

RESEARCH / WHITEPAPER

13 October 2016

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CLO Rankings by Vintage (updated as of September 30, 2016)

Any ranking system of structured finance instruments is generally open to some level of subjectivity. When ranking CLO's, for example, does one look primarily to equity performance, performance of the notes or performance of the collateral? If the methodology is a blend, how does one weigh the various measures? Any attempt to "rank" CLO's is just one of many alternative methods to provide such scoring. Alternative methods would generally yield different results. Given the nature of any ranking system, the results should be interpreted accordingly.

In this report, Moody's Analytics has updated the prior deal rankings of the non-terminated 2006–2015 CLO's by vintage using a variety of scoring factors. CLO's that have had at least two payment periods are included.¹ The ranking is a function of equity returns (with a slight emphasis on recent returns), the standard deviation of those returns, junior overcollateralization test cushion, the number of collateral quality tests that are failing, the Moody's WARF test cushion, the ratio of the market value of the collateral to the par value of the tranches, the difference between Suspected Defaults² and current defaults, the average cushion of the Diversity Score, Moody's WARF, Weighted Average Life and Weighted Average Recovery Rate tests.³

These multiple factors are the basis of the ranking to better balance the debt and equity performance. (The Moody's Analytics MESR⁴ is an equity based ranking of CLO's.) The analysis includes more than 770 US CLO's and 150 European deals. The frequency with which a manager shows up is a function of the performance and the number of CLO's they manage as well as which CLO's have not been redeemed. Strong performing CLO's may have been redeemed which is more likely to affect CLO 1.0's. We list the top CLO's for each vintage alphabetically.

^{1 2016} will be included once there are enough deals for an useful ranking.

² See "Collateral Defaults vs Issuer Defaults" 6-19-15.

³ The cushions were normalized to reflect the typical numerical difference between a Diversity Cushion and a WARF Cushion, for example. In order to mitigate any unusual results from highly amortized CLO's, the deal factor was incorporated into the analysis. Annualized par build was removed from this analysis, but a greater emphasis has been placed on the ratio of the MV of collateral to the par of CLO tranches.

⁴ Moody's Analytics Equity Score Report CDO Deal Summary Performance as of July 13, 2016.

US BSL CLO's

CLO's from 2008 - 2011 are not included in the analysis because of the limited number of outstanding CLO's from those vintages. Some of the manager ranking changes are a result of fewer deals displayed from these vintages. The most frequently ranked managers of US broadly syndicated loan ("BSL") CLO's are CSAM and BlueMountain. CSAM has two or three of the top CLO's in each of 2006-07 and 2014-15. BlueMountain is the only other manager with three CLO's within the top 10 of any of vintage. CSAM is in the top group in four of the six vintages with a total of nine CLO's ranked which is 43% of its CLO's in the analysis. BlueMoutain's eight deals represent 53% of its non-terminated deals from the selected vintages.

Of the managers with at least three CLO's in the vintages, only Marathon Asset Management has a higher percentage ranked at 60% (three of five CLO's). Symphony and CIFC have five and four ranked deals, respectively while Apollo, Marathon and LCM have three. Five managers have at least two deals within the top in any one vintage. Six managers represent more than 50% of the top ranked deals. For managers with at least four deals outstanding from the indicated vintages, CSAM, BlueMountain, Symphony, Feingold O'Keeffe and Marathon have at least one-third of their deals in the tables. Five managers only have ranked only 1.0 CLO's while 16 have only 2.0 CLO's. There are 27 ranked managers out of 123 with CLO's outstanding in the indicated vintages. Nine managers are no longer in the top group and eight have been added since the last report. This change could be due to CLO performance or CLO redemption. Interestingly, 70% of the 2007 vintage top 10 are from only three managers. This is more concentrated than any other vintage.

