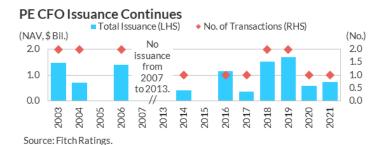


Private Equity Collateralized Fund Obligations (PE CFOs)Recover Following Downturn



PE CFO Quarterly Distributions



Note: Quarter classifications are best fit and do not align to actual quarter months due to different reporting periods for each transaction: 1Q: February–April; 2Q: May-July; 3Q: August–October; 4Q: November–January.

BoP – Beginning of Period. Source: Fitch Ratings.

Related Research

PE CFOs Weather Coronavirus-Driven Downturn (December 2020) Private Equity Collateralized Fund Obligations (PE CFO) Rating Criteria (December 2020)

PE CFOs: Securitizing Private Equity Fund Interests (A Primer Based on Questions from Market Participants) (October 2019)

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Private equity (PE) collateralized fund obligations (CFOs) rated by Fitch Ratings have recovered from the coronavirus pandemic-driven economic downturn and market volatility, with cash flows and loan-to-value (LTV) measures having generally returned to pre-pandemic levels or better. This performance has been driven by significantly improved market conditions and the transactions' structural features, such as de-leveraging mechanisms. Transaction-specific charts and tables on pages 4 and 5 provide additional details.

PE CFOs' stronger positioning relative to prior periods contributed to positive rating actions as of Fitch's recent sector review. Fitch upgraded three tranches of three transactions, changed its Rating Outlook on three tranches of two additional transactions to Stable from Negative, placed one tranche on Rating Outlook Positive and affirmed the remaining tranches at their current ratings.

After a pause of over one year driven by regulatory uncertainty and market volatility, the issuance of PE CFOs resumed in October 2020 with the MCA Fund III transaction and continued in March 2021 with the Astrea VI transaction.

Recovery Drives Increased Distributions

Distributions from underlying PE funds (defined herein as including all private market strategies, such as buyout, growth, credit and others) increased modestly in 3Q20, and more significantly in 4Q20, driven by a broad market recovery. Portfolio ages and sector exposures were the primary drivers for varying levels of distributions across PE CFOs, as illustrated in the lower chart at left.

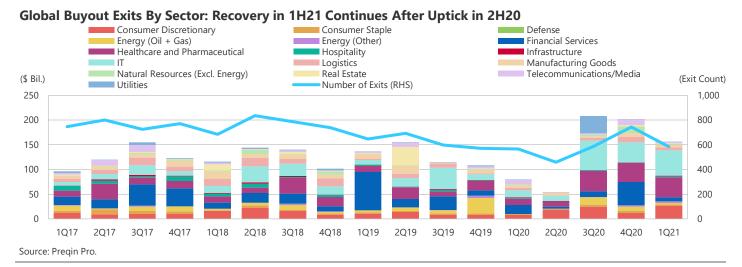
As demonstrated in the chart on page 2, the IT and healthcare sectors drove buyout fund exits during the downturn, and this trend continues. Sectors more heavily impacted by the downturn, such as energy, also saw increased exit activity more recently. Fitch expects a further increase in energy sector exit values in 2Q21, driven by heightened activity. One example is the \$6.4 billion sale of DoublePoint Energy, providing an exit to Apollo and Quantum Energy funds. This deal alone is almost triple the total \$2.2 billion exit value seen in the energy sector in 1Q21, according to Preqin.

Spike in Capital Calls Abates

Capital calls on PE CFOs in the months after the onset of market volatility in 2020 primarily reflected defensive actions by fund general partners (GPs) attempting to support their portfolio companies or build liquidity and, in some cases, make opportunistic add-on acquisitions.

In more recent periods, capital calls on PE CFOs have decreased back to pre-pandemic levels, with existing portfolio companies needing less support from PE funds owing to market stabilization. Assuming normal market conditions, PE CFOs' capital calls are expected to decline over time as underlying funds mature and investment periods expire. As shown in the table on page 5, Fitch-rated PE CFOs own relatively seasoned funds, averaging five years to 11 years in age, with mostly limited remaining unfunded commitments.





