21%
MJX Asset Management	220,670	220,671	-	90.4%	0.00%

Source: Moody's Analytics Structured Finance Portal

Managers with collateral market value marks below 50% as well as those with greater than 1% exposure and marks below 75% are highlighted.

CLO Positions:

Deal Name	Exposure	% of Deal
Zais CLO 2 Ltd.	2,853,225	5.61%
BNPP IP CLO 2014-II Ltd.	2,870,777	5.06%
Flagship CLO VIII Ltd.	2,911,334	2.84%
Ellington CLO II Ltd.	8,552,327	2.22%
Silvermore CLO Ltd.	2,158,109	2.08%
Ellington CLO III Ltd.	7,274,160	1.79%
Ocean Trails CLO VI	2,875,604	1.69%
RR 3 Ltd. (FKA ALM XIV Ltd.)	24,027,755	1.62%
Ellington CLO IV Ltd.	6,535,788	1.57%
Ellington CLO I Ltd.	6,762,158	1.51%
ALM 2020 Ltd.	27,398,887	1.28%
Apollo Credit Funding IV Ltd.	5,510,368	1.17%
RR 6 Ltd.	6,932,401	1.13%
RR 4 Ltd.	9,945,978	1.10%
RR 2 Ltd.	8,881,903	1.10%
RR 17 Ltd.	7,669,396	1.08%
RR 5 Ltd.	5,332,616	1.05%
RR 1 Ltd. (FKA ALM X Ltd.)	7,132,360	1.00%
CBAM 2019-11 Ltd.	4,745,397	0.94%
CBAM 2020-13 Ltd.	3,993,958	0.88%
RR 14 Ltd.	5,667,706	0.86%
RR 12 Ltd. (FKA ALM VII(R) Ltd.)	4,024,221	0.83%
Neuberger Berman CLO XVI-S Ltd.	3,769,119	0.81%
Neuberger Berman CLO XX Ltd.	4,114,249	0.81%
Voya CLO 2014-3 Ltd.	1,014,263	0.81%
RR 7 Ltd.	3,742,629	0.74%
RR 8 Ltd.	3,582,820	0.71%
TICP CLO II-2 Ltd.	2,329,848	0.69%
Crown Point CLO 7 Ltd.	3,061,654	0.69%
Crown Point CLO 4 Ltd.	3,037,589	0.69%
Neuberger Berman Loan Advisers CLO 41 Ltd.	3,288,320	0.64%
CBAM 2019-9 Ltd.	3,830,613	0.64%
CBAM 2020-12 Ltd.	3,182,116	0.63%
Steele Creek CLO 2016-1 Ltd.	1,860,760	0.63%
RR 16 Ltd.	3,809,536	0.63%
TICP CLO I-2 Ltd.	1,998,084	0.62%
Cutwater 2015-I Ltd.	1,956,248	0.60%
Cumberland Park CLO Ltd.	2,002,389	0.57%
CBAM 2017-2 Ltd.	8,631,425	0.55%
CFIP CLO 2018-1 Ltd.	2,351,580	0.55%
Parallel 2015-1 Ltd.	746,102	0.53%
Steele Creek CLO 2015-1 Ltd.	1,734,083	0.53%