Deal Name	Vintage	Currency Collateral Manager		
Anchorage Capital CLO 7, Ltd.	2015	USD	Anchorage Capital Group LLC	
Atrium XII	2015	USD	Credit Suisse Asset Management	
CIFC Loan Opportunity Fund Ltd.	2015	USD	CIFC Asset Management LLC	
Fortress Credit BSL III Limited	2015	USD	Fortress Investment Group LLC	
LCM XX Limited Partnership	2015	USD	LCM Asset Management LLC	
Madison Park Funding XVIII, Ltd.	2015	USD	Credit Suisse Asset Management	
Marathon CLO VIII Ltd.	2015	USD	Marathon Asset Management LP	
Neuberger Berman CLO XX, Ltd.	2015	USD	Neuberger Berman Fixed Income LLC	
THL Credit Wind River 2015-2 CLO Ltd.	2015	USD	THL Credit Senior Loan Strategies LLC	
Voya CLO 2015-3, Ltd.	2015	USD	Voya Investment Management (ING)	

Deal Name	Vintage	Currency Collateral Manager		
Atrium XI	2014	USD	Credit Suisse Asset Management	
BlueMountain CLO 2014-1 Ltd.	2014	USD	BlueMountain Capital Management LLC	
BlueMountain CLO 2014-2, Ltd.	2014	USD	BlueMountain Capital Management LLC	
BlueMountain CLO 2014-3 Ltd.	2014	USD	BlueMountain Capital Management LLC	
Madison Park Funding XV, Ltd.	2014	USD	Credit Suisse Asset Management	
Marathon CLO VI Ltd.	2014	USD	Marathon Asset Management LP	
Regatta IV Funding Ltd.	2014	USD	Napier Park Global Capital, LLC	
Staniford Street CLO, Ltd.	2014	USD Feingold O'Keeffe		
Symphony CLO XV, Ltd.	2014	USD Symphony Asset Management LLC		
Zais CLO 1, Limited	2014	USD	ZAIS Group Inc.	

Deal Name	Vintage	Currency Collateral Manager			
ALM VII(R), LTD.	2013	USD	Apollo Credit Management LLC		
BlueMountain CLO 2013-2, Ltd	2013	USD	BlueMountain Capital Management LLC		
BlueMountain CLO 2013-3, Ltd.	2013	USD	BlueMountain Capital Management LLC		
Carlyle Global Market Strategies 2013-2, LTD.	2013	USD	Carlyle Investment Management LLC		
Catamaran CLO 2013-1 Ltd	2013	USD	Trimaran Advisors LLC		
CIFC Funding 2013-IV, Ltd.	2013	USD	CIFC Asset Management LLC		
Kingsland VI	2013	USD	Kingsland Capital Management LLC		
LCM XIV Limited Partnership	2013	USD	LCM Asset Management LLC		
Longfellow Place CLO Ltd	2013	USD	Feingold O'Keeffe		
Marathon CLO V Ltd.	2013	USD	Marathon Asset Management LP		

Deal Name	Vintage	Currency	Collateral Manager
ALM VI, Ltd.	2012	USD	Apollo Credit Management LLC
ALM VII, LTD.	2012	USD	Apollo Credit Management LLC
Benefit Street Partners CLO I, Ltd.	2012	USD	Benefit Street Partners LLC
Bluemountain CLO 2012-1 Ltd.	2012	USD	BlueMountain Capital Management LLC
BlueMountain CLO 2012-2, Ltd.	2012	USD	BlueMountain Capital Management LLC
Carlyle Global Market Strategies CLO 2012-2, Ltd.	2012	USD	Carlyle Investment Management LLC
Fortress Credit Funding V LP	2012	USD	Fortress Investment Group LLC
Fraser Sullivan CLO VII Ltd.	2012	USD	3i Group plc
LCM XII Limited Partnership	2012	USD	LCM Asset Management LLC
Symphony CLO IX Limited Partnership	2012	USD	Symphony Asset Management LLC

