Global CLO Quarterly

Market Review – 2Q20

July 2020

Global CLO Quarterly

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CLOs Global

Section 1

Second-Quarter Themes

CLO Issuance Summary

US CLOs: Volume Picks Up Through 2Q20

- New US CLO activity picked up during 2Q 20 with more deals done than there were in 1Q 20. But quarterly volume fell short of what was logged in the previous quarter. It was the first full quarter for managers to deal with market disruption and portfolio company weakness from the coronavirus pandemic.
- For all of 2Q20, there were 42 new or reissued broadly syndicated loan (BSL) CLOs that priced USD16 billion in notes and equity, compared with 33 CLOs in the previous quarter with USD17 billion. This compares with 63 such CLOs that priced in 2Q19, worth USD31 billion.
- Typical new and reissue BSL CLOs that priced in 2Q20 had average senior 'AAAsf' spreads of 192bp, up from 1Q20 when they averaged 127bp and 136bp in 1Q19. The full-year average was 137bp over Libor in 2019.
- The sharp increase in spreads comes despite the average reinvestment period (RP) for new typical revolving CLOs materially shortening. The RP decreased to 2.4 years in 2Q20, from 4.6 years in 1Q20, and from 4.7 years on average in 2Q19 and all new deals that priced in 2019.
- Initial spread tests were set at 329bp on average, down from 343bp logged in 1Q20 and the 342bp average logged in 4Q19. Credit enhancement for the senior-most notes averaged 39.8%, which is up on 36.9% for 1Q20 new CLOs as well as on the 2019 average of 37.7%. This is while the initial weighted average life (WAL) test eased to average 7.0 years, with a range of five to nine years. This compares to 8.7 years for new and reissue transactions that priced in the previous quarter, which ranged six to 11 years.
- Before the market disruption related to the coronavirus pandemic, there was a high level of reset and refinancing activity that supplemented new BSL CLO issuance. That dried up in 2Q20, with no such activity recorded.
- There were three middle-market CLOs that issued USD1.4 billion in notes and equity, down from five with USD1.9 billion in 1Q20.

EMEA CLOs: Primary Market Remains Open

- The European CLO primary market remains open despite the coronavirus pandemic and 16 transactions priced in 2Q20, accounting for EUR4.3 billion of notes.
- Transactions were structured with lower paramount, increased credit enhancement and lower reinvestment period, non-call period and maximum weighted average life.
- Average spread across the capital structure increase with the 'AAAsf' notes being priced at Euribor + 172bp on average, compared with Euribor + 95bp for transactions priced during 1Q20.
- Three new managers entered the European CLO market over the past three months, with CBAM CLO Management European Limited, Blue Bay Asset Management LLP and AlbaCore Capital LLP pricing their first European CLO.

See the tables from page 23 for individual transaction details.

CLO Topics Continued

US CLOs: Shorter Reinvestment Periods

- Most new CLOs that priced in 2Q20 had RPs of less than three years, a much higher proportion than what is typical and well short of the usual RP of four to five years.
- Fitch Ratings notes that adjusting RPs has been a tool to facilitate issuance in the past few months since coronavirus pandemic concerns disrupted markets.
- Including static transactions, overall CLOs with short RP (less than three years) are two-thirds of new CLOs that have priced in Q2. This compares to the proportion in 2Q19 of 8%. The highest level was logged in April, when eight of the nine transactions were with short RP.

US CLOs: US Agencies Agree to Bond Buckets

- Five federal agencies have approved changes to the Volker Rule, paving the way for US CLOs to again invest up to 5% of their portfolios in bonds after the effective date on 1 October 2020. The five agencies are the Federal Reserve, the Commodity Futures Trading Commission, the Federal Deposit Insurance Corporation, the Office of Comptroller of the Currency and the Securities Exchange Commission.
- Our current rating process uses a stress portfolio and cash flow assumptions that already maximize non-senior secured and fixed-rate exposures.
- Fitch has commented that a reinstatement of high-yield bond allowances in US CLO portfolios would give managers more options and likely not introduce a new risk to senior noteholders or change our ratings.
- Several asset managers with CLO platforms have a material component of assets under management (AUM) in high-yield bonds, <u>Fitch notes</u>, based on asset class allocations reported to Fitch for the annual <u>CLO Asset Manager Handbook</u> published in May 2020.

CLO Topics Continued

EMEA CLOs: Trading Activity Continues in Most European CLOs Despite Negative Credit Migration

- Trading Activity Continues in Most European CLOs Despite Negative Credit Migration
- European CLO managers have been actively managing their portfolio throughout the coronavirus pandemic.
- While trading activity has slowed due to limited opportunities on the primary market and a reduction of principal proceeds coming from unscheduled principal proceeds, CLO managers have been continuously trading.
- This trading flexibility has allowed some CLO managers to slightly mitigate negative credit migration in their portfolio. Credit quality as measured by the average WARF has improved (decreased) to 35.1 from 35.5 over the course of June while the average 'CCC' exposure decreased to 6.8% from 7.8% over the same period.

EMEA CLOs: Portfolio Deterioration Erodes Breakeven Default Rate Cushions

- Portfolio Deterioration Erodes Breakeven Cushions on European CLOs
- The deterioration of credit quality of the portfolios backing Fitch-rated European CLOs has had a negative impact on the breakeven default rate (BDR) cushions of CLO notes in recent months.
- Tranches at the 'AAAsf' rating category continue to show significant BDR cushions, albeit down to 12.8% on 4 July from 14.7% on 4 April.
- Most European sub-investment-grade CLO tranches have been placed and remain on Rating Watch Negative or Negative Outlook, reflecting the BDR shortfalls on these tranches under Fitch coronavirus baseline scenario.

CLO Topics Continued

Coronavirus CLO Stress Tailored to Issuer-Specific Assumptions

Fitch's rating analysis for CLO notes globally considers stress for negative outlook status as well as the updated issuer default ratings of underlying leveraged loan borrowers. These current stresses have evolved from sector-driven sensitivities to issuer-specific credit views as the global impact from coronavirus has rippled through CLO portfolios and the ratings of vulnerable issuers have been updated.

For a new rating CLO analysis globally, Fitch applies two stresses in addition to the standard criteria scenarios and has been disclosing the results in its rating commentary communication:

(1) Ratings of obligors on a negative outlook in the indicative portfolio are adjusted down by one notch down (with 'CCC-' floor);

(2) For US CLOs, each rating default rate generated by Portfolio Credit Model (PCM) off of the indicative portfolio is increased by 5%. For EMEA CLOs, Fitch expects a break even cushion of at least 2% on top of the stress applied in (1) above.

The coronavirus sensitivity analysis is run based on the stable interest-rate scenario using all default timing scenarios.

When assigning new ratings to CLOs, Fitch continues to run the two fundamental scenarios described in its CLO criteria. These scenarios test the ability of the CLO notes to withstand default and recovery stress on the arranger-provided indicative portfolio, as well as the Fitch Stressed Portfolio, constructed based on permissible investment limitations.