Sector Breakdown of Fitch-Rated PE CFOs

Transaction	Astrea III		Astrea IV		Astrea V		SWC		Nassau		MCA Fund III		Astrea VI	
Ranking	Sector	% of NAV	Sector	% of NAV	Sector	% of NAV	Sector	% of NAV	Sector	% of NAV	Sector	% of NAV	Sector	% of NAV
1	IT	21	IT	25	IT	29	Energy	31	Software and Services	21	IT	18	IT	28
2	Industrials	19	Consumer Discretionary	13	Healthcare		Minerals and Mining	20	Capital Goods	15	Industrials	14	Healthcare	20
3	Consumer Discretionary	17	Industrials	13	Industrials	14	Timberland	18	Commercial and Professional Services	14	Healthcare		Consumer Discretionary	13

Note: Sector data is based on each PE CFO's reporting and may not reflect consistent classifications across all transactions. Data as of January 2021 for Astrea III, December 2020 for Astrea IV and Astrea V, February 2021 for SWC and MCA, May 2020 for Nassau and March 2021 for Astrea VI. Source: Fitch Ratings.

LTVs Benefit from Distributions, Valuations

Since the beginning of the economic recovery in 2H20, Fitch-rated PE CFOs have been in line with their LTV targets, supported by recovering distributions and valuations. During the height of the downturn in mid-2020, some PE CFOs' LTVs rose above their target levels before being cured, either during the same or subsequent period. The chart on page 3 shows relative LTVs for rated tranches.

Valuations^a recovered in 2H20 across Fitch-rated transactions, driven by exposure to strong performing sectors and more modest appreciation in credit and energy funds. The Astrea transactions appreciated 7%–13% for the three-month period ended in October 2020 and 8%–12% for the three-month period ended in January 2021, while the MCA transaction appreciated 6% for the February 2021 distribution period. Nassau appreciated 5% and 8% during the November 2020 and February 2021 quarterly reporting periods, respectively, while SWC's valuations appreciated 4% and 5% for the same respective distribution periods.

During the downturn in 2020, equity distributions from some PE CFOs were redirected to de-lever senior notes. Since then, all transactions have resumed paying their equity holders excess

distributions with the exception of SWC, which reinvested excess cash into additional funds.

The Astrea and MCA transactions are de-leveraging as scheduled, while Nassau is not required to pay down notes except to maintain its LTV targets. SWC's reinvestment period has ended and, beginning with the November 2020 period, SWC entered mandatory amortization, based on a percentage of available cash.

Liquidity Remains Sufficient

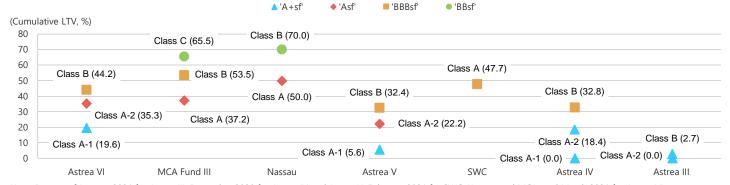
Liquidity remains adequate for Fitch-rated PE CFOs, as distributions and cash on hand have been sufficient to cover capital calls, interest and expenses without drawing on contingent liquidity facilities, as shown in the table on page 4. Distributions have significantly outpaced capital calls, while overall one-year liquidity coverage ratios (defined below) have ranged from 2.6x to 11.0x.

In addition to liquidity provided by distributions, Fitch-rated PECFOs have other contingent liquidity sources that can provide further support. Contingent liquidity available varies across the transactions and includes reserve accounts, the ability to call on the sponsor to cover capital calls and bank-provided liquidity facilities.

^aValuation figures cited are based on reported NAVs in quarterly or semiannual trustee reports for each transaction. For the Astrea transactions, Fitch used fund-level data for the quarters not reported in the semiannual report. These figures are based on the latest valuations reported by underlying funds, which may not be for the same date across all transactions, and which are then adjusted for calls and distributions.



Fitch-Rated PE CFO Cumulative LTV Comparison, Net of Reserves, by Tranche Rating



Note: Data as of January 2021 for Astrea III; December 2020 for Astrea IV and Astrea V; February 2021 for SWC, Nassau and MCA; and March 2021 for Astrea VI. Source: Fitch Ratings.