Deal Name	Exposure	% of Deal
Neuberger Berman Loan Advisers CLO 29 Ltd.	2,632,979	0.52%
TICP CLO V 2016-1 Ltd.	2,045,814	0.51%
Steele Creek CLO 2014-1R Ltd.	2,076,044	0.51%
Sound Point CLO III-R Ltd.	2,441,818	0.51%
Steele Creek CLO 2018-1 Ltd.	1,977,185	0.51%
Steele Creek CLO 2017-1 Ltd.	2,224,333	0.50%
CFIP CLO 2017-1 Ltd.	2,411,438	0.50%
Steele Creek CLO 2018-2 Ltd.	1,977,185	0.50%
Steele Creek CLO 2019-1 Ltd.	1,977,185	0.50%
Verde CLO Ltd.	2,543,516	0.49%
Tralee CLO VI Ltd.	1,691,526	0.48%
CBAM 2018-6 Ltd.	4,497,905	0.45%
CBAM 2017-1 Ltd.	5,605,313	0.45%
Milos CLO Ltd.	2,209,193	0.43%
Alinea CLO Ltd.	2,207,538	0.43%
Upland CLO Ltd.	1,766,520	0.43%
Carbone CLO Ltd.	2,196,757	0.43%
TICP CLO VI 2016-2 Ltd.	1,710,900	0.43%
Betony CLO 2 Ltd.	2,120,339	0.42%
Sound Point CLO IV-R Ltd.	2,439,046	0.42%
Neuberger Berman Loan Advisers CLO 28 Ltd.	2,098,562	0.41%
Annisa CLO Ltd.	1,677,111	0.41%
Recette CLO Ltd.	1,426,679	0.41%
Symphony CLO XVII Ltd.	1,548,717	0.40%
Neuberger Berman CLO XXI Ltd.	2,023,017	0.40%
CBAM 2017-3 Ltd.	5,123,019	0.39%
Diameter Credit Funding I Ltd.	1,049,463	0.38%
Diameter Credit Funding II Ltd.	1,026,244	0.37%
Neuberger Berman CLO XXIII Ltd.	1,384,642	0.35%
Riserva CLO Ltd.	2,110,034	0.35%
TICP CLO XI Ltd.	1,388,096	0.35%
Columbia Cent CLO 29 Ltd.	1,404,105	0.35%
TICP CLO XII Ltd.	1,388,096	0.35%
Neuberger Berman Loan Advisers CLO 24 Ltd.	1,727,466	0.34%
CBAM 2018-5 Ltd.	3,393,154	0.34%
Neuberger Berman CLO XIV Ltd.	1,376,426	0.34%
Neuberger Berman CLO XV Ltd.	1,362,419	0.34%
Neuberger Berman CLO XXII Ltd.	1,380,611	0.34%
Neuberger Berman CLO XVII Ltd.	1,873,389	0.34%
Diameter Credit Funding III Ltd.	1,357,064	0.34%
Neuberger Berman CLO XVIII Ltd.	1,712,821	0.34%
RR 15 Ltd.	2,214,503	0.33%
Sound Point CLO VI-R Ltd.	1,791,081	0.30%

