Astrea V Pte. Ltd.

New Issue Report

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Closed-End Funds and Market Value Structures Rating Criteria (July 2018)

Structured Finance and Covered Bonds Counterparty Rating Criteria (April 2019)

Global Structured Finance Rating Criteria (April 2019)

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Capital Structure

Class	Rating	Amount (Mil.)	Currency	Maturity	Approx.% of NAV	Approx. NAV OC (%)
A-1	Asf	315	SGD	June 2029	17.4	65.2
A-2	Asf	230	USD	June 2029	17.4	65.2
B	BBBsf	140	USD	June 2029	10.5	54.7

Ratings are not a recommendation to buy, sell or hold any security. The offering circular and other materials should be reviewed prior to any purchase.

Transaction Overview

Fitch Ratings assigned ratings to the class A-1, A-2, and B bonds issued by Astrea V Pte. Ltd. (Astrea V) as displayed in the table above. Astrea V is a collateralized fund obligation (CFO) transaction managed by Azalea Investment Management Pte. Ltd. (Azalea) and backed by interests in a diversified pool of private equity funds, with approximately $1.3 billion net asset value (NAV) of funded commitments and $215 million of unfunded capital commitments as of March 31, 2019.

The underlying funds will distribute cash as they generate income or exit investments and will make capital calls when they require additional cash to invest. Cash flows generated by the funds will be used to pay off the bonds, as well as interest and other expenses.

Key Rating Drivers

NAV Overcollateralization: The rated bonds make up approximately 45% of the NAV at issuance, providing a sufficient level of credit enhancement at the indicated rating levels as per Fitch's rating criteria. The 65.3% of credit enhancement for class A and 54.7% credit enhancement for class B provide the bonds with a cushion in case private equity distributions are realized at lower levels than expected. A loan-to-value (LTV) test will redirect cash flows to de-lever the transaction at a constant 50% threshold during the transaction's life.

Structural Features: Key structural features include a credit facility to fund capital calls in the event of a cash shortfall and to bridge liquidity gaps between cash flow generation and interest payments and other expenses; amortization triggers tied to the LTV test; reserves accounts for the class A-1 and class A-2 bonds; currency hedges to pay interest and principal of class A-1 bonds denominated in Singapore dollars and hedge euro-denominated fund exposure; and long final maturities of the bonds to support the structure's ability to weather a down market.

Diversified Portfolio: Astrea V's portfolio of private equity interests is diversified by vintage, geography, managers, and funds, which mitigates some of the market cyclicality and idiosyncratic factors that drive private equity fund performance. The portfolio comprises 38 funds managed by 32 fund managers, with 862 underlying investments.

Ability to Withstand Stress: Fitch measured the ability of the structure to withstand weak performance in its underlying funds in combination with adverse market cycles. The class A-1 and class A-2 bonds are rated 'Asf', in line with their ability to withstand fourth quartile level performance in the underlying funds. The class B bonds are rated 'BBBsf', in line with their ability to withstand third quartile level performance in the underlying funds.

Counterparty Exposure: Certain structural features of the transaction involve significant reliance on counterparties, such as the credit facility provider, account banks, and hedge counterparties, and the rating on the bonds could be negatively affected in the event of a key counterparty downgrade. Fitch believes this risk is mitigated by counterparty replacement provisions in the transaction documents that align with Fitch's criteria.

Ratings Linked to Reserve Investments: The funds in the reserves accounts will be invested in securities or bank deposits, as specified in transaction documentation. As these investments can have long-dated maturities and could have a material impact on the performance of the rated bonds, the ratings of the Astrea V A-1 and A-2 bonds will be capped at and linked to the ratings of investments in the reserves accounts.

If the investments in the reserves account are downgraded below the rating levels of the class A-1 and A-2 bonds at a future date, this will likely cause a corresponding downgrade to the ratings of the class A-1 and A-2 bonds. At launch, these investments will be rated higher than the ratings of the class A-1 and A-2 bonds and, therefore, do not constrain the ratings.

Capabilities of the Manager: Fitch believes the manager (Azalea, an indirect subsidiary of Temasek) has the capability and resources required to manage this transaction. Azalea's management team has extensive experience and institutional knowledge in the private equity industry, in addition to having experience structuring previous PE CFO transactions.

Alignment of Interests: The sponsor's (Astrea Capital V, which is owned by Azalea and ultimately Temasek) and bondholders' interests are strongly aligned, as the sponsor will hold the entire equity stake (approximately 55% of NAV) in Astrea V.

Asset Isolation and Legal Structure: Legal opinions Fitch reviewed indicate that the issuer is structured as a bankruptcy-remote entity and holds 100% of the asset-owning companies AsterFive Assets I Pte. Ltd and AsterFive Assets II Pte. Ltd. (collectively, AOCs) and that the assets held by the AOCs have been transferred as a true sale.

Rating Cap at 'Asf' Category: Fitch has a rating cap at the 'Asf' category for PE CFO transactions, primarily driven by the uncertain nature of PE fund cash flows.

Structure Overview

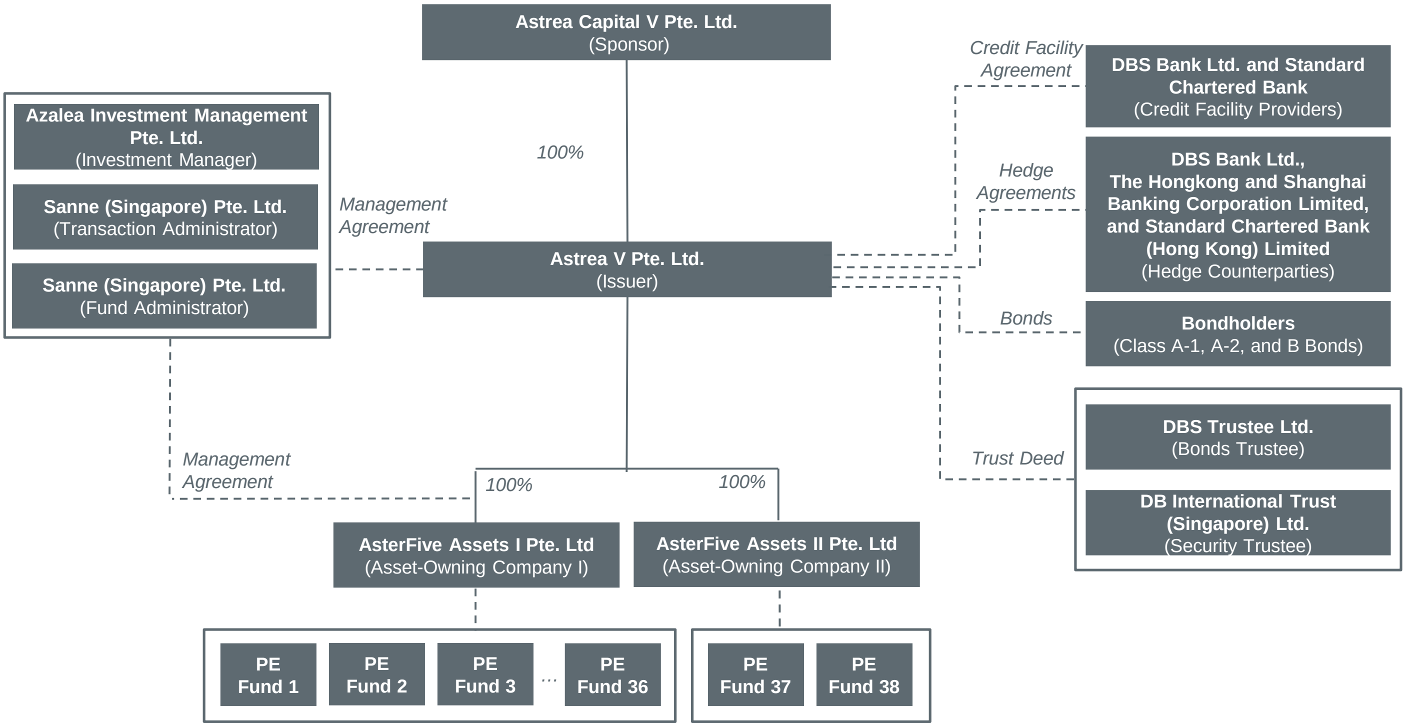
Astrea V is a special purpose entity that will be the sole shareholder of the AOCs. The issuer's capitalization will include the class A-1, class A-2 and class B bonds, as well as an equity tranche. The net cash received by the issuer via the issuance of the bonds will be used by the AOCs to repay a certain portion of existing loans from the sponsor, Astrea Capital V, which were incurred in connection with the AOCs' acquisition of the fund investments.

