# Global CLO Quarterly

Market Review – 2Q20

July 2020

### Global CLO Quarterly

Market Review – 2Q20



Vincent Scalvenzi Senior Director, European Structured Credit

+44 20 3530 1653 vincent.scalvenzi@fitchratings.com



Matthias Neugebauer Managing Director, European Structured Credit

+44 20 3530 1099 matthias.neugebauer@fitchratings.com



Deborah Ogawa Senior Director, US Structured Credit

+61451600-805 deborah.ogawa@fitchratings.com



Derek Miller Managing Director, Head of US Structured Credit

+1312368-2076 derek.miller@fitchratings.com

Cont	ents	
1	Second-Quarter Themes	3
а	CLOs Issuance Summary	4
b	US CLOs: Shorter Reinvestment Periods	5
с	US CLOs: US Agencies Agree to Bond Buckets	5
d	EMEA CLOs: Trading Activity Continues in Most European CLOs Despite Negative Credit Migration	6
е	EMEA CLO:s Portfolio Deterioration Erodes Breakeven Default Rate Cushions	6
f	Coronavirus CLO Stress Tailored to Issuer-Specific Assumptions	8
g	CLO Asset Manager Updates	8
2	CLOs Issuance Overview	9
3	CLO Collateral Overview	15
4	CLO Quarterly Issuance Lists	21
5	Appendix	30
а	Methodologies Used	31
b	Recent Publications	32

### Structured Finance

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*.

### Structured Finance

CLOs Global

Section 2

**CLO Issuance Overview** 

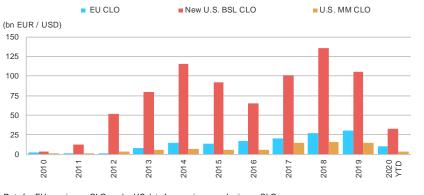
#### New CLO Issuance Overview

- 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





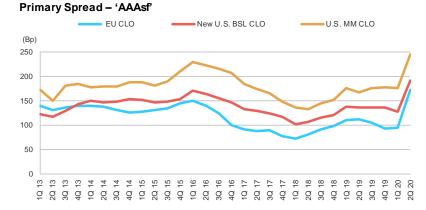
Data for EU new issue CLOs only, US data for new issue and reissue CLOs Source: Fitch Ratings, public domain

New CLO Issuance



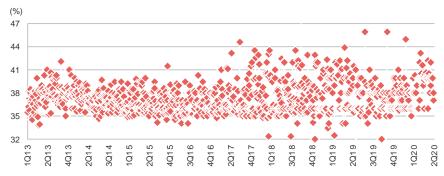
New CLO Issuance Overview: 'AAAsf' Credit Enhancement, Spread

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



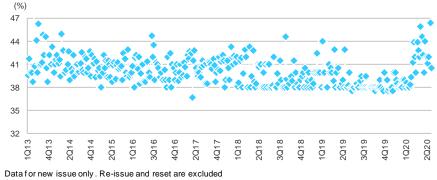
Data for EU new issue CLOs only, US data for new issue and reissue CLOs Source: Fitch Ratings, public domain

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



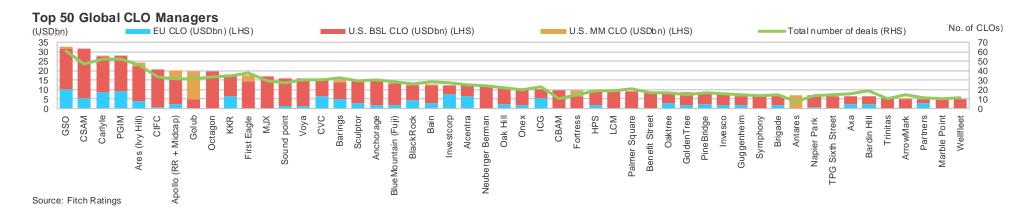
Data for new issue and re-issue CLOs only Source: Fitch Ratings, public domain

#### '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

### Structured Finance

CLOs Global

Section 3

**CLO Collateral Overview** 

#### Structured Finance CLOs Global

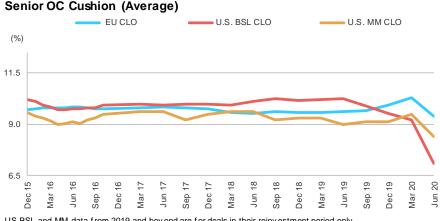
#### Portfolio Quality Snapshot

- 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



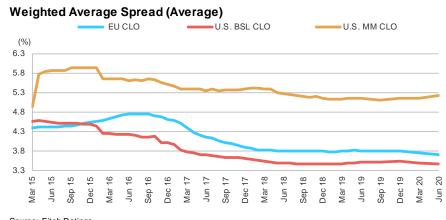
US BSL and MM data from 2019 and bey ond are for deals in their reinvestment period only Source: Fitch Ratings