Fitch expects ratings on new primary CLOs to be issued with a stable outlook and expects the break-even default rate under these sensitivities to pass their PCM hurdle rate. This should increase the likelihood of rating stability in newly assigned CLO note ratings, barring a substantial underlying rating migration. Furthermore, most new issue European CLOs have incorporated the application of a downward notch of one to ratings with a negative outlook for calculation of the Fitch weighted average rating factor (WARF) at the effective date. This means that if corporate ratings are placed on negative outlook between closing and effective date, the WARF would deteriorate and the manager may not be able to go effective. This would trigger an equity distribution to be reinvested or to deleverage the structure. In Fitch's opinion, this mitigates the potential negative corporate rating migration and allows the agency to assign new CLO ratings with a stable outlook.

For its surveillance reviews, Fitch applies a one-notch rating adjustment to corporate issuer ratings in CLO portfolios with a negative outlook, floored at 'CCC-'. Obligor ratings with a Rating Watch Negative (RWN) continue to be adjusted down by one notch under the CLO criteria. CLO notes showing vulnerability under this stress scenario are placed on RWN or Outlook Negative. RWN will be primarily used for CLO note ratings that are more likely to be downgraded in the near term.

To date, Fitch has not downgraded any US CLO notes. Fitch has downgraded notes of some EMEA CLOs but the ratings have remained in their original rating category.

CLO Asset Manager Updates

Ninth Annual CLO Asset Manager Handbook and Datasheet Published

Fitch has published its ninth edition of the <u>CLO Asset Manager Handbook</u>, with profile reports for 121 CLO managers. It is accompanied by a <u>Data Sheet</u>, an Excel-based list of information collected. The manager profiles are presented in a standardised format and include corporate structures, key personnel and CLOs under management, among other information.

Individual manager profiles are also available in a downloadable PDF format on our website, under Resources on the CLO & Structured Credit landing page found at https://www.fitchratings.com/structured-finance/structured-credit.

The aggregated data collected from the managers in the handbook were used in a <u>survey report</u>. Among other topics, the report discusses that US CLO portfolio management (PM) teams have nearly 25 years of experience on average, with the largest average range of experience for PMs of 20 to 25 years, 52%, or 59 of 113 managers reporting. Supplementing this, 60% (65) of US managers stated they had credit analyst teams with an average of 10 to 15 years' experience and 6% (six) had analyst teams with more than 20 years of experience. Only 12% (13) reported having teams averaging less than 10 years' experience. Overall, the US team average was 14.7 years.

Individual Updates from the Quarter

Sixth Street Partners/TICP – Sixth Street Partners, TICP's parent company, announced the completion of its planned disaffiliation with TPG on May 1. TPG retained a passive minority stake in Sixth Street at a reduced level from its prior minority ownership. TICP does not expect changes to its day-to-day CLO management operations in terms of staffing, investment process, operations and compliance, and CLO funding strategy. Sixth Street, including TICP, has grown to more than USD34 billion in managed assets and has already been operating autonomously from TPG. Sixth Street/TICP remains an acceptable CLO manager.

Medalist Partners Corporate Finance (MPCF) – MPCF informed Fitch that chief investment officer (CIO) and investment committee member Fred Passenant has left the firm as part of a restructuring. Portfolio manager/head trader Jeremy Phipps has been named as the new CIO. Chief financial officer Craig Kitchen has also been named as the firm's new president, while Brian Hamm remains as chief executive. Fitch recognises the stability and industry experience of the remaining senior staff as a mitigant to Passenant's departure. *MPCF remains an acceptable CLO manager*.

First Eagle Alternative Credit, LLC – Following the acquisition of THL Credit Advisors, the firm has announced that their BSL CLOs will now be managed by the newly acquired CLO team from THL Credit Advisors. *First Eagle remains an acceptable CLO manager*.

Pretium Credit Management, LLC – The firm announced in April that CLO PM Gil Tollinchi has departed the firm. CLO PM Roberta Goss remains and will continue to manage the firm's CLO platform. *Pretium remains an acceptable CLO manager*.

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Section 2

CLO Issuance Overview

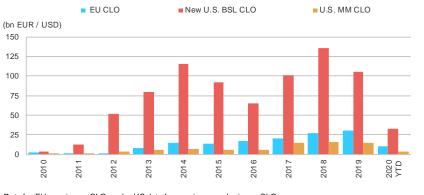
New CLO Issuance Overview

- CLO volume ended lower in 2Q20 than the previous quarter across both regions, though there were more US broadly syndicated loan CLOs that priced in the most recent quarter compared to the last one. It was the first full quarter for managers to navigate the coronavirus pandemic spread impact on the market and portfolio companies.
- The average 'AAAsf' spread on European CLOs jumped to nearly 172bp, after being below 100bp for two quarters. It remained below levels US levels on the senior most notes, though these also moved materially higher.
- The rise in spreads came as reinvestment periods nearly halved. MM CLOs recorded the shortest average reinvestment period of the three CLO types at 1.6 years (from 3.5 years in 1Q20), compared with BSL CLOs at 2.4 years (4.5 years) and European CLOs with 2.3 years (4.3 years).
- The weighted average life (WAL) average level also contracted, with the US BSL CLOs' average just under European CLOs', a change in order from 1Q20.
- Credit enhancement levels were also thicker, with 'AAAsf' levels nearly touching or in the 40% context.

At a Glance

| New Issues (Average 2Q20) | EU CLO | US BSL CLO | US MM CLO |
|-------------------------------|--------|------------|-----------|
| Average 'AAAsf' CE (%) | 42.7 | 39.8 | 46.6 |
| Average 'AAAsf' spread (bp) | 171.7 | 191.7 | 245.7 |
| lssuance volume (EURbn/USDbn) | 4.3 | 16.2 | 1.4 |
| Average reinvestment (years) | 2.3 | 2.4 | 1.6 |
| Average WAL (years) | 7.1 | 7.0 | 6.8 |

CE : Credit Enhancement. WAL: Weighted Average Life. BSL: Broadly Syndicated Loan. MM: Middle Market. US BSL CLO statistics are for typical new and reissue CLOs, except for issuance which includes all. Source: Fitch Ratings, public domain



Data for EU new issue CLOs only, US data for new issue and reissue CLOs Source: Fitch Ratings, public domain





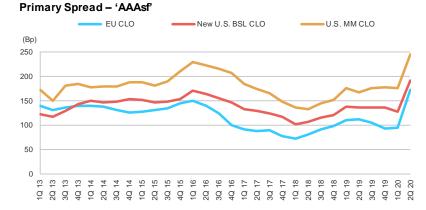
Data for EU new issue CLOs only, US data for new issue and reissue CLOs Source: Fitch Ratings, public domain