The AOCs will hold the fund investments as limited partners (LPs) for each of the underlying interests. They will transfer cash distributions from the fund investments to the issuer, which will apply the distributions semiannually in accordance with the priority of payments. No additional funds are permitted to be purchased and funds may only be sold under certain restrictions, as described below, ensuring the portfolio is fixed through the course of the transaction. AsterFive Assets I Pte. Ltd. will hold 36 fund investments and AsterFive Assets II Pte. Ltd. will hold two fund investments. The structure of the AOCs and allocations of specific private equity funds to each AOC are for tax reporting purposes.

Related Research

Private Equity Collateralized Fund Obligations Gain Traction (February 2019)

Astrea V: Post-Closing Structure



Source: Fitch Ratings, Astrea V Pte. Ltd..

Portfolio Overview

The portfolio is diversified across a number of metrics, which mitigates some of the risk from the uncertain nature of private equity cash flows. Approximately 53% of Astrea V's total exposure falls in the top two performance quartiles based on data from Preqin Ltd. Four funds, consisting of approximately 8% of the portfolio's total exposure, are in the bottom quartile of returns, which is relatively strong compared to portfolios of other CFOs Fitch has rated. Fitch views positively the low exposure to weaker performing funds in the portfolio.

Fitch believes the portfolio is well diversified across primarily large managers with long track records, which should reduce idiosyncratic risks in individual funds. As of Dec. 31, 2018, the funds in the portfolio had 862 underlying individual holdings, comprising different industries, asset types, and geographies. In addition to the diversification characteristics mentioned, the funds are mature with low unfunded capital commitments, approximately 16% of NAV, a weighted average vintage of 2014 and a weighted average investee company investment holding period of approximately 3.2 years, as shown in charts below.

Top 5 General Partners

(As of March 31, 2019)	(% of NAV)
KKR	9.0
Warburg Pincus	6.5
TPG	6.0
Silver Lake	5.4
CVC Capital Partners	5.2

Source: Astrea V Pte. Ltd.

Astrea V Portfolio

(As of March 31, 2019)

No.	Funds	Vintage	Geography	Strategy	Commitment (USD Mil.)	NAV (USD Mil.)	% of NAV	Undrawn Capital Commitments (USD Mil.)	Total Exposure (USD Mil.)	% of Total Exposure
1	Silver Lake Partners IV, L.P.	2013	U.S.	Buyout	60.0	71.7	5.4	4.8	76.5	5.0
2	KKR North America Fund XI L.P.	2012	U.S.	Buyout	60.0	62.3	4.7	6.1	68.4	4.4
3	Warburg Pincus Private Equity XI, L.P.	2012	U.S.	Growth equity	60.0	54.2	4.1	0.0	54.2	3.5
4	A8 — B (Feeder) L.P.	2012	Europe	Buyout	50.0	53.3	4.0	3.5	56.8	3.7
5	General Atlantic, L.P.	2015	U.S.	Growth equity	50.0	52.7	4.0	3.8	56.5	3.7
6	Yunfeng Fund II, L.P.	2014	Asia	Growth equity	30.0	52.1	3.9	0.1	52.2	3.4
7	Hahn & Company I L.P.	2011	Asia	Buyout	50.0	49.7	3.8	0.5	50.2	3.3
8	PAG Asia I LP	2011	Asia	Buyout	50.0	48.8	3.7	4.4	53.2	3.5
9	Bain Capital Fund XI, L.P.	2014	U.S.	Buyout	50.0	48.3	3.6	11.4	59.7	3.9
10	TPG Partners VII, L.P.	2015	U.S.	Buyout	50.0	46.9	3.5	11.0	57.9	3.8
11	Thoma Bravo Fund XII-A, L.P.	2016	U.S.	Buyout	40.0	40.9	3.1	2.8	43.7	2.8
12	Permira V L.P.1	2014	Europe	Buyout	33.7	37.8	2.9	5.5	43.3	2.8
13	Insight Venture Partners (Cayman) IX, L.P.	2014	U.S.	Growth equity	25.0	37.0	2.8	0.9	37.9	2.5
14	EQT Mid Market (No. 1) Feeder Limited Partnership	2013	Europe	Buyout	33.6	35.2	2.7	2.5	37.7	2.4
15	CVC Capital Partners Asia Pacific IV L.P.	2014	Asia	Buyout	40.0	35.0	2.6	8.8	43.8	2.8
16	CVC Capital Partners VI (B) L.P.	2014	Europe	Buyout	33.7	34.1	2.6	0.8	34.9	2.3
17	Clayton, Dubilier & Rice Fund IX, L.P.	2013	U.S.	Buyout	35.0	33.0	2.5	5.6	38.6	2.5
18	EQT VII (No. 1) Limited Partnership	2015	Europe	Buyout	33.6	32.8	2.5	7.5	40.3	2.6
19	Blackstone Capital Partners VII L.P.	2016	U.S.	Buyout	50.0	32.7	2.5	24.2	56.9	3.7
20	Welsh, Carson, Anderson & Stowe XII, L.P.	2015	U.S.	Buyout	35.0	32.7	2.5	10.4	43.1	2.8
21–38	Other	Various	Various	Various	506.8	433.2	32.6	100.4	533.6	34.6
Total — Astrea V Portfolio	**—**	**2014**	**—**	**—**	**1376.4**	**1324.4**	**100.0**	**215.0**	**1539.4**	**100.0**

Source: Astrea V Pte. Ltd.

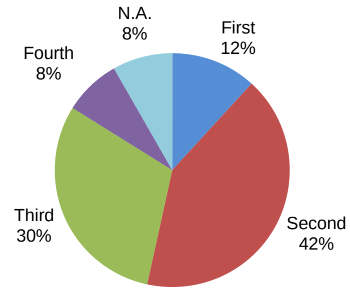
Underlying Investment Sector Breakdown

(As of Dec. 31, 2018)	(% of NAV)
Information Technology	23.9
Healthcare	17.6
Consumer Discretionary	15.3
Industrials	14.4
Communication Services	8.0
Financials	7.4
Consumer Staples	4.4
Materials	3.5
Energy	3.1
Real Estate	1.9
Utilities	0.5

Source: Astrea V Pte. Ltd.