Deal Name	Exposure	% of Deal
CBAM 2018-8 Ltd.	1,473,116	0.30%
Symphony CLO XIV Ltd.	1,067,576	0.30%
Neuberger Berman Loan Advisers CLO 27 Ltd.	1,497,028	0.29%
Neuberger Berman Loan Advisers CLO 25 Ltd.	1,497,645	0.29%
Neuberger Berman Loan Advisers CLO 26 Ltd.	1,650,261	0.29%
Symphony CLO XXI Ltd.	1,151,038	0.29%
Bean Creek CLO Ltd.	822,827	0.28%
Voya CLO 2016-4 Ltd.	1,701,517	0.28%
TICP CLO X Ltd.	1,382,641	0.28%
TICP CLO VII Ltd.	1,377,185	0.27%
Tryon Park CLO Ltd.	978,149	0.26%
Voya CLO 2015-2 Ltd.	1,141,474	0.26%
Symphony CLO XX Ltd.	1,017,064	0.25%
Sound Point CLO V-R Ltd.	1,441,897	0.24%
Deer Creek CLO Ltd.	688,593	0.23%
MidOcean Credit CLO III	1,084,776	0.22%
Voya CLO 2016-2 Ltd.	852,422	0.22%
TCI-Symphony CLO 2016-1 Ltd.	1,073,748	0.21%
HPS Loan Management 8-2016 Ltd. (FKA Highbridge Loan Management 8-2016 Ltd.)	1,048,844	0.21%
Harbourview CLO VII-R Ltd.	761,075	0.21%
Symphony CLO XIX Ltd.	1,014,542	0.20%
Sound Point CLO VII-R Ltd.	992,500	0.20%
Sound Point CLO XIV Ltd.	1,231,842	0.20%
Parallel 2017-1 Ltd.	746,102	0.19%
Sound Point CLO II Ltd.	1,050,307	0.19%
CBAM 2017-4 Ltd.	1,935,378	0.19%
Parallel 2018-2 Ltd.	763,453	0.19%
Parallel 2018-1 Ltd.	746,102	0.19%
Sound Point CLO VIII-R Ltd.	1,094,537	0.19%
GoldenTree Loan Opportunities IX Ltd.	1,179,060	0.19%
GoldenTree Loan Management US CLO 3 Ltd.	1,273,584	0.19%
GoldenTree Loan Opportunities XI Ltd.	985,038	0.18%
GT Loan Financing I Ltd.	343,271	0.18%
MP CLO VII Ltd. (FKA ACAS CLO 2015-1 Ltd.)	933,307	0.18%
Sound Point CLO XV Ltd.	1,157,931	0.18%
GoldenTree Loan Opportunities X Ltd.	1,273,584	0.18%
CBAM 2019-10 Ltd.	743,552	0.18%
GoldenTree Loan Opportunities XII Ltd.	726,341	0.18%
GoldenTree Loan Management US CLO 2 Ltd.	1,318,358	0.18%
GoldenTree Loan Management US CLO 1 Ltd.	1,273,584	0.18%
GoldenTree Loan Management US CLO 4 Ltd.	1,457,657	0.18%
GoldenTree Loan Management US CLO 5 Ltd.	1,089,511	0.18%
GoldenTree Loan Management US CLO 6 Ltd.	999,962	0.18%

Deal Name	Exposure	% of Deal
MP CLO III Ltd. (FKA ACAS CLO 2013-1 Ltd.)	691,206	0.18%
GoldenTree Loan Management US CLO 9 Ltd.	1,273,584	0.18%
Sound Point CLO XVII Ltd.	1,386,775	0.18%
Voya CLO 2019-1 Ltd.	694,048	0.18%
Sound Point CLO XXII Ltd.	879,887	0.18%
GoldenTree Loan Management US CLO 7 Ltd.	910,414	0.17%
Steele Creek CLO 2019-2 Ltd.	688,593	0.17%
TICP CLO IX Ltd.	688,593	0.17%
TICP CLO VIII Ltd.	683,137	0.17%
CBAM 2018-7 Ltd.	1,251,888	0.17%
Vibrant CLO X Ltd.	806,440	0.16%
Sound Point CLO XXVI Ltd.	794,000	0.16%
GoldenTree Loan Management US CLO 8 Ltd.	820,865	0.16%
Ocean Trails CLO V	582,045	0.15%
Sound Point CLO XXVII Ltd.	744,375	0.15%
Silver Creek CLO Ltd.	479,983	0.14%
Clear Creek CLO Ltd.	411,414	0.14%
Voya CLO 2018-3 Ltd.	827,932	0.14%
Voya CLO 2018-2 Ltd.	827,932	0.14%
Symphony CLO XXIII Ltd.	544,878	0.14%
Vibrant CLO VII Ltd.	660,107	0.13%
Vibrant CLO VI Ltd.	638,450	0.13%
Voya CLO 2017-3 Ltd.	762,110	0.13%
Sound Point CLO XVI Ltd.	992,500	0.13%
Marble Point CLO XII Ltd.	598,765	0.12%
Voya CLO 2012-4 Ltd. (FKA ING IM CLO 2012-4 Ltd.)	476,700	0.12%
MP CLO VIII Ltd. (FKA ACAS CLO 2015-2 Ltd.)	406,769	0.12%
TCI-Symphony CLO 2017-1 Ltd.	693,887	0.11%
Voya CLO 2018-1 Ltd.	663,164	0.10%
Neuberger Berman Loan Advisers CLO 30 Ltd.	525,406	0.10%
Voya CLO 2016-3 Ltd.	587,285	0.10%
Voya CLO 2017-2 Ltd.	581,644	0.10%
Sound Point CLO IX Ltd.	486,304	0.10%
Voya CLO 2015-1 Ltd.	497,167	0.09%
Voya CLO 2017-4 Ltd.	539,668	0.09%
Sound Point CLO XX Ltd.	694,048	0.09%
Voya CLO 2018-4 Ltd.	347,024	0.09%
Voya CLO 2017-1 Ltd.	364,843	0.07%
MidOcean Credit CLO VIII	372,188	0.07%
Voya CLO 2016-1 Ltd.	271,225	0.07%
Marble Point CLO XVIII Ltd.	324,991	0.07%
Bardot CLO Ltd.	357,870	0.06%
Sound Point CLO XIX Ltd.	259,848	0.05%