New CLO Issuance



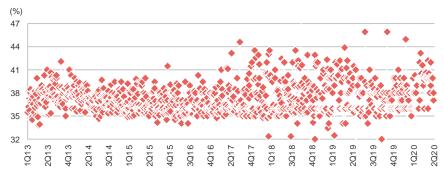
New CLO Issuance Overview: 'AAAsf' Credit Enhancement, Spread

CE - Credit enhancement. Data for EU new issue CLOs only, US data for new issue and reissue CLOs Source: Fitch Ratings, public domain



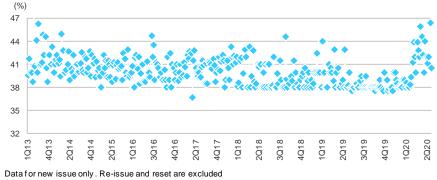
Data for EU new issue CLOs only, US data for new issue and reissue CLOs Source: Fitch Ratings, public domain

'AAAsf' U.S. BSL CLO C/E



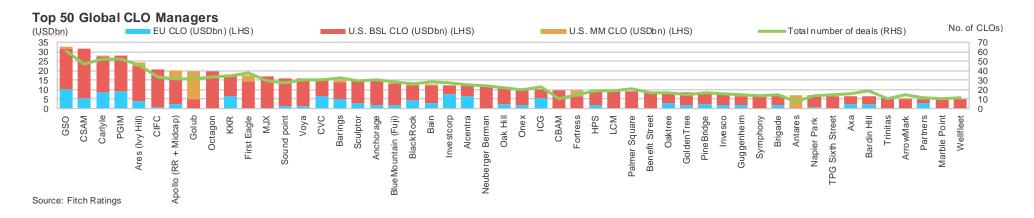
Data for new issue and re-issue CLOs only Source: Fitch Ratings, public domain

'AAAsf' EU CLO C/E



CLO Manager Ranking

- Large managers are active on both markets
- Additional information on CLO managers is available in the Fitch CLO Asset Manager Handbook



US CLOs Manager Ranking (BSL and MM)

| Rank | Manager | Total CLOs (USDbn) | Total Deals |
|------|--------------------------------|--------------------|-------------|
| 1 | Credit Suisse Asset Management | 26.07 | 36 |
| 2 | GSO Capital Partners | 22.63 | 39 |
| 3 | Ares Management | 20.73 | 38 |
| 4 | Golub Capital | 19.79 | 32 |
| 5 | Carlyle Group | 19.72 | 36 |
| 6 | CIFC Asset Management | 19.69 | 32 |
| 7 | Octagon Credit Investors | 19.49 | 34 |
| 8 | PGIM | 19.18 | 35 |
| 9 | Apollo Global Management | 18.04 | 27 |
| 10 | First Eagle | 17.47 | 38 |

EU CLOs Manager Ranking

| Rank | Manager | Total CLOs (EURbn) | Total Deals |
|------|--------------------------------|--------------------|-------------|
| 1 | GSO Capital Partners | 9.13 | 22 |
| 2 | PGIM | 7.98 | 18 |
| 3 | Carlyle Group | 7.54 | 17 |
| 4 | Investcorp Credit Management | 6.79 | 16 |
| 5 | KKR | 5.92 | 13 |
| 6 | CVC Credit Partners | 5.85 | 14 |
| 7 | Alcentra | 5.61 | 13 |
| 8 | Credit Suisse Asset Management | 5.08 | 11 |
| 9 | Intermediate Capital Group | 4.73 | 11 |
| 10 | Barings | 4.40 | 10 |

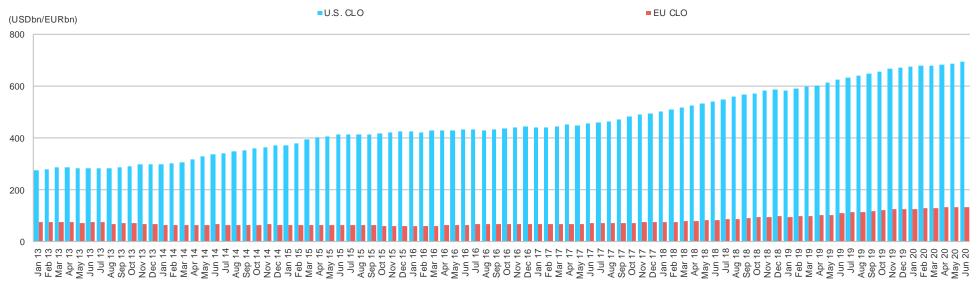
Source: CreditFlux, Fitch Ratings.

Structured Finance CLOs Global

CLO Assets Under Management

- Assets under management for US CLOs increased by about USD13 billion in 2Q20 (2%) and by about USD60 billion in the year to June 2020 (9%)
- Assets under management for EU CLOs increased by about EUR5 billion in 2Q20 (4%) and by about EUR20 billion in the year to June 2020 (17%)

CLO Assets Under Management



Source: Refinitiv LPC

Deal Terms Snapshot

Select Credit Metrics

| (Average 2Q20) | EU CLO | US BSL CLO | US MM CLO |
|---|---------------------|------------|-----------|
| Initial Senior OC Test Cushion (%) | 10 | 10 | 12 |
| Maximum WAL (years) | 7.1 | 7.0 | 6.8 |
| Portfolio Credit Quality | B/B- | B/B- | B- |
| Maximum 'CCC' Assets (%) | 7.5 | 7.3 | 18.8 |
| Minimum WAS (%) | 3.6 | 3.3 | 5.1 |
| Maximum Fixed-Rate Assets (%) | 10 | 5 | 5 |
| Maximum Single Obligor (%) | 3 | 2.5 | 3.5 |
| Maximum Single Industry (%) | 17.5 | 15 | 17.5 |
| Minimum Senior Secured (%) | 90 | 92 | 91 |
| Maximum Second Lien (%) | 10 | 8 | 5 |
| Asset Currency other than Liabilities (%) | 20-30 | None | None |
| Asset Hedging Strategies | Currency / Interest | None | None |
| Domiciled Country Ceiling Below 'AAA' (%) | 10 | None | None |
| Average Obligor Count | 137 | 277 | 104 |
| Maximum Covenant-Lite Loans (%) | 30 | 60 | 18 |

Source: Fitch Ratings

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Section 3

CLO Collateral Overview

Structured Finance CLOs Global

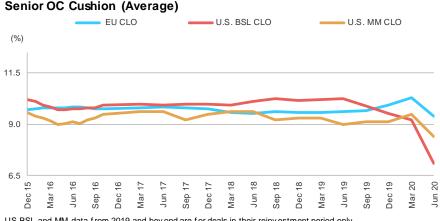
Portfolio Quality Snapshot

- Credit quality in CLO portfolios has come under pressure in both the US and Europe due to the impact of the coronavirus pandemic slowing measures and consumer behaviour.
- The average 'CCC' exposure (including +/-) increased for each type of CLO covered in this report. It remains the highest in US MM CLO, even when excluding non-rated credits, which are treated as 'CCC' as per the CLO rating criteria.
- Default exposure remains at a manageable level, though the US CLOs' averages increased to over 1% in 2Q20.
- Senior and junior OC cushions tumbled quarter on quarter due an increase in haircuts relating to excess 'CCC' and default exposures, among other factors. US BSL CLOs fell by the most of the three.
- The maturity wall for collateral held in Fitch-rated CLOs is relatively back-ended, with European CLOs having the most collateral with farther in the future. US MM CLOs have the most front-ended exposure, with 9.4% scheduled to mature before the end of 2021.