Portfolio Total Exposure by Quartile

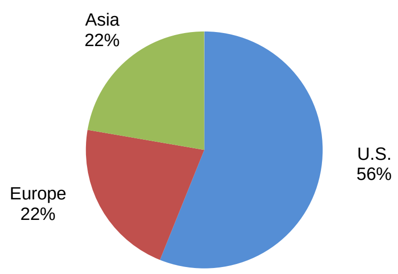
(As of March 31, 2019)



N.A. – Not available.
Source: Preqin.

Portfolio NAV by Geography

(As of March 31, 2019)



Source: Astrea V Pte. Ltd.

Portfolio Stratification

(% of Total Exposure)

Fund Strategy and Age	3 Years Old (2016 Vintage)	4 Years Old (2015 Vintage)	5 Years Old (2014 Vintage)	6 Years Old (2013 Vintage)	7 Years Old (2012 Vintage)	8 Years Old (2011 Vintage)	Total
Growth Strategy	—	6	6	—	5	—	**18**
Buyout Strategy	12	11	18	22	12	7	**82**
Total	**12**	**18**	**24**	**22**	**17**	**7**	**100**

Source: Fitch Ratings.

Transaction Comparison – At Launch

	Astrea V Pte. Ltd	Astrea IV Pte. Ltd.	Astrea III Pte. Ltd.	SWC Funding LLC
Sponsor	Astrea Capital V Pte. Ltd.	Astrea Capital IV Pte. Ltd.	Astrea Capital Pte. Ltd.	Sightway Capital, LP
Closing Date	June 20, 2019	June 14, 2018	July 8, 2016	August 3, 2018
Issuance ($ Mil.)				
Total Debt Issuance	600	501	510	216
Capital structure (% of NAV)				
'Asf'	35	36	30	50
'BBB'sf	10	10	9	—
Non-Investment Grade or Unrated Debt	N.A.	N.A.	6	N.A.
Equity	55	54	55	50
Portfolio				
Collateral NAV ($ Mil.)	1,324.4	1,098.4	1,141.6	432.4
Unfunded (as % of NAV)	16	15	18	19
Total Exposure ($ Mil.)	1,539.4	1,266.5	1,343.0	516.1
No. of Funds	38	36	34	32
No. of Managers	32	27	26	19
No. of Co-Investments	N.A.	N.A.	N.A.	7
No. of Portfolio Holdings	862	596	592	244
Weighted Average Fund Age (in Years)	5	7	7	5
Allowed to Sell Investments	Yes	Yes	No	Yes
Largest Fund Strategy Exposure with % of NAV	Buyout (81%)	Buyout (86%)	Buyout (77%)	Real Asset — Natural Resources — Excluding Oil & Gas (51%)
Second Largest Fund Strategy Exposure with % of NAV	Growth (19%)	Growth Equity (12%)	Growth Equity (23%)	Real Asset — Natural Resources — Oil & Gas (22%)
Third Largest Fund Strategy Exposure with % of NAV	—	Private Debt (2%)	—	Equity — Venture Capital (11%)

N.A. – Not applicable.
Source: Fitch Ratings.

Structural Features

Given the uncertain nature of private equity fund distributions and the reliance on market valuations, the transaction includes structural protections to help the rated bonds potentially weather negative market cycles and depressed valuations when private equity distributions may be low. The class A-1 and class A-2 bonds both have a scheduled call date of five years, but all classes of bonds issued (including the class B bonds) have longer legal maturities of 10 years, which could give the bonds additional time to potentially weather a market downturn. Fitch's ratings address the timely repayment of the bonds at their legal final maturities, not the potential repayment at the earlier scheduled call dates.

The reserves accounts will retain cash distributions for the repayment of the class A bonds until the scheduled call date or the distribution date at which the class A reserves accounts cap is met. The structure also has a credit facility sized to 50% of the amount of unfunded commitments to the underlying funds plus an amount that steps down to cover operating expenses and interest on the bonds. These features help mitigate the cyclicality of private equity funds that Fitch considered in its analysis.

Reserves Accounts

The USD230 million (SGD315 million as of May 21, 2019) principal amount of the class A-1 bonds and the USD230 million class A-2 bonds are to be reserved over their expected call dates and funded as provided in the priority of payments. Payments to the reserves accounts will be made on semiannual distribution dates to provide sufficient funds to fully repay both the class A-1 bonds and the class A-2 bonds at year five, as per the table below. Additionally, clause 13 of the priority of payments allows for additional payments to the reserves accounts when the performance threshold is met.

Reserves Accounts

Distribution Date	Total Class A-1 and A-2 Reserve Amount ($ Mil.)
First	46.7
Second	46.7
Third	46.7
Fourth	46.7
Fifth	46.7
Sixth	46.7
Seventh	46.7
Eighth	46.7
Ninth	46.7
Tenth	46.7
Total (USD)	467

Source: Astrea V Pte. Ltd.

Scheduled Call Date Scenarios

Balance of Reserves Account at the Scheduled Call Date	Class A-1 Bonds Status	Class A-2 Bonds Status
Less than the principal amount of the class A-1 bonds	Not Redeemed	Not Redeemed
Greater than or equal to the principal of the class A-1 bonds but less than the aggregate principal amount of the class A-1 and A-2 bonds	Redeemed	Partially Redeemed
Greater than or equal to the aggregate principal amount of the class A-1 and A-2 bonds	Redeemed	Redeemed

Note: Assumes there is no balance drawn on the credit facility.
Source: Astrea V Pte. Ltd.

If available cash on any distribution date is insufficient to satisfy the reserve amount, the unpaid balance carries forward to subsequent distribution dates until paid through the priority of payments. Amounts transferred to the reserves accounts are capped (the reserves accounts cap) at USD467 million, which is more than the combined principal amount of the class A-1 and A-2 bonds.

If at end of year five on the scheduled call date of the class A-1 and A-2 bonds, the total balance of the reserves accounts and reserves custody account is at least equal to the principal of the class A-1 bonds and there is no balance drawn on the credit facility, then the class A-1 bonds will be fully redeemed with the remaining balance used to redeem part or all of the principal amount of the class A-2 bonds on the same date as the redemption of the class A-1 bonds. Any remaining outstanding class A-2 bonds will be redeemed on subsequent distribution dates using available cash flows.

In a default scenario, the class A-1 and class A-2 bonds have equal claim on monies in the reserves accounts. Outside of a default scenario, under expected case scenarios and under some stress scenarios, the class A-1 and class A-2 bonds are likely to be called and paid off at the same time; however, under more stressful conditions, the class A-1 bonds may be called and paid off before the class A-2 bonds. Fitch believes these dynamics create time subordination between the class A-1 and class A-2 bonds in periods of stress, although the current levels of LTV support rating equalization between the two classes.

Maximum LTV Ratio

The priority of payments provides for the deleveraging of the issuer on any distribution date at which the LTV exceeds 50% (maximum LTV ratio), subject to available funds in the structure. The purpose of this feature is to de-lever the structure to reduce bondholders' exposure to the risk of portfolio valuation declines or the risk of cash flow exiting the structure and rendering the remaining NAV insufficient to provide future distributions to support the bonds. There is no requirement to sell fund interests upon a breach of the LTV ratio.