Deal Name	Vintage	Currency	Collateral Manager
Apidos Cinco CDO	2007	USD	CVC Credit Partners LLC
California Street CLO III, Ltd.	2007	USD	Symphony Asset Management LLC
California Street CLO V, Ltd.	2007	USD	Symphony Asset Management LLC
CIFC Funding 2007-I, Ltd.	2007	USD	CIFC Asset Management LLC
GoldenTree Loan Opportunities III, Limited	2007	USD	GoldenTree Asset Management LP
GoldenTree Loan Opportunities IV, Limited	2007	USD	GoldenTree Asset Management LP
Madison Park Funding IV, Ltd.	2007	USD	Credit Suisse Asset Management
Madison Park Funding V, Ltd.	2007	USD	Credit Suisse Asset Management
Madison Park Funding VI, Ltd.	2007	USD	Credit Suisse Asset Management
Venture VIII CDO, Limited	2007	USD	MJX Asset Management LLC

Deal Name	Vintage	Currency Collateral Manager		
Atrium V	2006	USD	Credit Suisse Asset Management	
Blue Mountain CLO II Ltd.	2006	USD	BlueMountain Capital Management LLC	
California Street CLO II, Ltd.	2006	USD	Symphony Asset Management LLC	
Canyon Capital CLO 2006-1 Ltd.	2006	USD	Canyon Capital Advisors LLC	
Cent CDO 12 Limited	2006	USD	Columbia Management Investment Advisors	
CIFC Funding 2006-II, Ltd.	2006	USD	CIFC Asset Management LLC	
Eaton Vance CDO VIII, Ltd.	2006	USD	Eaton Vance Management	
Madison Park Funding III, Ltd.	2006	USD	Credit Suisse Asset Management	
Venture VII CDO Limited	2006	USD	MJX Asset Management LLC	
Wasatch CLO Ltd.	2006	USD	Invesco Inc.	

Manager Frequency for US\$ CLO's by Vintage

Collateral Manager	2006	2007	2012	2013	2014	2015	Total
Credit Suisse Asset Management	2	3			2	2	9
BlueMountain Capital Management LLC	1		2	2	3		8
Symphony Asset Management LLC	1	2	1		1		5
CIFC Asset Management LLC	1	1		1		1	4
Apollo Credit Management LLC			2	1			3
Marathon Asset Management LP				1	1	1	3
LCM Asset Management LLC			1	1		1	3
MJX Asset Management LLC	1	1					2
Carlyle Investment Management LLC			1	1			2
Feingold O'Keeffe				1	1		2
GoldenTree Asset Management LP		2					2
Fortress Investment Group LLC			1			1	2
Neuberger Berman Fixed Income LLC						1	1
Benefit Street Partners LLC			1				1
Canyon Capital Advisors LLC	1						1
ZAIS Group Inc.					1		1
Anchorage Capital Group LLC						1	1
Napier Park Global Capital, LLC					1		1
Voya Investment Management (ING)						1	1
Eaton Vance Management	1						1
Kingsland Capital Management LLC				1			1
CVC Credit Partners LLC		1					1
Invesco Inc.	1						1
Trimaran Advisors LLC				1			1
3i Group plc			1				1
Columbia Management Investment Advisors, LLC	1						1
THL Credit Senior Loan Strategies LLC						1	1
Total	10	10	10	10	10	10	60

Note: Unpriced loans are assumed to have a market price equal to the average of that type of loan in the market. Unpriced bonds are priced based upon seniority and if they are performing while equity is essentially valued at zero. Outlying values for certain factors have been capped or floored. Reasonable approximations have been used where selected data fields are not reported.

Euro CLO's

The same updated analysis was completed for Euro denominated CLO's. Since that market is much smaller than its US counterpart, only the top five within each vintage are displayed. Several vintages were excluded given the limited number of issues in those years (2008- 2013). Babson has the most ranked deals at six (at least one in each vintage) which represents 100% of its European CLO's from these vintages. None of the other managers have two CLO's in the top five in one vintage. As a proportion of CLO's outstanding from the selected vintages, Oak Hill, CVC along with Babson have the highest percentage of their deals on the list for those managers with two or more Euro CLO's outstanding. There are 10 different managers in the ranking out of the 20 positions which is more concentrated than the US ranking. Three managers represent more than 50% of the total as compared with 36% for the US. It is also noteworthy that only one of the managers in the top five ranking exclusively issues in the European market. Half of the managers in the European top ranking are also in the US top ranking. Most of the European managers also issue US CLO's. Four managers had only 1.0 CLO's ranked and four are only in the 2.0 CLO ranking. Three managers are new to these tables and six are no longer in the top five as compared with the last report (the prior ranking included 13 different CLO managers).