Stabilizing Outlooks, Positive Rating Actions

PE CFOs' stronger positioning relative to prior periods contributed to positive rating actions at the time of Fitch's sector review in February 2021. Most of the Astrea transactions' notes were affirmed; exceptions are the Astrea III class B notes, Astrea IV class A-2 bonds and Astrea V class A-1 bonds, which were upgraded to 'A+sf', driven by strong underlying portfolio performance leading to strong liquidity and continued de-leveraging. Additionally, the Astrea V class A-2 bonds were placed on Rating Outlook Positive. (Fitch Upgrades Astrea III's Class B to 'A+sf'; Affirms Class A-2 at 'A+sf'; Outlook Stable); (Fitch Upgrades Astrea IV's Class A-2 to 'A+sf'; Affirms Class A-1 and B; Outlook Stable); (Fitch Upgrades Astrea V's A-1 Bonds; Affirms A-2 and B Bonds; Assigns Positive Outlook to A-2 Bonds); (Fitch Assigns Final Ratings to Astrea VI Pte. Ltd.; Publishes New Issue Report)

SWC's class A notes and Nassau's class A and B notes were affirmed with their Rating Outlooks revised to Stable from Negative, reflecting the transactions' performance through the pandemic and sufficient cushion for the transactions before breaching Fitch's modeling scenarios or LTV limits. (Fitch Affirms SWC Funding LLC Class A Notes' 'BBBsf'; Outlook Stable For All Ratings); (Fitch Affirms Nassau 2019 CFO LLC; Revises Outlook to Stable)

MCA's class A, B and C notes were affirmed at their rating levels. (Fitch Affirms MCA Fund III Holding, LLC)

The ratings on PE CFO notes may be upgraded in the future if LTVs decrease further. If cash flows materialize at lower than expected levels or there is a material decline in NAV indicating insufficient forthcoming cash distributions, the ratings may be downgraded or placed on Rating Outlook Negative or Rating Watch Negative.

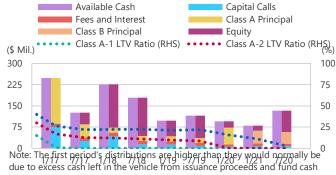
Liquidity Profiles of Fitch-Rated PE CFOs

(\$ Mil.)	I.) Liquidity Sources				quidity Uses		Liquidity Ratios				
Transaction	One-Year Distributions ^a	Contingent Liquidity Available ^b	Total Liquidity (One Year)	•	Fees and Expenses	Note Interest		Portfolio Liquidity (Distributions to Capital Calls) (x)	PE CFO Liquidity (One-Year Liquidity Sources to Uses) (x)		
Astrea III	213	141	354	16	3	13	32	13.3	11.0		
Astrea IV	212	204	416	21	4	27	52	10.2	8.0		
Astrea V	305	195	500	65	7	27	99	4.7	5.1		
Astrea VI	237	208	445	56	8	22	86	4.2	5.2		
SWC	46	50	96	26	1	10	37	1.8	2.6		
Nassau	108	30	138	18	3	12°	33	5.9	4.2		
MCA Fund III	86	O _q	86	Oq	3	16 ^e	19	1.3	4.6		

"The one-year period in the analysis above covers December 2019 to December 2020 for Astrea III; December 2019 to November 2020 for Astrea IV and Astrea V; and February 2020 to January 2021 for SWC, Nassau and MCA Fund III. The figures for Astrea VI do not represent the first distribution for the transaction; the cash flows are estimates based on the portfolios' historical cash flows, and transaction expenses are estimated based on transaction documents. PNassau, SWC, Astrea IV and Astrea V contingent liquidity facilities to cover interest, expenses and capital calls. Astrea III's contingent liquidity consists of a liquidity facility to cover interest and expenses and a fully funded reserve account to cover outstanding unfunded commitments. Liquidity facility availability is as of the end of the period analyzed. SWC also has the ability to request that the sponsor meet capital calls, and Nassau can address insufficient internal liquidity generation by causing one of the PE CFO's equity owners (which is also an affiliate of the manager) to contribute additional capital in return for preferred shares. Cash on hand is not included in the figures above for any transaction. Interest for Nassau's class B notes is deferrable. The sponsor will fund all capital calls in MCA Fund III. For the one-year period ended in February 2021, capital calls for the portfolio were \$66 million. Interest for MCA Fund III's class A, B and C notes is deferrable.



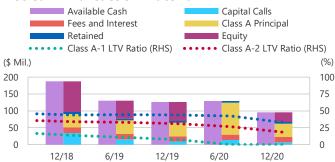
Astrea III Transaction Waterfall



flows prior to closing. LTV ratios are net of cash in the reserve accounts. Available cash includes fund distributions, interest income and draws on cash accounts.

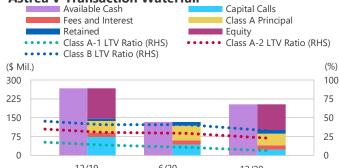
Source: Fitch Ratings, Azalea.