At a Glance

| Measure (Average 2Q20) | EU CLO | U.S. BSL CLO | U.S. MM CLO |
|------------------------------|--------|--------------|-------------|
| Average WAS (%) | 3.7 | 3.5 | 5.2 |
| WAS Failures (%) | 4.9 | 6.8 | 0 |
| Average WARF (%) | 35.1 | 36.4 | 43.9 |
| Average WARR (%) | 65.1 | 78.4 | 69.5 |
| Average WAL (years) | 5.0 | 4.7 | 3.8 |
| WAL Failures (%) | 6.3 | 8.7 | 1.8 |
| Average 'CCC' Exposure (%) | 6.8 | 12.7 | 18.3 |
| Average Default Exposure (%) | 0.6 | 1.2 | 1.6 |

WAS: Weighted Average Spread. WARF: Weighted Average Rating Factor. WARR: Weighted Average Recovery Rate. Cash excluded. CCC exposure includes +/-. Non-rated credits not included in CCC exposure. Source: Fitch Ratings



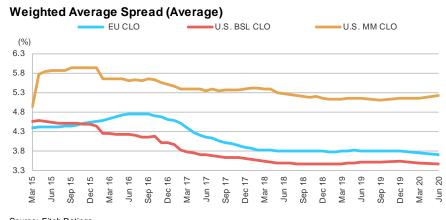
US BSL and MM data from 2019 and bey ond are for deals in their reinvestment period only Source: Fitch Ratings

Loan Maturity Profile (Average)



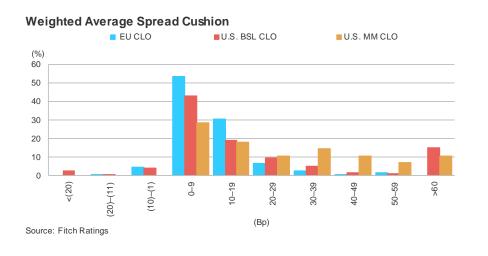
Source: Fitch Ratings

Structured Finance CLOs Global

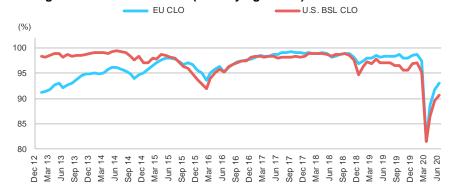


Weighted Average Spread, Gains/Loss and Bid Levels

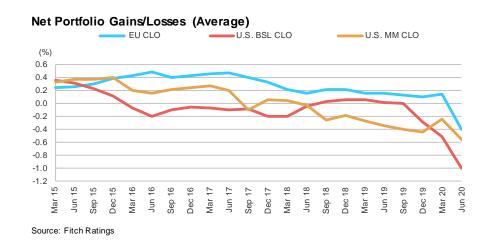




Average Bid of CLO Portfolios (Underlying Assets)



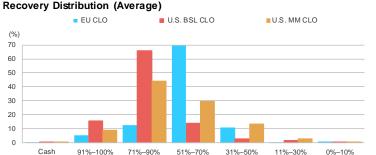
Source: Fitch Ratings, Refinitiv LPC



Rating Distribution (Average) EU CLO U.S. BSL CLO U.S. MM CLO (%) 50 40 30 20 10 0 Cash BBB- or BB+ BΒ BB-B+ В B-CCC CC or abov e Lower

Rating and Recovery Distributions, Junior OC Cushion

'CCC' includes 'CCC+', 'CCC', 'CCC-' and non rated issuers. 'CC' or lower includes defaulted issuers. Reflects Fitch-equivalent ratings/surveillance ratings. In cases where a MM CLO portfolio includes a high level of unrated issuers, most recent opinion levels have been used Source: Fitch Ratings

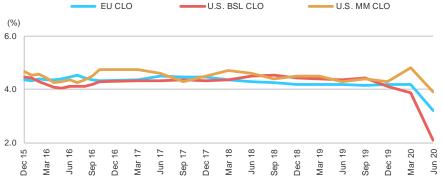


RR2 includes Strong and RR5 includes Weak recovery assignments Source: Fitch Ratings



Exposure includes 'CCC+' to 'CCC-' credits but excludes non-rated issuers Source: Fitch Ratings



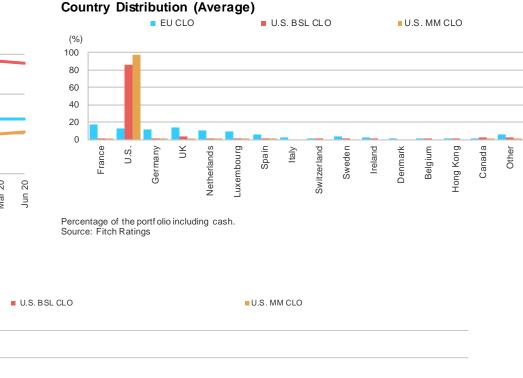


US BSL and MM data 2019 and bey ond are for deals in their reinvestment period only. Source: Fitch Ratings

Structured Finance CLOs Global

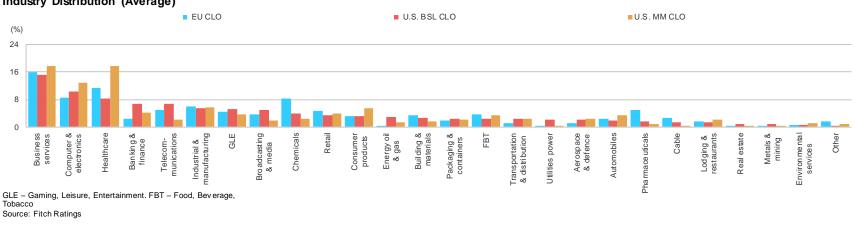
Average Number of Obligors (Average) EU CLO U.S. BSL CLO U.S. MM CLO (No. of Obligors) 300 200 100 0 Dec 15 Sep 16 Mar 18 Jun 18 Mar 19 Jun 19 Jun 20 16 16 Dec 16 17 Jun 17 Sep 17 Dec 17 Sep 18 Dec 18 Sep 19 Dec 19 20 Mar Mar Mar Jun

Obligor Count, Country and Industry Distributions



Source: Fitch Ratings

Industry Distribution (Average)



Most Referenced Issuers

- Four issuers (Nouryon Holding B.V., Clarios Global LP, Altice France S.A. and Froneri International Limited) among the 20 most referenced in Europe and US BSL CLOs are in common
- Overlap matrices are available for EU CLO, US BSL CLO and US MM CLO in respective "Leveraged Loan CLO Tracker Data File" published on a quarterly basis on fitchratings.com