Deal Name	Vintage	Currency	Collateral Manager
Babson Euro CLO 2015-1 B.V.	2015	EUR	Babson Capital Management LLC
Cadogan Square CLO VI B.V.	2015	EUR	Credit Suisse Asset Management
Carlyle Global Market Strategies Euro CLO 2015-2 Limited	2015	EUR	Carlyle Investment Management LLC
CVC Cordatus Loan Fund V Limited	2015	EUR	CVC Credit Partners LLC
Harvest CLO XIV Designated Activity Company	2015	EUR	3i Group plc

Deal Name	Vintage	Currency	Collateral Manager
BABSON EURO CLO 2014-1 B.V.	2014	EUR	Babson Capital Management LLC
BABSON EURO CLO 2014-2 B.V.	2014	EUR	Babson Capital Management LLC
Carlyle Global Market Strategies Euro CLO 2014-3 Limited	2014	EUR	Carlyle Investment Management LLC
Halcyon Loan Advisors European Funding 2014 B.V.	2014	EUR	Halcyon Loan Investors LP
Harvest CLO IX Limited	2014	EUR	3i Group plc

Deal Name	Vintage	Currency	Collateral Manager
Cordatus Loan Fund II P.L.C.	2007	EUR	CVC Credit Partners LLC
Harbourmaster Pro-Rata CLO 3 B.V.	2007	EUR	GSO / Blackstone Debt Funds Management
Laurelin II B.V	2007	EUR	GoldenTree Asset Management LP
Malin CLO B.V.	2007	EUR	Babson Capital Management LLC
OAK HILL EUROPEAN CREDIT PARTNERS II P.L.C.	2007	EUR	Oak Hill Advisors LP

Deal Name	Vintage	Currency	Collateral Manager
Duchess VI CLO B.V.	2006	EUR	Babson Capital Management LLC
Duchess VII CLO B.V.	2006	EUR	Babson Capital Management LLC
Harbourmaster CLO 7 B.V.	2006	EUR	GSO / Blackstone Debt Funds Management
OAK HILL EUROPEAN CREDIT PARTNERS I P.L.C.	2006	EUR	Oak Hill Advisors LP
Vallauris II CLO PLC	2006	EUR	Natixis Asset Management

Note: Unpriced loans are assumed to have a market price equal to the average of that type of loan in the market. Unpriced bonds are priced based upon seniority and if they are performing while equity is essentially valued at zero. Outlying values for certain factors have been capped or floored. Reasonable approximations have been used where selected data fields are not reported.

Manager Frequency for Euro CLO's by Vintage

Collateral Manager	2006	2007	2014	2015	Total
Babson Capital Management LLC	2	1	2	1	6
3i Group plc			1	1	2
Carlyle Investment Management LLC			1	1	2
CVC Credit Partners LLC		1		1	2
GSO / Blackstone Debt Funds Management	1	1			2
Oak Hill Advisors LP	1	1			2
Credit Suisse Asset Management				1	1
GoldenTree Asset Management LP		1			1
Halcyon Loan Investors LP			1		1
Natixis Asset Management	1				1
Grand Total	5	5	5	5	20

Conclusion

Although no ranking system is, by definition, perfect, we offer a possible approach to viewing CLO performance that incorporates both the debt and the equity. In our analysis, the CLO's are ranked by a variety of factors beyond their equity returns in an effort to balance the interests of the equity with that of the debt investors. As a result, deals that ranked moderately in regards to equity returns, may jump up to make the above tables given their strength in other factors. Conversely, CLO's that ranked high solely based upon their equity returns, may drop out of the table through a combination of other issues. When analyzing CLO performance, the factors selected and relative weight one gives to the factors will cause differing CLO's to be more attractive as buy or sell opportunities. Careful and complete analysis will highlight these differences.

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