LTV is calculated as the outstanding balance of the credit facility and the bonds (net of the class A-1 and class A-2 reserves accounts balance and any principal repayments on the class B bonds) divided by the portfolio NAV. If LTV exceeds the 50% threshold, 100% of the remaining cash flow after payment of amounts due under clauses 1 through 9 of the priority of payments in the Appendix will be paid in accordance with clause 10. If the class A-1 bonds are still outstanding, the cash flow will be used to fund the reserves accounts until the reserves accounts cap is reached and then to pay down the class B bonds until the maximum LTV ratio is no longer in breach. If the class A-1 bonds have been redeemed, the cash flows will be applied to the principal repayment of the class A-2 bonds and then to the class B bonds until the maximum LTV ratio is no longer in breach.

Credit Facility

The credit facility is a senior standby multi-currency liquidity facility established with DBS Bank Ltd. (DBS; AA–/F1+/Stable Rating Outlook) and Standard Chartered Bank (SCB; A+/F1/Stable Rating Outlook) to fund (i) taxes, administrative expenses, management fees, hedging-related payments and interest on the class A-1, class A-2 and class B bonds (payments due under clauses 1 through 4, except for clause 4(iii), and clause 5 through 6 of the priority of payments) and (ii) capital calls in the event of a shortfall in distributions in certain payment periods. The credit facility fully matures upon the earlier of the end of year 10 or the date on which all classes of bonds are fully redeemed (termination date).

Credit Facility “A” Availability

(As of March 31, 2019)

Stepdown Provision	Amount ($ Mil.)
Years 1–3 of the Transaction	130
Years 4–6 of the Transaction	100
Year 7 of the Transaction through the Termination Date	40

Note: Facility “B” sizing is discussed at right.
Source: Astrea V Pte. Ltd.

The amount available under the facility is USD238 million at issuance. The total amount available to draw under the credit facility is sized in two parts, “A” plus “B”. Facility “A” will step down in accordance with the table at left, while facility “B” will be sized to 50% of the unfunded capital commitments.

Interest on the amount drawn is paid at a rate of the relevant London Interbank Offering Rate (LIBOR) plus 1.75%. There is an annual 57.5 basis point (bp) commitment fee on the undrawn portion.

Per clause 4 of the priority of payments in the Appendix, any cash in the operating account on any distribution date will be used to pay the credit facility up to the lesser of the outstanding loan balance or the full amount of cash in the operating account. Any loan amount outstanding after this payment is repayable on the next distribution date if there is sufficient cash in the operating account. In any event, the full amount of the loan balance must be repaid by the termination date.

DBS and SCB can cancel the commitment or declare the outstanding amount due and payable if there is an event of default under the credit facility agreement. Such events include non-payment of loan principal or interest when due, insolvency or non-payment of any debt of the issuer and any event of default under the bonds.

Either credit facility provider will be required to be replaced if the provider’s rating falls below the lower of ‘A–’ and ‘F1’ or the then prevailing rating of the most senior class of outstanding Astrea V bonds (credit facility minimum rating requirement), provided the replacement would not cause a downgrade to the then prevailing rating of the most senior class of outstanding Astrea V bonds. The documents provide that the issuer and lender make “commercially reasonable” efforts to effect the replacement within 30 days. These eligibility thresholds and replacement language are in line with Fitch’s “Structured Finance and Covered Bonds Counterparty Rating Criteria” report.

The relative amount of liquidity available under the credit facility for the transaction is lower than in previous Astrea transactions but is sufficient for the projected use of the facility under Fitch’s stress scenarios and is in line with other Fitch-rated PE CFOs. Under Fitch’s most severe stress scenario, the maximum utilization of the facility was $96 million, representing about 41% of its total capacity.

Hedging

Full principal and semiannual interest on the class A-1 bonds is payable in Singapore dollars, unlike the other bond classes, which are payable in U.S. dollars. The fund investments are denominated in US dollars and euros, creating a currency mismatch between Astrea V's assets and liabilities. The issuer will employ hedge agreements to help mitigate the risk that volatility in FX rates may negatively affect the cash flows needed to fund the required payments under the bonds.

Fitch notes that clause 12 of the priority of payments is a "flip clause," which places any termination payments due to a hedge counterparty that is in default in a junior position in the transaction's priority of payments. The purpose of this provision is to mitigate the potential impact caused by the default or non-performance of the counterparty. In case the issuer does not pay a hedge counterparty, the transaction documents include a "non-petition" clause that prevents the counterparty from causing the issuer to file for bankruptcy.

A hedge counterparty will be replaced if its rating falls below the lower of 'A–' and 'F1' or the then prevailing rating of the most senior outstanding class of Astrea V bonds (hedge counterparty minimum rating requirement), provided the replacement would not cause a downgrade to the then prevailing rating of the most senior outstanding class of Astrea V bonds. The documents provide that the issuer and hedge counterparty make "commercially reasonable" efforts to effect the replacement within 30 days. These eligibility thresholds and replacement language are in line with Fitch's "Structured Finance and Covered Bonds Counterparty Rating Criteria" report.

Class A-1 Bonds – Principal Amounts

To mitigate the class A-1 bonds' foreign currency (FX) mismatch risk, the issuer will be entering into forward contracts to buy Singapore dollars and sell U.S. dollars to hedge 100% of the principal amount of the class A-1 bonds.

The issuer will take delivery of the SGD315 million to fully repay the class A-1 bonds across a series of fixed forwards that will be settled before the scheduled call date. If, for any forward contract, the reserves accounts are funded with less than the amount required to settle the forward contract, the issuer will settle the forward for the amount of U.S. dollars that has been accumulated. For the underfunded U.S. dollar amount, the issuer has the discretion to roll over the hedge by entering into a six-month or longer FX forward transaction with the counterparty. The forward transaction will result in cash flows to the issuer based on the difference between the initial forward transaction versus the spot rate of the new forward. There would be a net cash inflow if the U.S. dollar has depreciated and a net cash outflow if the U.S. dollar has appreciated since closing.

At the discretion of the issuer, if at year 5.5, the reserves accounts are still not fully funded, the rollover process would be repeated with another six-month FX forward for the underfunded USD amount. The FX forward would expire at the next distribution date, and at the issuer's discretion, the process would repeat until class A-1 bonds are fully repaid.

If the reserves accounts are funded with less than the USD amounts required to settle the hedge, the issuer will be required to make a payment to the counterparty to settle the hedge if the U.S. dollar appreciated against the Singapore dollar compared to the forward rate. However, this situation is unlikely because even if the reserves accounts contain only half the scheduled reserves, this would be sufficient to settle the hedge. Under all of the adverse scenarios Fitch ran, model results indicate there would be sufficient funds in the reserve account to fully settle the hedge for the class A-1 bonds.

Class A-1 Bonds – Interest Amounts

At closing, the issuer will enter into ten separate forward contracts with the hedge counterparties in amounts to fully match the ten semiannual interest payments on the class A-1 bonds.

If the reserves accounts are underfunded and the class A-1 bonds are not redeemed at the scheduled call date, the issuer may enter into a six-month forward contract for the interest payment due at year 5.5. If at year 5.5, the reserves accounts are still not fully funded, it will be at the discretion of the issuer to enter into a new six-month forward contract for the interest payment due at the next distribution date and, at the issuer's discretion, continue the process until the class A-1 bonds are fully repaid.

Euro NAV Hedge

Euro NAV Hedge

No.	Forward Tenor (Years)	Euro Hedge Amount (EUR Mil.)
1	0.5	5
2	1.0	5
3	1.5	15
4	2.0	15
5	2.5	18
6	3.0	18
7	3.5	18
8	4.0	16
9	4.5	16
10	5.0	13
11	5.5	8
12	6.0	8

Source: Astrea V Pte. Ltd.