EU CLOs Most Referenced Issuers

US BSL CLOs Most Referenced Issuers

| Most reference d issuer # | lssuer | % of CLO referencing this issuer | Average CLO exposure to this issuer (%) | Most referenced issuer # | lssuer | % of CLO referencing this issuer | Average CLO exposure to this issuer (%) |
|---------------------------------|--|--|---|--------------------------------|---------------------------------------|--|---|
| 1 | Verisure Holding AB | 94.6% | 1.3% | 1 | CSC Holdings, LLC (Cablevision-U.S.) | 90.3% | 0.6% |
| 2 | Nidda BondCo GmbH | 87.0% | 1.1% | 2 | Transdigm Inc. | 89.1% | 0.8% |
| 3 | Financiere Top Mendel SAS | 87.0% | 1.0% | 3 | Asurion, LLC | 86.8% | 0.9% |
| 4 | Sigma Holdco BV | 86.1% | 1.2% | 4 | Berry Global, Inc. | 83.3% | 0.6% |
| 5 | Nouryon Holding B.V. | 84.3% | 0.9% | 5 | SS&C Technologies, Inc. | 82.5% | 0.4% |
| 6 | Clarios Global LP | 83.9% | 1.0% | 6 | Dell International LLC | 80.4% | 0.6% |
| 7 | Nets Topco Lux 3 Sarl | 83.0% | 1.1% | 7 | Altice France Holding S.A. | 79.3% | 0.7% |
| 8 | Peer Holding III B.V. | 83.0% | 1.3% | 8 | Reynolds Group Holdings Inc. | 77.1% | 0.5% |
| 9 | eircom Holdings (Ireland) Limited | 82.1% | 0.7% | 9 | CenturyLink, Inc. | 75.1% | 0.6% |
| 10 | Auris Luxembourg II S.A. | 81.6% | 0.9% | 10 | Zayo Group LLC | 74.3% | 0.5% |
| 11 | Masmovil Ibercom, S.A. | 80.7% | 0.7% | 11 | Clarios Global LP | 73.4% | 0.5% |
| 12 | Synlab Unsecured Bondco PLC | 80.3% | 1.0% | 12 | Nouryon Holding B.V. | 73.0% | 0.5% |
| 13 | Altice France Holding S.A. | 80.3% | 1.2% | 13 | Nexstar Broadcasting, Inc. | 71.7% | 0.4% |
| 14 | Quimper AB | 79.4% | 0.9% | 14 | Belron Finance US LLC | 71.2% | 0.3% |
| 15 | EG Group Limited | 78.5% | 1.4% | 15 | Charter Communications Operating, LLC | 69.6% | 0.5% |
| 16 | VodafoneZiggo Group B.V. | 76.7% | 1.2% | 16 | Froneri International Limited | 69.2% | 0.4% |
| 17 | Froneri International Limited | 75.8% | 0.8% | 17 | American Airlines, Inc. | 68.5% | 0.7% |
| 18 | CAB societe d exercice liberal paractions simplifiee | 74.9% | 0.8% | 18 | Vistra Corp. | 67.7% | 0.4% |
| 19 | ION Trading Technologies Limited | 73.5% | 1.1% | 19 | Calpine Corporation | 66.6% | 0.5% |
| 20 | Springer Nature GmbH | 72.2% | 1.2% | 20 | Cineworld Group PLC | 66.2% | 0.5% |

Source: Fitch Ratings

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Section 4

CLO Quarterly Issuance Lists

CLO Issuance: 2Q20 US Broadly Syndicated Loan CLOs

(as at 30 June 2020)

| | | | | | | | | Reinvest- | |
|---|---------------------|-----------------------------------|-------------------|-----------------|-------------|----------------------|---------------------|-----------------|------------------------|
| Deal name | Deal size (USDm) | Collateral manager | Structurer | Pricing date | 'AAA' CE | 'AAA' spread (bp) | Non-call (vears) | ment (vears) | Maximum WAL (years) |
| Stratus 2020-1 | 476.7 | GSO Blackstone Funds Management | Citigroup | Apr 2020 | 37 | 198 | 1.0 | - | 6.0 |
| RR 9 Ltd. | 446.5 | Redding Ridge Asset Management | Natixis | Apr 2020 | 40 | 270 | 1.0 | 2.0 | 6.5 |
| Guggenheim CLO 2020-1, Ltd. | 303.8 | Guggenheim Investments | Goldman Sachs | Apr 2020 | 37 | 180 | 1.9 | 3.9 | 7.0 |
| AGL Core CLO4, Ltd | 398.9 | AGL Credit Management | Barclays | Apr 2020 | 42 | 221 | 1.0 | 1.0 | 6.0 |
| Canyon CLO 2020-1, Ltd. | 401.0 | Canyon Capital Advisors | BofA | Apr 2020 | 40 | 192 | 1.0 | 0.5 | 6.0 |
| SCFF 1, Ltd. | 306.9 | Redding Ridge Asset Management | Natixis | Apr 2020 | 40 | 250 | 1.0 | 2.0 | 6.5 |
| TCW CLO 2020-1, Ltd. | 285.0 | The TCW Group | Jefferies | Apr 2020 | 43 | 230 | 1.1 | 1.2 | 5.0 |
| Goldentree Loan Management US CLO 7, Ltd. | 453.3 | GoldenTree Asset Management | Morgan Stanley | Apr 2020 | 41 | 190 | 1.9 | 1.9 | 6.5 |
| Après Static CLO 2, Ltd. | 315.4 | ArrowMark Partners | Goldman Sachs | Apr 2020 | 42 | 250 | 1.9 | 1.0 | 5.0 |
| Palmer Square CLO 2020-1, Ltd. | 437.9 | Palmer Square Capital Management | Barclays | May 2020 | 40 | 200 | 0.9 | 0.9 | 7.0 |
| Pikes Peak CLO 6, Ltd. | 301.3 | Partners Group | Credit Suisse | May 2020 | 42 | 190 | 1.0 | 1.0 | 6.0 |
| AIG CLO 2020-1 LLC | 332.8 | AIG Asset Management | Natixis | May 2020 | 40 | 205 | 1.9 | 1.9 | 6.0 |
| Gulf Stream Meridian 2, Ltd. | 282.0 | Gulf Stream Asset Management | JP Morgan | May 2020 | 40 | 220 | 1.0 | 1.4 | 7.0 |
| Oaktree CLO 2020-1, Ltd. | 386.4 | Oaktree Capital Management | Barclays | May 2020 | 39 | 200 | 1.9 | 2.4 | 7.0 |
| OCP CLO 2020-18 | 406.8 | Onex Credit Partners | BofA | May 2020 | 40 | 180 | 1.0 | 2.0 | 9.0 |
| Ares LV CLO LTD. | 476.7 | Ares Management | J.P. Morgan | May 2020 | 40 | 170 | 1.0 | 3.0 | 7.0 |
| Magnetite XXIV, Ltd | 397.7 | BlackRock | Goldman Sachs | May 2020 | 36 | 175 | 2.4 | 4.4 | 5.1 |
| Palmer Square Loan Funding 2020-3, Ltd. | 341.8 | Palmer Square Capital Management | Citigroup | May 2020 | 38 | 170 | 1.1 | 0.0 | 6.0 |
| RR 10, Ltd. | 376.0 | Apollo Global Management | BNP Paribas | May 2020 | 40 | 180 | 2.3 | 4.4 | 8.5 |
| Octagon Investment Partners 47, Ltd. | 496.9 | Octagon Credit Investors | Wells Fargo | May 2020 | 40 | 185 | 0.9 | 2.9 | 8.0 |
| Broad River BSL Funding CLO Ltd. 2020-1 | 335.5 | Jocasse Partners | Barings | May 2020 | 41 | 185 | 2.1 | 2.1 | 6.0 |
| AGL CLO 5 LTD. | 600.0 | AGL Credit Management | Mizuho Securities | May 2020 | 41 | 205 | 1.0 | 2.0 | 6.6 |
| Bain Capital Credit CLO 2020-2, Ltd. | 388.5 | Bain Capital | Credit Suisse | May 2020 | 40 | 185 | 1.1 | 3.1 | 8.0 |
| OCP CLO 2020-19, Ltd. | 395.5 | Onex Credit Partners | Natixis | Jun 2020 | 40 | 175 | 2.4 | 4.4 | 7.5 |
| HalseyPoint CLOII, Ltd. | 377.8 | HalseyPoint Asset Management | GreensLedge | Jun 2020 | 40 | 186 | 1.5 | 2.1 | 7.0 |
| Apidos CLO XXXIII, Ltd. | 392.2 | CVC Credit Partners | Goldman Sachs | Jun 2020 | 36 | 170 | 1.1 | 3.1 | 7.0 |
| Zais CLO 15, Ltd. | 278.5 | ZAIS Group | RBC Captial | Jun 2020 | 42 | 256 | 2.3 | 2.4 | 7.0 |