#### Loan Maturity Profile (Average)



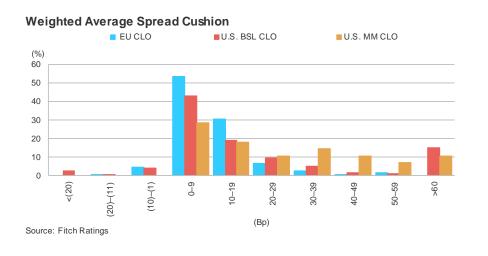
#### Source: Fitch Ratings

Structured Finance CLOs Global

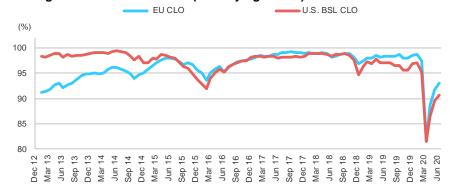


#### Weighted Average Spread, Gains/Loss and Bid Levels

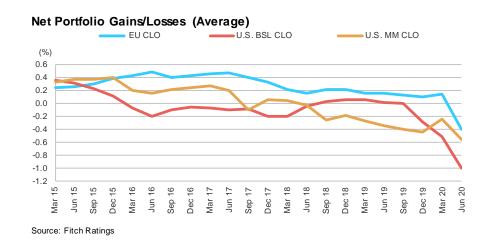




Average Bid of CLO Portfolios (Underlying Assets)



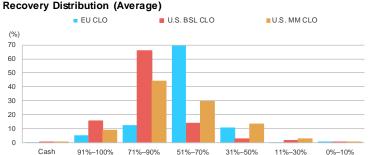
Source: Fitch Ratings, Refinitiv LPC



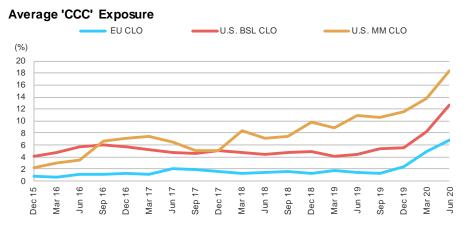
#### Rating Distribution (Average) EU CLO U.S. BSL CLO U.S. MM CLO (%) 50 40 30 20 10 0 Cash BBB- or BB+ BΒ BB-B+ В B-CCC CC or abov e Lower

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

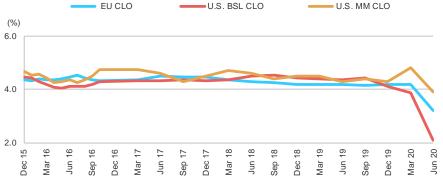


RR2 includes Strong and RR5 includes Weak recovery assignments Source: Fitch Ratings



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



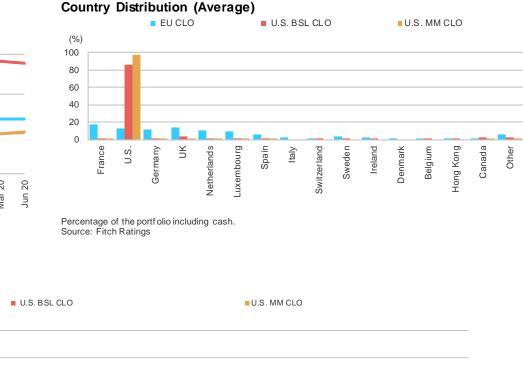


US BSL and MM data 2019 and bey ond are for deals in their reinvestment period only. Source: Fitch Ratings

**Structured Finance CLOs** Global

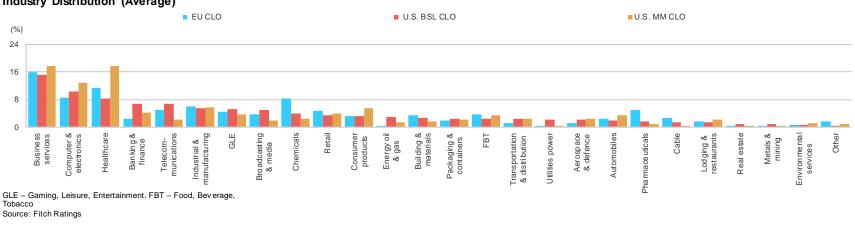
#### Average Number of Obligors (Average) EU CLO U.S. BSL CLO U.S. MM CLO (No. of Obligors) 300 200 100 0 Dec 15 Sep 16 Mar 18 Jun 18 Mar 19 Jun 19 Jun 20 16 16 Dec 16 17 Jun 17 Sep 17 Dec 17 Sep 18 Dec 18 Sep 19 Dec 19 20 Mar Mar Mar Jun

### **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

### Structured Finance

CLOs Global

### 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
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
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)