FX risk in the portfolio is viewed as manageable, as the bulk of fund investments provide distributions in USD. Of the 38 funds in the portfolio, eight funds, totaling about USD233 million of NAV (18% of total NAV), call capital and make distributions in euros. To mitigate FX risk posed by the euro-denominated funds (compared to the U.S. dollar and Singapore dollar denominated bonds), the issuer has entered into a series of fixed forward contracts (with fixed forward rates and fixed forward dates), ranging in tenor from six months to six years, to hedge approximately 75% of the initial euro NAV, subject to change before closing. The tenors and notional amounts of euro hedges were set by Azalea to match the manager's projections of euro NAV distributions and are subject to change until closing.

As the timing and amounts of distributions from private equity funds are uncertain, fully hedging the FX exposure is impossible. Not hedging at all would leave Astrea V vulnerable to significant FX exposure but attempting to hedge 100% of NAV could still leave the structure over-hedged and exposed to FX risk if distributions come in lower than projected and the FX moves against the structure when it needs to settle the forwards. Hedging a sufficient portion of the NAV, and providing the manager flexibility to hedge further over time if deemed necessary, is a prudent approach, in Fitch's opinion.

Any underperformance in the euro-denominated funds would create an additional FX risk, as the structure is required to deliver euros for each foreign exchange hedge as they become due. As discussed in the Euro Hedge Stresses section, Fitch conducted stress scenarios to model the sensitivity of the structure to underperformance in European funds and to adverse moves in USD/EUR exchange rates and the rated bonds passed at their assigned rating levels.

Disposal Option

Astrea V has the ability to sell stakes in the underlying private equity fund interests at its discretion and more than once, up to 15% of the initial portfolio NAV. Proceeds from the sale or disposal of any underlying fund interests will be received in the collection accounts and then swept into the operating accounts.

At each distribution date, if net cash proceeds have been received from exercising the disposal option, any cash proceeds from the disposal option remaining after clauses 1 through 6 of the waterfall will be applied in accordance with clause 7. Clause 7 dictates that any proceeds from the disposal option will be applied to the reserves accounts of the class A-1 and A-2 bonds. If the bonds are fully reserved, the disposal option proceeds will be applied to principal repayment of the class B bonds. Fitch views the disposal option as a positive, as it may allow the manager to realize some of the outstanding NAV if organic distributions come in lower and/or slower than needed to pay Astrea V's liabilities. Selling fund interests on the secondary market in a stressed environment will likely require a steep discount and, in its modelling, Fitch assumed that the fund disposal option was not used.

If fund interests are sold at significant discounts to their NAVs, the structure may realize less cash than modeled, leading to more adverse outcomes for the bonds than contemplated in Fitch's analysis. However, Fitch views the limit on the percentage of the portfolio that can be sold as well as the strong alignment of interests between bondholders and the parties controlling fund dispositions as significant mitigants to this risk.

Account Banks and Eligible Investments

The funds in the reserves accounts may be placed in security instruments or bank deposits in accordance with eligibility requirements defined in transaction documentation. The transaction documentation permits these investments to mature as late as the class A-1 scheduled call date (i.e. five years from transaction launch), which significantly exceeds the maturity levels contemplated in Fitch's counterparty criteria as it relates to eligible investments. Owing to the significant long-dated exposure bondholders may have to investment counterparties, the ratings of the Astrea V A-1 and A-2 bonds will be capped at the ratings of investments in the reserves accounts or the ratings allowed for investments in the reserves accounts by the transaction documentation, whichever is lower. Therefore, if a security in the reserves accounts is downgraded in the future below the ratings of the class A bonds, the ratings of the bonds may also be downgraded, depending on the materiality of the exposure.

The transaction documents specify that investments in securities require a rating of at least 'AA–' by Fitch. Bank deposits are required to be invested with banks rated at least 'AA–' by Fitch for amounts covering the class A-1 bonds principal, while for amounts above the principal of the class A-1 bonds (i.e. for the benefit of the A-2 bonds in a non-default scenario), the transaction documents require that banks be rated at least 'A+' by Fitch. As noted, the documents permit these investments to mature at the class A-1 scheduled call date or, if the bonds are not called on the call date, by the next distribution date. In the case of deposits, a downgrade below the minimum levels require the account bank to be replaced within 60 days by a bank meeting the transaction documents' minimum rating requirements.

Transaction Accounts Overview

Account Name	Owner	Account Description
Collection Account	Asset-Owning Companies	This account will receive any cash distributions from the funds in the structure or from the operating account to fund capital calls. Cash from this account will be used to fund capital calls and will be swept to the operating account on a daily basis.
Operating Account	Issuer	Monies will be swept here on a daily basis from the collection account. Any proceeds from credit facility drawdowns will also be deposited to this account. Proceeds (in excess of the retained amount) in this account will be applied to the priority of payments at each distribution date. Cash in this account may be used to satisfy a capital call on the structure.
Bonus Redemption Premium Reserves Account	Issuer	This account will receive cash in accordance with clause 13(ii) of the priority of payments if the performance threshold has been met prior to the class A-1 call date. The monies will be paid with the redemption of the class A-1 bonds.
Reserves Accounts	Issuer	This account will receive funds from the priority of payments to hold for ultimate repayment of principal on the class A bonds. In the interim, monies will be used to fund investments in eligible assets.
Reserves Custody Account	Issuer	Custody account used to hold the eligible investments made from funds in the reserves account.
Distributions-in-Kind Custody Account	Asset-Owning Companies	This account will receive any in-kind distributions from the funds in the structure. Funds from this account will be swept to the collection account on a daily basis. This account will only be set up in the future if needed to take in-kind distributions.

Source: Fitch Ratings, Astrea V Pte. Ltd.

Since the ratings of the investments and bank deposits are at the same level or higher than the ratings of the senior bonds, capping and linking the ratings of the Astrea V bonds to the investments will not affect the senior bond ratings assigned at launch. However, absent mitigants, in the event of a future downgrade to an investment or deposit institution, Fitch's criteria would call for the rating on the Astrea V bonds to be capped at the downgraded ratings of the investment or institution if the exposure is deemed material.

Cash Flow Scenario Analysis

As described in Fitch's criteria, when rating PE CFOs, the structure's projected performance and distributions over different market cycles are reviewed to assess whether cash flows are sufficient to pay off the rated obligations based on the transaction's structural features.

The performance scenarios for Astrea V were constructed based on historical data that matched the characteristics of Astrea V's portfolio, primarily the types of funds (buyout and growth) and the ages of the funds. For example, about 18% of the portfolio's exposure comprises buyout funds that are approximately five-year old funds as of the launch of Astrea V in 2019. As a result, Fitch reviewed how five-year old buyout funds performed over different economic cycles. These scenarios correspond to previous economic cycles observed over 10-year intervals to match the legal final maturity of the Astrea V rated bonds.

For example, in one scenario Fitch reviewed how a portfolio similar to Astrea V's current profile would have performed during the 10-year period between 2001 and 2011 (in the tables of the Results section referred to as the start-year 2001 scenario, labeled “2001”. The key data points in the analysis are (1) how much capital the underlying funds called, (2) how much cash the underlying funds distributed and (3) what was the NAV appreciation or depreciation that was driving distributions.