Astrea IV Transaction Waterfall



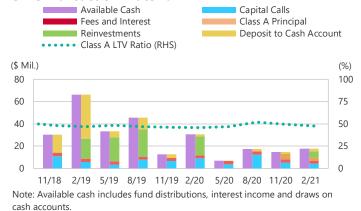
Note: The first period's distributions are higher than they would normally be due to excess cash left in the vehicle from issuance proceeds and fund cash flows prior to closing. LTV ratios are net of cash in the reserve accounts. Available cash includes fund distributions, interest income and draws on cash accounts. Source: Fitch Ratings, Azalea.

Astrea V Transaction Waterfall



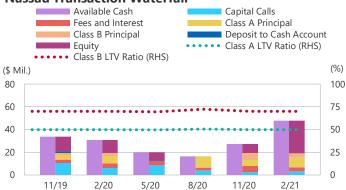
12/19 6/20 12/20
Note: The first period's distributions are higher than they would normally be due to excess cash left in the vehicle from issuance proceeds and fund cash flows prior to closing. LTV ratios are net of cash in the reserve accounts. Available cash includes fund distributions, interest income and draws on cash accounts. Source: Fitch Ratings, Azalea.

SWC Transaction Waterfall



Source: Fitch Ratings, SWC.

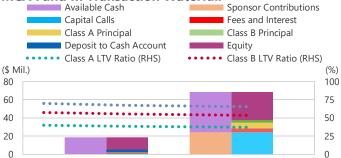
Nassau Transaction Waterfall



Note: Available cash includes fund distributions, interest income and draws on cash accounts.

Source: Fitch Ratings, Nassau.

MCA Fund III Transaction Waterfall



Note: The first period's available cash is lower than normal because this period only includes three days from the transaction's launch through Oct. 31, 2020 and includes prelaunch cash flows. Available cash includes fund distributions, realized gains/losses and investment income.

Source: Fitch Ratings, CUNA Mutual.

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Name	Astrea VI	MCA Fund III	Nassau	Astrea V	SWC	Astrea IV	Astrea III
Sponsor	Azalea/Temasek	CUNA Mutual	Nassau	Azalea/Temasek	Sightway/Two Sigma	Azalea/Temasek	Azalea/ Temasek
Sponsor Type	ponsor Type Government- Linked		Insurance Insurance		Asset Manager	Government- Linked	Government- Linked
Launch Date	unch Date March 2021		September 2019	June 2019	August 2018	June 2018	June 2016
Reporting Date	3/18/2021	1/31/2021	1/31/2021	12/7/2020	1/31/2021	11/30/2020	12/23/2020
Capital Structure (Class	s LTV as % of NAV	and Cumulative LT	V as % of NAV, Ne	t of Cash Reserves)			
'A+sf'	19.6 (19.6)	_	_	5.6 (5.6)	_	18.4 (18.4)	2.7 (2.7)
'Asf'	15.7 (35.3)	37.2 (37.2)	50.0 (50.0)	26.6 (22.2)	_	_	_
'BBBsf'	8.9 (44.2)	16.3 (53.5)	_	10.2 (32.4)	47.7 (47.7)	14.2 (32.8)	_
'BBsf'	_	12 (65.5)	20.0 (70.0)	_	_	_	_
Unrated Debt	_	_	_	_	_	_	19.0 (21.7)
Equity	55.8	34.5	30.0	67.6	52.3	67.2	74.0
Portfolio							
Weighted Average Fund Age (Years; By Total Exposure)	7	5	9	7	7	9	11
NAV (\$ Mil.)	1,456	602	306	1,382	438	762	450
Unfunded Commitment (\$ Mil.)	156	167	59	130	105	104	86
Unfunded (% of Total Exposure)	10	22	16	9	19	12	16
Total Exposure (\$ Mil.)	1,612	769	364	1,512	543	865	536
# of Funds and Co-Investments	35	71	144	38	44	36	31
Largest Fund Strategy (% of Total Exposure)	Buyout (83%)	Buyout (26%)	Buyout (45%)	Buyout (79%)	Natural Resources — Oil and Gas (38%)	Buyout (89%)	Buyout (72%)
Second Largest Fund Growth Equity Strategy (% of Total (17%) Exposure)		Secondaries (18%)	Mezzanine (38%)	Growth Equity (21%)	Natural Resources — Excluding Oil and Gas (31%)	Growth Equity (9%)	Growth Equity (28%)
Third Largest Fund Strategy (% of Total Exposure)	-	Mezzanine (16%)	Venture Capital (17%)	-	Venture Capital (17%)	Private Debt (2%)	_
Source: Fitch Ratings.							

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