ALL FITCH CREDIT RATINGS ARE SUBJECT TO CERTAIN LIMITATIONS AND DISCLAIMERS. PLEASE READ THESE LIMITATIONS AND DISCLAIMERS BY FOLLOWING THIS LINK: <u>HTTPS://FITCHRATINGS.COM/UNDERSTANDINGCREDITRATINGS</u>. IN ADDITION, RATING DEFINITIONS AND THE TERMS OF USE OF SUCH RATINGS ARE AVAILABLE ON THE AGENCY'S PUBLIC WEB SITE AT <u>WWW.FITCHRATINGS.COM</u>. PUBLISHED RATINGS, CRITERIA, AND METHODOLOGIES ARE AVAILABLE FROM THIS SITE AT ALL TIMES. FITCH'S CODE OF CONDUCT, CONFIDENTIALITY, CONFLICTS OF INTEREST, AFFILIATE FIREWALL, COMPLIANCE, AND OTHER RELEVANT POLICIES AND PROCEDURES ARE ALSO AVAILABLE FROM THE CODE OF CONDUCT SECTION OF THIS SITE. FITCH MAY HAVE PROVIDED ANOTHER PERMISSIBLE SERVICE TO THE RATED ENTITY OR ITS RELATED THIRD PARTIES. DETAILS OF THIS SERVICE FOR RATINGS FOR WHICH THE LEAD ANALYST IS BASED IN AN EU-REGISTERED ENTITY CAN BE FOUND ON THE ENTITY SUMMARY PAGE FOR THIS ISSUER ON THE FITCH WEBSITE.

Copyright © 2020 by Fitch Ratings, Inc., Fitch Ratings Ltd. and its subsidiaries. 33 Whitehall Street, NY, NY 10004. Telephone: 1-800-753-4824, (212) 908-0500. Fax: (212) 480-4435. Reproduction or retransmission in whole or in part is prohibited except by permission. All rights reserved. In issuing and maintaining its ratings and in making other reports (including forecast information), Fitch relies on factual information it receives from issuers and underwriters and from other sources. Fitch believes to be credible. Fitch conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or in a given jurisdiction. The manner of Fitch's factual investigation and the scope of the third-party verification in which the rated security is offered and sold and/or the issuer is located, the availability of pre-existing third-party verification sources with respect to the particular jurisdiction of the issuer, and a variety of other factors. Users of Fitch's ratings and reports should understand that neither an enhanced factual investigation nor any third-party verification can ensure that all of the information Fitch relies on in connection with a rating or a report will be accurate and complete. Ultimately, the issuer and its reports. In issuing its ratings and its reports. Fitch must rely on the work of experts, including independent and other reports of the information respect to legal and to the market in offering documents and other reports. In issuing its ratings and its reports. Fitch must rely on the work of experts, including independent and tother information nearest and to the market in offering documents and other reports. In issuing reports, legal opinions and other reports information fitch relies on in connection with a rating or a report will be accurate and complete. Ultimately, the issuer and its advi

The information in this report is provided "as is" without any representation or warranty of any kind, and Fitch does not represent or warrant that the report or any of its contents will meet any of the requirements of a recipient of the report. A Fitch rating is an opinion as to the creditworthiness of a security. This opinion and reports made by Fitch are based on established criteria and methodologies that Fitch is continuously evaluating and updating. Therefore, ratings and reports are the collective work product of Fitch and no individual, or group of individuals, is solely responsible for a rating or a report. The rating does not address the risk of loss due to risks other than redit risk, unless such risk is specifically mentioned. Fitch is not engaged in the offer or sale of any security. All Fitch reports have shared authorship. Individuals identified in a Fitch report were involved in, but are not solely responsible for, the opinions stated therein. The individuals are named for contact purposes only. Areport providing a Fitch rating is neither a prospectus on a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. Ratings may be changed or withdrawn at any time for any reason in the sole discretion of Fitch. Fitch does not provide investment advice of any sort. Ratings are not a recommendation to buy, sell, or hold any security. Ratings do not comment on the adequacy of market price, the suitability of any security for a particular investor, or the tax-exempt nature or taxability of payments made in respect to any security. Fitch will rate all or a number of issues issued by a particular issuer, or insured or guaranteed by a particular insurer or guarantor, for a single annual fee. Such fees are expected to vary from US\$1,000 to US\$1,500,000 (or the applicable currency equivalent) per issue. In certain cases, Fitch will rate all or a number of issuesing and update insuch or dissemination of a rating by

For Australia, New Zealand, Taiwan and South Korea only: Fitch Australia Pty Ltd holds an Australian financial services license (AFS license no. 337123) which authorizes it to provide credit ratings to wholesale clients only. Credit ratings information published by Fitch is not intended to be used by persons who are retail clients within the meaning of the Corporations Act 2001.

DPC-10130790