In addition, Fitch stressed the resilience of the structure to potential underperformance in Astrea V's underlying funds. While the portfolio comprises relatively balanced funds as measured by quartiles, in some of the scenarios Fitch ran, all of the funds' performance was assumed to have deteriorated to 4th quartile levels, which negatively affected their projected distributions and other performance measures. In measuring the results of the scenarios, Fitch focused on key metrics, such as the ability to make timely interest and principal payments with respect to the legal final maturity of the rated bonds, total cash flow as a percentage of the transaction NAV, the repayment periods, the use of distributions in the structure, and how various structural protections drove performance of the transaction (LTV triggers, credit facility and so on).

Results

The ‘Asf’ ratings of the class A-1 and class A-2 bonds are supported by the fact that, under all fourth quartile performance projections Fitch ran, the class A-1 and class A-2 bonds made all timely interest and principal payments with respect to their legal final maturity of 10 years. In all cases, the class A-1 bonds were called on the scheduled call date (fifth year) with the ratios of distributed cash coverage to the class A-1 principal amount varying between 1.8x and 2.7x in the different scenarios. The class A-2 bonds were called by the scheduled call date in 9 out of 17 scenarios and distribution coverage ratios varied between 1.3x and 1.9x. The class A-2 bonds were called in year 6.5 under the most punitive scenario.

The ‘BBBsf’ rating of the class B bonds is supported by the fact that, under all third quartile performance projections Fitch ran, the class B bonds made all timely interest and principal payments with respect to their legal maturity of 10 years. The principal payback period for the class B bonds varied between five and seven years. Cash flow coverage varied between 1.7x and 2.3x for the class B bonds.

Generally, the more negative scenarios for the class B bonds are those where the 10-year life of the deal starts with a strong market cycle but turns negative midway through the transaction's life. For example, in the start year 2004 scenario, the portfolio is projected to generate very strong distributions in the first five years of the transaction but then enters the 2008 financial crisis and generates much weaker performance over the next five years. In this scenario, while over the life of the deal total cash distributions are high, in the first five years, the scheduled reserve payments are made for the class A-1 and A-2 bonds, but much of the strong distributions flow out of the structure to the equity holders.

Since the class B bonds do not start being repaid until the class A bonds are repaid, at the earliest in year five, the class B bonds do not benefit from the portfolio's strong distributions in the first five years but only start receiving cash sweeps in the weak years 6-10. In very stressful scenarios, where the class A-2 bonds are called later than year five because of the shortfall in the reserves accounts at the scheduled call date, the class B bonds will have less time to be paid off via realized distributions.

However, relative to previous Astrea transactions, the class B bonds benefit from a younger portfolio that better balances the distribution patterns with the liabilities of the transaction. Because the portfolio is younger, the first few years of the transactions should not experience as much excess distributions above the reserve account requirements, which then flow out to the equity. Instead, model scenarios show that distributions are sufficient to meet reserve account requirements in years 1-5 while leaving more distributions for years 6-10 that will benefit the class B bonds.

Launch Year Scenarios — Fourth-Quartile Performance

Launch Year Scenario	Class A-1 Bonds Payback Period (Years)	Class A-1 Cash Flow to Principal Coverage	Class A-2 Bonds Payback Period (Years)	Class A-2 Cash Flow to Principal Coverage	Gross Cash Flow (% of Initial NAV)	Capital Calls Paid (% of Initial NAV)	Expenses and Interest Paid (% of Initial NAV)	Maximum Credit Facility Utilized (% of Total Facility Capacity)
1998	5.0	2.2	6.0	1.6	104	13	18	0
1999	5.0	1.9	5.5	1.4	94	13	18	0
2000	5.0	1.8	6.5	1.3	83	11	19	0
2001	5.0	2.3	5.0	1.6	96	8	17	0
2002	5.0	2.3	5.0	1.6	98	8	17	0
2003	5.0	2.7	5.0	1.9	117	8	17	0
2004	5.0	2.6	5.0	1.9	119	11	18	0
2005	5.0	2.5	6.0	1.8	122	13	19	0
2006	5.0	2.5	6.0	1.9	125	14	18	0
2007	5.0	2.2	6.0	1.6	110	15	19	0
2008	5.0	1.9	6.0	1.4	97	15	19	25
2009	5.0	2.3	5.0	1.7	115	12	21	41
2010	5.0	2.3	5.0	1.7	109	13	17	0
2011	5.0	2.1	5.5	1.6	102	13	18	0
2012	5.0	2.4	5.0	1.8	115	13	17	1
2013	5.0	2.3	5.0	1.6	106	12	18	0
2014	5.0	2.1	5.0	1.6	102	13	18	0

Source: Fitch Ratings.

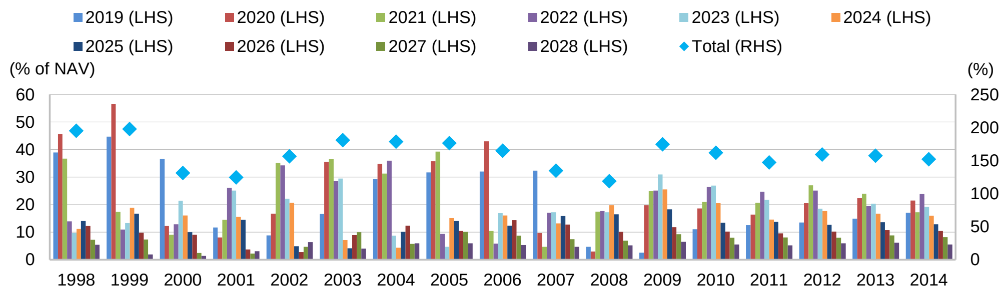
In addition, the disposal option discussed is an additional positive qualitative factor to consider, which was not specifically modeled in the scenarios Fitch ran since it is at the discretion of the manager. By exercising the disposal option, the manager may accelerate realization of the NAV on the secondary market but likely at a steep discount in a stressed market.

Launch Year Scenarios — Third-Quartile Performance

Launch Year Scenario	Class B Bonds Payback Period (Years)	Class B Cash Flow to Principal Coverage	Gross Cash Flow (% of Initial NAV)	Capital Calls Paid (% of Initial NAV)	Expenses and Interest Paid (% of Initial NAV)	Maximum Credit Facility Utilized (% of Total Facility)
1998	6.0	2.1	161	13	17	0
1999	5.5	1.9	138	10	17	0
2000	5.5	1.7	125	10	17	0
2001	5.5	1.8	135	11	17	0
2002	5.5	1.9	142	13	17	5
2003	6.0	2.0	145	11	17	0
2004	7.0	2.1	158	13	18	0
2005	6.0	2.1	160	14	17	0
2006	5.5	2.2	165	14	17	0
2007	5.5	2.1	163	14	17	0
2008	5.5	2.1	159	14	17	6
2009	5.0	2.3	174	13	17	0
2010	5.5	2.3	173	14	17	0
2011	5.5	2.2	165	14	17	0
2012	5.5	2.2	168	13	17	0
2013	5.5	2.2	165	14	17	0
2014	5.5	2.2	165	14	17	0

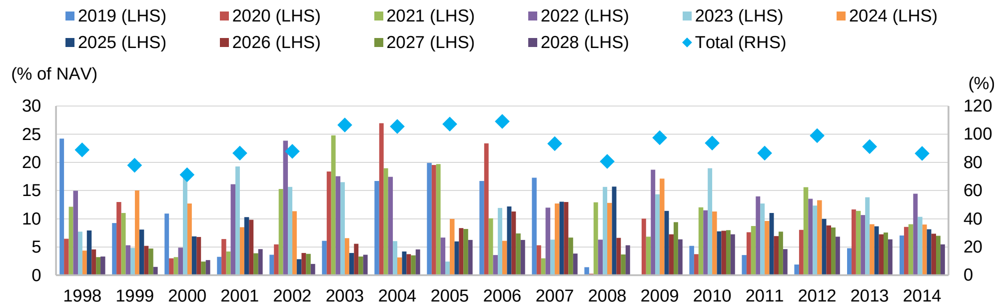
Source: Fitch Ratings.