Source: Fitch Ratings, Fitch Solutions, public domain

CLO Issuance: 2Q20 US Broadly Syndicated Loan CLOs (Continued)

(as at 30 June 2020)

| | | | | | | | | Reinvest- | |
|---|---------------------|-----------------------------------|------------------|-----------------|-------------|----------------------|---------------------|-----------------|------------------------|
| Deal name | Deal size (USDm) | Collateral manager | Structurer | Pricing date | 'AAA' CE | 'AAA' spread (bp) | Non-call (years) | ment (vears) | Maximum WAL (years) |
| Sound Point XXVI | 399.3 | Sound Point Capital Management | Citigroup | Jun 2020 | 41 | 185 | 1.1 | 2.1 | 7.0 |
| Crown Point CLO 9, Ltd. | 300.6 | Pretium Credit Management | Morgan Stanley | Jun 2020 | 40 | 205 | 2.3 | 2.4 | 6.5 |
| Voya CLO 2020-1, Ltd. | 2986 | Voya Investment Management | Credit Suisse | Jun 2020 | 38 | 170 | 1.0 | 2.1 | 7.0 |
| Neuberger Berman Loan Advisers CLO 37, Ltd. | 3984 | Neuberger Berman | Neuberger Berman | Jun 2020 | 40 | 175 | 1.1 | 3.1 | 8.0 |
| Ballyrock CLO 2020-1, Ltd. | 3938 | Ballyrock Investment Advisors | Citigroup | Jun 2020 | 38 | 170 | 1.0 | 2.0 | 7.0 |
| CIFC Funding 2020-1, Ltd. | 497.0 | CIFC Asset Management | Barclays | Jun 2020 | 42 | 170 | 1.0 | 3.0 | 8.0 |
| Madison Park XLV | 3989 | Credit Suisse Asset Management | BofA | Jun 2020 | 39 | 165 | 1.0 | 3.0 | 9.0 |
| Crown City CLO I | 3523 | Western Asset Management Company | Citigroup | Jun 2020 | 40 | 205 | 1.1 | 1.6 | 7.0 |
| Benefit Street Partners CLO XX, Ltd. | 3982 | Benefit Street Partners | Natixis | Jun 2020 | 40 | 175 | 1.1 | 3.1 | 7.0 |
| BlueMountain CLO XXIX, Ltd. | 3944 | BlueMountain Capital Management | Citigroup | Jun 2020 | 40 | 175 | 1.1 | 3.1 | 7.0 |
| Octagon Investment Partners 46, Ltd. | 5032 | Octagon Credit Investors | Morgan Stanley | Jun 2020 | 37 | 165 | 1.1 | 3.1 | 8.0 |
| Ocean Trails CLO 8 | 3028 | Five Arrows Managers | Barclays | Jun 2020 | 40 | 195 | 1.0 | 1.0 | 7.0 |
| Elmwood CLO V | 3924 | Elmwood Asset Management | RBC | Jun 2020 | 37 | 175 | 1.0 | 3.0 | 9.0 |
| Cayuga Park CLO | 3928 | GSO Blackstone Funds Management | BNP Paribas | Jun 2020 | 38 | 160 | 1.0 | 3.0 | 6.0 |
| Anchorage Capital CLO 15 | 340.8 | Anchorage Capital Group | Citigroup | Jun 2020 | 43 | 185 | 1.0 | 3.0 | 8.0 |
| Stats for New US Broadly Syndicated Loan CLOs onl | y | | | | | | | | |
| 2Q20 Average | 384.6 | | | | 39.7 | 192.7 | 1.3 | 2.3 | 6.9 |
| 2Q20 Median | 392.6 | | | | 40.0 | 185.0 | 1.1 | 2.1 | 7.0 |
| 2Q20 Minimum | 278.5 | | | | 36.0 | 160.0 | 0.9 | 0.0 | 5.0 |
| 2Q20 Maximum | 600.0 | | | | 43.2 | 270.0 | 2.4 | 4.4 | 9.0 |
| Total | 16,154. | 9 | | | | | | | |