Deal Name	Exposure	% of Deal
ECP CLO 2015-7 Ltd.	242,871	0.05%
Sound Point CLO XVIII Ltd.	260,520	0.03%
Venture 31 CLO Ltd	180,887	0.02%
MidOcean Credit CLO IX	79,427	0.02%
Venture XXIII CLO Ltd.	39,784	0.01%
MidOcean Credit CLO VII	39,700	0.01%
Voya CLO 2015-3 Ltd.	2,282	0.00%

Source: Moody's Analytics Structured Finance Portal

CBAM was the largest purchaser of the 2nd lien and the second largest net purchaser overall behind Ellington.

Manager	Purchase 1 st Lien	Sold 1 st Lien	1 st Lien Net	Purchase 2 nd Lien	Sold 2 nd Lien	2 nd Lien Net
Ellington CLO Management	18,647,241		18,647,241	3,769,601		3,769,601
CBAM CLO Management	14,868,266	(13,236,420)	1,631,846	18,291,246		18,291,246
GoldenTree Asset Management	22,709,798	(10,218,449)	12,491,349			
Voya Investment Management	5,114,810		5,114,810			
Sound Point Capital Management	5,748,431	(1,057,460)	4,690,971			
Vibrant Capital Partners	5,368,799	(3,234,509)	2,134,290			
Investcorp B.S.C.	11,287,597	(9,310,385)	1,977,212			
MidOcean Credit Fund Management	1,504,204		1,504,204			
Steele Creek Investment Man.	554,464		554,464			
CFI Partners,	2,429,661	(2,429,661)	0			
TCI Capital Management		(250,000)	(250,000)			
Nuveen Alternatives Advisors		(250,000)	(250,000)			
Symphony Asset Management	750,000	(1,200,000)	(450,000)			
ZAIS Group Inc.		(641,796)	(641,796)			
Neuberger Berman Fixed Income		(1,435,000)	(1,435,000)			
Sixth Street Partners		(1,679,080)	(1,679,080)			
Diameter Capital Partners		(1,917,701)	(1,917,701)			
Invesco Inc.	6,204,334	(9,535,941)	(3,331,607)	2,050,931	(682,138)	1,368,793
Allianz Global Investors Capital		(2,764,662)	(2,764,662)			
Golub Capital Management	6,301,233	(10,037,118)	(3,735,885)			
Marble Point Credit Management		(3,762,883)	(3,762,883)			
HPS Investment Partners,	2,297,771	(8,571,467)	(6,273,696)			
Blackstone Liquid Credit Strategies	26,539,934	(33,180,503)	(6,640,569)			
Apollo Credit Management	2,343,293	(9,205,132)	(6,861,839)		(3,692,791)	(3,692,791)
Sculptor Capital Management	11,612,578	(23,997,509)	(12,384,931)			
Total/Average	144,282,414	(147,915,676)	(3,633,262)	24,111,778	(4,374,929)	19,736,849

Source: Moody's Analytics Structured Finance Portal

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