% NAV Distributed Per Launch Year Scenario Over Projected 10-Year Life of Astrea V
(All Quartiles)



Source: Fitch Ratings.

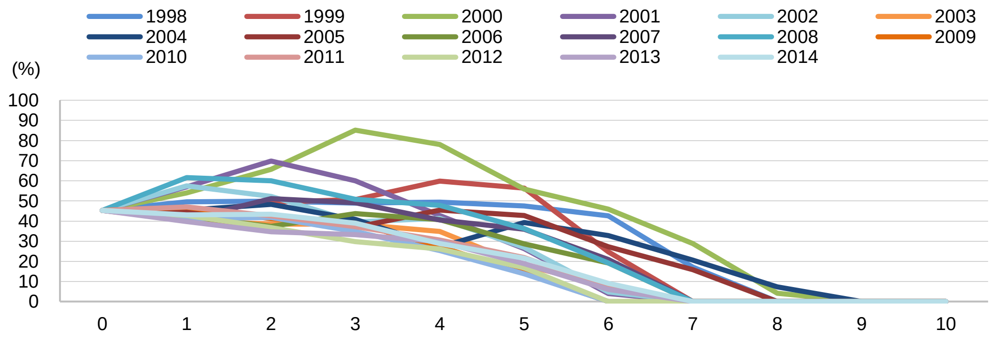
% NAV Distributed Per Launch Year Scenario Over Projected 10-Year Life of Astrea V
(Fourth Quartile)



Source: Fitch Ratings.

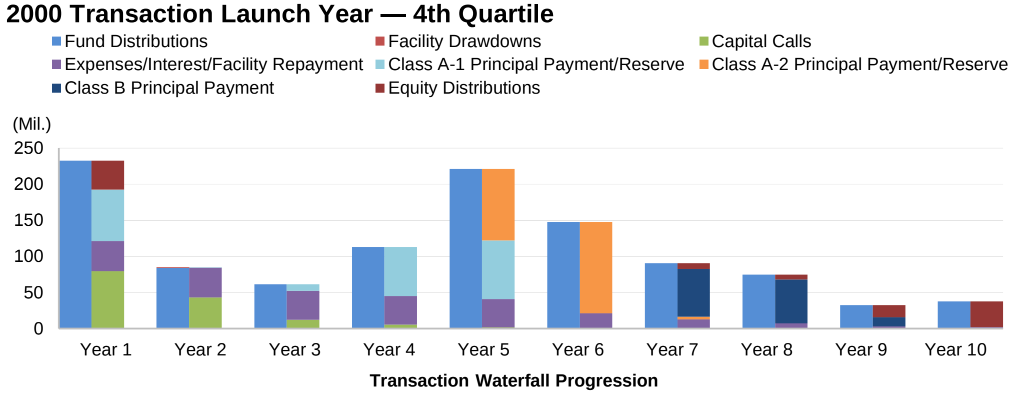
The chart below shows the progression of the LTV ratio (for all debt combined) over the life of the transaction in different start year scenarios in the 4th quartile stress. The 2000 launch year scenario experienced the highest LTV levels, which was primarily driven by weak distributions from the underlying funds in years 2-4 of the transaction, as shown in the second chart below. In the following years (5 and 6) distributions improved, which allowed the structure to fully repay the class A-1 bonds by year five, the class A-2 bonds by year 6.5 and the class B bonds by year 8.5.

LTV Progression in Stress Scenarios: by Start Year Scenario
(4th Quartile)



Source: Fitch Ratings.

2000 Transaction Launch Year — 4th Quartile



Source: Fitch Ratings.

Euro Hedge Stresses

Given the portfolio's exposure to European funds that distribute NAV in euros, Fitch considered the impact of potential foreign exchange fluctuation on the structure. As outlined in Fitch's "Rating Closed-End Funds and Market Value Structures Criteria" report, in a few of the most adverse scenarios stresses run we fully discounted the portion of NAV from euro-denominated funds that was not hedged. These results were not materially different from the base case scenario due to the relatively small euro NAV exposure in the portfolio.

For example, assuming fourth quartile performance, the class A-1 bonds were called on the scheduled call date in all scenarios with cash flow coverage ratios varying between 1.7x and 2.6x, compared to the base case of 1.8x and 2.7x. The class A-2 bonds were called in year 6.5 in the most punitive scenario with cash flow coverage ratios varying between 1.2x and 1.9x, compared to the base case of 1.3x and 1.9x. Finally, assuming third quartile performance, the class B bonds were called in year seven in the most punitive scenario with cash flow coverage ratios varying between 1.7x and 2.2x, compared to the base case of 1.7x and 2.3x.

In addition to the stresses noted, which we view as extreme given the zero credit for unhedged EUR distributions, for informational purposes, we also ran some FX stress scenarios based on more reasonable stress assumptions for FX moves. In these assumptions about USD/EUR moves, Fitch considered the risk of adverse FX fluctuation along with the uncertainty in timing fund distributions and their effect on the structure's ability to timely repay the bonds, as outlined in Fitch's "Foreign-Currency Stress Assumptions for Residual Foreign-Exchange Exposures in Covered Bonds and Structured Finance Criteria" report.

These stresses were applied to evaluate scenarios where the euro appreciates and depreciates against the U.S. dollar, as the structure is required to deliver euros at the maturity of each hedge. The euro-denominated distributions were adjusted at each payment date in accordance with the scheduled hedge amount to evaluate the impact on the portfolio's total fund distributions under all quartile, third quartile and fourth quartile fund performance scenarios.

Using fourth quartile fund performance projections, the worst performance was observed in the launch year of 2000 and the scenario where the euro depreciates against the U.S. dollar (80% assumed depreciation). Under this scenario, the class A-1 bonds made all timely interest and principal payments with respect to their scheduled call date with cash flow coverage of 1.7x, compared to the no FX stress cash flow coverage of 1.8x. The payback period on the class A-2 bonds was at year six and cash flow coverage of 1.2x, compared to the no FX stress where the payback period was 6.5 years with cash flow coverage of 1.3x.

Under the third quartile fund performance projections, the worst performance was observed in the launch year of 2004 and the scenario where the euro depreciates against the U.S. dollar. The class A-1 and class A-2 bonds made all timely interest and principal payments with respect to their scheduled call date with cash flow coverage of 3.1x and 2.3x, respectively, compared to the no FX stress where cash flow coverage was 3.3x and 2.4x, respectively. The class B bonds payback period was at year seven with cash flow coverage of 1.9x, compared to the no FX stress, where the payback period was also seven years with cash flow coverage of 2.1x. In all cases, the performance metrics were in line for each of the bonds' ratings.

Valuations

Private equity fund valuations are made available quarterly on an unaudited basis and annually on an audited basis. Fund managers apply various valuation methods (discounted cash flow analysis, multiple analysis and so on) to the underlying holdings of the fund. Valuations are made as of a certain date and are reported to the LPs a few months following the valuation reference date. Valuation methods can vary from fund to fund, as managers have discretion on the applied techniques. However, these valuations are prepared in accordance with International Financial Reporting Standards or generally accepted accounting principles in the U.S. or elsewhere.