CLO Issuance: US Middle-Market CLOs

2Q20 US Middle Market CLO Transactions (as at 30 June 2020)

| | | | | | | | | Reinvest- | |
|--|---------------------|---------------------------------|-------------|-----------------|-------------|----------------------|---------------------|-----------------|------------------------|
| Deal name | Deal size (USDm) | Collateral manager | Structurer | Pricing date | 'AAA' CE | 'AAA' spread (bp) | Non-call (years) | ment (years) | Maximum WAL (years) |
| Owl Rock CLO IV, Ltd. | 430.2 | Owl Rock Capital Advisors | Natixis | May 2020 | 47.0 | 262.0 | 2.2 | 2.7 | 5.5 |
| Fortress Credit Opportunities XIII, Ltd. | 390.0 | Fortress Investment Group | Natixis | Jun 2020 | 45.0 | 225.0 | 1.1 | 0 | na |
| Golub Capital Partners CLO 49(M) | 595.77 | GC Advisors LLC (Golub Capital) | Wells Fargo | June 2020 | 47.5 | 250 | 1.0 | 2.0 | 8.0 |
| | | | | | | | | | |
| Stats for New U.S. Middle Market CLOs only | | | | | | | | | |
| 2Q20 Average | 47 | 2 | | | 46.5 | 246 | 1.4 | 1.6 | 6.8 |
| 2Q20 Median | 43 | 0 | | | 47.0 | 250 | 1.1 | 2.0 | 6.8 |
| 2Q20 Minimum | 39 | 0 | | | 45.0 | 225 | 1.0 | 0.0 | 5.5 |
| 2Q20 Maximum | 59 | 6 | | | 47.5 | 262 | 2.2 | 2.7 | 8.0 |
| | | | | | | | | | |
| Total | 1,41 | 6 | | | | | | | |

CLO Issuance: US CLO Resets

2Q20 US Broadly Syndicated Loan CLO Reset Transactions (as at 30 June 2020)

| | | | | | 'AAA' | | Reinvest- | | n | |
|-------------------------------------|--|------------|-----------------|-------------|----------------|---------------------|-----------------|---------|------------|-----------|
| Deal name | Deal size (USDm) Collateral manager | Structurer | Pricing date | 'AAA' CE | spread (bp) | Non-call (years) | ment (years) | WAL | Collateral | Deal type |
| None | (03Din) Collater ar manager | 30 000101 | uate | CL | (00) | (years) | (years) | (years) | Collateral | Deartype |
| | | | | | | | | | | |
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| Stats for Broadly Syndicated Loan R | esets only | | | | | | | | | |
| 2Q20 Average | | | | | | | | | | |
| 2Q20 Median | | | | | | | | | | |
| 2Q20 Minimum | | | | | | | | | | |
| 2Q20 Maximum | | | | | | | | | | |
| | | | | | | | | | | |
| Total | | | | | | | | | | |

Source: Fitch Ratings, Fitch Solutions, public domain

CLO Issuance: US CLO Refinancings

2Q20 US CLO Refinancing

(as at 30 June 2020)

| | | Closing date | Collateral | Original deal | Par amount refinanced | Previous 'AAAsf' | Current 'AAAsf' | | A |
|---|---------|-----------------|------------|---------------|--------------------------|---------------------|-----------------|-----------------|----------|
| Deal name None | Vintage | uate | manager | size (USDm) | rennanced | spread (bp) | spread (bp) | Collateral type | Activity |
| | | | | | | | | | |
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| | | | | | | | | | |
| Stats for Broadly Syndicated Loan Refinancings only | , | | | | | | | | |
| 2Q20 Average | | | | | | | | | |
| | | | | | | | | | |
| 2Q20 Median | | | | | | | | | |
| 2Q20 Minimum | | | | | | | | | |
| 2Q20 Maximum | | | | | | | | | |
| | | | | | | | | | |
| Total | | | | | | | | | |

CLO Issuance: US Broadly Syndicated Loan CLO Comparison Table

| 2Q20 Broadly Syndicated Loan CLO Composition | Average | Median | Min | Max |
|--|---------|--------|-------|-------|
| Initial Senior OC Test Cushion (%) | 10.2 | 10.0 | 6.5 | 13.6 |
| Maximum WAL (Years) | 7.0 | 7.0 | 5.0 | 9.0 |
| Initial Target Moody's WARF | 2,689 | 2,719 | 2,382 | 3,024 |
| Maximum 'CCC' Assets (%) | 7.3 | 7.5 | 2.5 | 7.5 |
| Minimum WAS (%) | 3.3 | 3.3 | 3.0 | 3.9 |
| Initial WAS All-In Rate (%) | 3.5 | 3.4 | 3.1 | 3.5 |
| Maximum Fixed Assets (%) | 5.0 | 5.0 | 0.0 | 10.0 |
| Minimum WAC (%) | 7.0 | 7.0 | 4.0 | 8.0 |
| Maximum Single Obligor (Top 5) (%) | 2.5 | 2.5 | 2.0 | 2.5 |
| Maximum Single Obligor (Below Top 5) (%) | 2.0 | 2.0 | 1.5 | 2.0 |
| Maximum Single Industry (Largest) (%) | 14.9 | 15.0 | 12.0 | 15.0 |
| Maximum Single Industry (2nd Largest) (%) | 12.3 | 12.0 | 10.0 | 15.0 |
| Maximum Single Industry (3rd Largest) (%) | 11.1 | 10.5 | 10.0 | 13.5 |
| Maximum Single Industry (4th Largest) (%) | 10.4 | 10.0 | 10.0 | 13.0 |
| Maximum Single Industry (Below Top 4) (%) | 10.0 | 10.0 | 10.0 | 11.0 |
| Minimum Senior Secured (%) | 92.4 | 92.5 | 90.0 | 96.0 |
| Maximum Second Lien (%) | 8.4 | 10.0 | 4.0 | 10.0 |
| Maximum Senior Unsecured (%) | 8.5 | 10.0 | 4.0 | 10.0 |
| Maximum Other Than U.S. (%) | 19.7 | 20.0 | 15.0 | 20.0 |
| Maximum Covenant-Lite (%) | 59.5 | 60.0 | 2.5 | 80.0 |
| Expected Ramp-Up by Closing (%) | 90.7 | 96.5 | 28.5 | 100.0 |

This table considers all arbitrage CLOs priced in 2Q20 and backed by portfolios of BSLs. Source: Fitch Ratings, Fitch Solutions, public domain

CLO Issuance: European CLOs

2Q20 European CLO Primary Transactions

(as of 30 June 2020)

| | | | | | | | | Reinvest- | |
|---|---------------------|---|-----------------|-----------------|-------------|----------------------|---------------------|-----------------|------------------------|
| Deal name | Deal size (EURm) | collateral manager | Structurer | Pricing date | 'AAA' CE | 'AAA' spread (bp) | Non-call (vears) | ment (years) | Maximum WAL (years) |
| Providus CLO IV DAC | 207.6 | Permira Debt Managers Group Holdings Limited | Citigroup | Apr 2020 | 43.9 | 145 | 1.0 | 1.0 | 6.5 |
| Zinnia Finance DAC | 288.2 | Redding Ridge Asset Management (UK) | BNP Paribas | Apr 2020 | 42.0 | 225 | 1.5 | 3.0 | 8.5 |
| Avoca CLO XXIV DAC | 339.1 | KKR Credit Advisors (Ireland) Unlimited Company | Citigroup | Apr 2020 | 40.0 | 170 | 1.0 | 3.0 | 7.0 |
| Bilbao CLO III DAC | 281.7 | Guggenheim Partners Europe Limited | Citigroup | May 2020 | 43.9 | 144 | 1.0 | 1.0 | 6.0 |
| Fair Oaks Loan Funding II DAC | 254.2 | Fair Oaks Capital Limited | JP Morgan | May 2020 | 42.9 | 190 | 1.0 | 1.0 | 6.5 |
| Avondale Park DAC | 283.7 | Blackstone/GSO Debt Funds Management Europe | BNP Paribas | May 2020 | 42.0 | 170 | 1.0 | 3.0 | 8.5 |
| Henley CLO 2 DAC | 201.8 | Napier Park Global Capital Ltd | Credit Suisse | May 2020 | 46.0 | 174 | 1.0 | 3.0 | 7.0 |
| Aurium CLO VI DAC | 217.0 | Spire Management Limited | Bank of America | Jun 2020 | 44.6 | 190 | 1.0 | 3.0 | 7.0 |
| CVC Cordatus Loan Fund XVII DAC | 289.5 | CVC Credit Partners Group Limited | Natixis | Jun 2020 | 42.3 | 195 | 1.0 | 3.0 | 8.5 |
| Vendome Funding DAC | 347.8 | CBAM CLO Management Europe Limited | JP Morgan | Jun 2020 | 40.0 | 186 | 1.0 | 1.0 | 6.5 |
| BBAM European CLO I DAC | 250.5 | Blubay Asset Management LLP | Credit Suisse | Jun 2020 | 44.0 | 160 | 1.0 | 3.0 | 7.0 |
| OCP Euro CLO 2020-4 DAC | 251.5 | Onex Credit Partners, LLC | Credit Suisse | Jun 2020 | 42.0 | 175 | 1.0 | 3.0 | 7.0 |
| Goldentree Loan Management European CLO 4 DAC | 373.7 | Goldentree Loan Management II LP | Morgan Stanley | Jun 2020 | 41.1 | 155 | 1.0 | 1.0 | 6.5 |
| Harvest CLO XXIV DAC | 250.1 | Investcorp Credit Management EU Limited | Barclays | Jun 2020 | 42.0 | 160 | 1.0 | 3.0 | 7.0 |
| AlbaCore Euro CLOI DAC | 232.7 | AlbaCore Capital LLP | Bank of America | Jun 2020 | 46.5 | 153 | 1.0 | 1.0 | 6.5 |
| MacKay Shields Euro CLO 2 | 210.6 | Mackay Shields Europe Investment Management | BNP Paribas | Jun 2020 | 40.6 | 155 | 1.0 | 3.0 | 7.0 |
| 2Q20 Average | 267.5 | | | | 42.7 | 171.7 | 1.0 | 2.3 | 7.1 |
| 2Q20 Median | 252.9 | | | | 42.2 | 170.0 | 1.0 | 3.0 | 7.0 |
| 2Q20 Minimum | 201.8 | | | | 40.0 | 144.0 | 1.0 | 1.0 | 6.0 |
| 2Q20 Maximum | 373.7 | | | | 46.5 | 225.0 | 1.5 | 3.0 | 8.5 |
| Total | 4,279.5 | | | | | | | | |

Source: Fitch Ratings, Fitch Solutions, public domain

CLO Issuance: European CLOs Refinancings

2Q20 European CLO Refinancing (as at 30 June 2020)

| | | Previous 'AAAsf' | Current 'AAAsf' | | |
|-----------|----------------------------|------------------|-----------------|--------------|----------|
| Deal name | Vintage Collateral manager | spread (bp) | spread (bp) | Pricing date | Activity |
| None | | | | | |

Source: Fitch Ratings, Fitch Solutions, public domain

Structured Finance CLOs

Global

Section 5

Appendix – Methodologies Used and Recent Publications

Assumptions and Methods

- "CLOs Issuance Overview" statistics are based on the universe of post-crisis CLOs and only include new issue CLOs in Europe and the US. The US data include reissued CLOs. Resets are excluded.
- "CLO Collateral Overview" statistics are based on Fitch-rated post-crisis CLOs under surveillance at each point in time. Most recent data is as of end-2Q20 and based on trustee reports available at that time.
- All stratifications and bucket allocations reflect Fitch's rating methodology, detailed in CLOs and Corporate CDOs Rating Criteria. For example, industry stratification charts reflect Fitch's industry classification, 'CCC' buckets reflect Fitch's Equivalent Ratings and recovery rate of assets that do not have a Fitch asset-specific recovery rate assigned to them are based on Fitch's standard recovery rate assumptions.
- All portfolio statistics are based on asset balance and are calculated relative to the current outstanding balance of the portfolio, which includes cash and defaulted assets taken at par.
- Transaction net gains/losses are calculated as the difference between the current portfolio par and the target par (initial target minus reduction in liabilities). The net gains/losses take into account the benefit of excess spread used to deleverage the transaction and offset portfolio losses, as well as par building through the purchase of discounted assets.
- Data for US MM CLO are more volatile due to the low activity observed in some quarters.
- Charts may differ from regional CLO Index reports due to methodological differences such as inclusion in averages of non-standard CLOs, non-rated and/or CLO-defined defaulted entities and cash balances.

Related Research

- Trading Activity Continues in Most European CLOs Despite Negative Credit Migration (July 2020)
- Portfolio Deterioration Erodes Breakeven Cushions on European CLOs (July 2020)
- Coronavirus Rating Action Tracker for Structured Finance and Covered Bond (July 2020)
- EMEA CLO Index: 2Q20 Market Update (July 2020)
- Monthly U.S. CLO Index June 2020 (July 2020)
- Fitch U.S. Leveraged Loan Default Insight (July 2020)
- U.S. Leveraged Loan Chart Book: Second-Quarter 2020 (July 2020)
- Many US CLO Managers in High Yield, Poised for Volker Rule Change (July 2020)
- What Investors Want to Know: Fitch Stressed Portfolio for U.S. CLOs (Testing Flexibilities in Documentation Against Structural Protections) (July 2020)
- U.S. Middle-Market Recovery Ratings and the Coronavirus (Private Recovery Ratings Modestly Affected by the Pandemic) (July 2020)
- EMEA Lev Fin Ratings Depend on 2Q20 and 3Q20 Reporting (July 2020)
- U.S. Leveraged Finance: Corporate Recovery Rating Trends (First-Lien Recovery Prospects Continue to Weaken) (July 2020)
- Short Reinvestment Terms Supporting US CLO Issuance (June 2020)
- EMEA Corporate Defaults Through Amend & Extend to Increase (June 2020)
- What Investors Want to Know: Coronavirus Impact on U.S. Speculative Grade Market (Default Rates to Reach Post-Financial Crisis Highs as Pandemic Pressures Weaker Issuers) (June 2020)
- European At-Risk Leveraged Credit June 2020 (June 2020)
- The Road Back: Post-Lockdown Assumptions for Global Corporates (June 2020)
- Distressed Debt Exchanges Climb with Coronavirus Crisis (Pandemic-Induced Stress Causing an Increase in DDEs) (May 2020)
- U.S. Middle Market CLO Snapshot (1020) (May 2020)

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