The initial valuation of Astrea V was based on the audited NAVs of the funds as of the latest reported NAV valuation date. Roughly 85% of the portfolio NAV was valued as of Dec. 31, 2018 and roughly 15% as of March 31, 2019. The NAV valuations for each fund were then adjusted for any capital calls or distributions made between the time of valuation and March 31, 2019.

Going forward, the valuation of the structure's NAV will be made at each distribution reference date based on the most recent audited or unaudited NAVs provided by the underlying general partners (GPs). These are reported by the GPs quarterly, typically with a 45–60 day delay. The valuations will be based on the most recent valuations provided by each GP and adjusted for any distributions (subtracted from NAV) or capital calls (added to NAV) made between the reference date of the GP's valuation and the distribution date of the structure.

The Manager

Fitch considers Azalea suitably qualified, competent and capable of executing its transaction functions as the investment manager of Astrea V.

While the manager has a short track record as an independent entity, Azalea's management team has extensive experience and institutional knowledge in the private equity sector, and it draws on and benefits from its connection with Temasek. Temasek and its affiliates have been investing in private equity funds for over two decades and remain active in this space. Additionally, Temasek and its affiliates have successfully launched four prior Astrea vehicles. However, Temasek and its affiliates are not providing financial support to the bonds or the transaction.

Azalea's responsibilities as the manager include monitoring private equity fund performance, administering key fund matters, monitoring the performance of the transaction administrator and fund administrator, supervising the administration of assets and bonds, operation of the credit facility, monitoring cash flows in accordance with the priority of payments, managing investor relations and reporting to stakeholders, cash management, hedging of non-USD assets and obligations and supervising the affairs of the issuer and AOCs.

Either the issuer or the two AOCs can terminate the services of Azalea as manager for a termination event as specified in the management agreement, such as breach of duty or bankruptcy. Absent the occurrence of a specific termination event, either the issuer or the two AOCs can terminate the manager with 90 days' written notice. Upon any termination of Azalea from the role of manager, the issuer and AOCs will use commercially reasonable efforts to appoint a substitute manager that agrees to perform the requisite duties and whose appointment would not result in a downgrade to the then prevailing rating of the most senior class of bonds. Upon receipt of termination notice, the manager will use commercially reasonable efforts to assist the issuer and AOCs in the appointment of a substitute.

Alternatively, Azalea may choose to resign from the role of manager by providing 90 days written notice; however, the resignation will not be effective until a replacement that will not result in a downgrade to the then prevailing rating of the most senior class of bonds is found. In the event the AOCs do not appoint a substitute within 90 days of the resignation date, Azalea may select as substitute an entity willing to perform the requisite duties and whose selection will not result in a downgrade of the then prevailing rating of the most senior class of bonds. Fitch believes these terms provide a sufficient procedural framework to find a suitable manager in the unlikely event it should become necessary.

Fullerton Fund Management Company Ltd. (Fullerton) acted as the manager of Astrea III. For Astrea IV and Astrea V, Fullerton will be advising the manager on managing the cash and FX hedges of the transactions. Fullerton is licensed under the Securities and Futures Act and regulated by the Monetary Authority of Singapore (MAS). Fullerton has been regulated by the MAS since 2004 and holds a Capital Markets Services License issued by the MAS for carrying on business in fund management with all types of investors. As of Feb. 28, 2019, Fullerton had total assets under management of $34.8 billion.

Alignment of Interests

Fitch observes an alignment of interests in this transaction between the sponsor and bondholders given the sponsor's equity commitment in the transaction. The sponsor, Astrea Capital V, will be the sole owner of the equity tranche upon launch of the transaction, and Astrea Capital V intends to maintain its equity position. As the owner of the equity, the sponsor will bear any losses of the structure prior to bondholders, providing for the alignment of interests.

Security and Bankruptcy Remoteness

The bonds, the credit facility, and the hedge counterparties are secured by:

- a first fixed charge by the issuer over its shares in the AOCs and the dividends in respect of those shares;
- a first fixed charge by the issuer over its bank accounts and custody accounts;
- an assignment of the issuer's rights under the shareholder loan agreements between the issuer and the AOCs, respectively;
- a first floating charge by the issuer and sponsor of their respective undertaking and all their assets;
- a first fixed charge by the sponsor over its shares in the issuer and the dividends in respect of those shares and any present or future bank accounts; and
- an assignment of the sponsor's rights under the sponsor shareholder loan agreement between the sponsor and the issuer.

Legal opinions provided by the issuer's legal counsel indicate that the issuer is bankruptcy remote, that its assets cannot be consolidated with those of the sponsor or those of the AOCs and that the transfer of the fund investments to the AOCs would be characterized as a sale of rights over the fund investments and would not be regarded as property of the seller in the event of the seller's insolvency.

The Model

Fitch performed the cash flow analysis of the structure using a model to forecast hypothetical portfolio cash flows using historical private equity data. Private equity data were sourced from a third-party data provider and covered all quartiles of funds with vintages ranging from 1990 to 2017. The data set encompassed buyout and growth private equity funds to parallel the underlying breakdown of the Astrea V portfolio. The major data points driving the analysis include historical capital calls, historical distributions and historical NAV appreciation and depreciation. The historical data within each data set was extrapolated to simulate the average historical cash flow of a representative private equity fund. The historical cash flows were built up, as described in the Cash Flow Scenario Analysis section, to forecast the cash flows of Astrea V's portfolio of private equity holdings.

The model applied the cash flows, as described above, to the priority of payments (*see Appendix, pages 19-22)* to simulate the performance of the transaction.

Additionally, the model was modified to allow hypothetical launch dates for the transaction to forecast performance if Astrea V was launched during various market cycles. This analysis used observed historical cash flows where available and applied these to the underlying portfolio based on the private equity fund age and strategy profile of Astrea V's holdings. This model provided the ability to run the analyses described in the Cash Flow Scenario Analysis section.

For example, if the transaction was launched in 2005 and 10% of the NAV comprised two-year old buyout funds at that time, the model would apply the observed historical performance for two-year old buyout funds in 2005 to 10% of the portfolio. This would then be replicated for the remaining 90% of the portfolio NAV for the observed performance of each age and strategy in 2005. The analysis would then apply the same methodology to the remaining life of the transaction where historical performance data are available. If no data are available for a certain age in a certain year, the model applies the average historical performance for that age and strategy across vintages.

Surveillance of the Transaction

Fitch relied on information on the underlying funds for its analysis and will continue to do so for the ongoing surveillance of Astrea V. Fitch will also receive monthly and semiannual reporting from the issuer on an ongoing basis throughout the life of the transaction. Monthly reporting will detail any cash flows for the period (distributions, capital calls and so on), balances of assets and liabilities, mark-to-market updates on FX hedges and investments held in the reserve account.

Semiannual reporting will coincide with the distribution dates of the bonds and will detail the cash flows of underlying funds within Astrea V, periodic and cumulative payments made at each level of the structure's waterfall, balances of assets and liabilities of the structure, LTV calculations, mark-to-market updates on FX hedges and updated valuation data for Astrea V's private equity holdings as well as a portfolio update. The semiannual portfolio update will include cash flow performance of the funds as well as updated breakdowns of the portfolio by region, vintage year, sector and so on.

Rating Sensitivities

Private equity collateralized fund obligations have many inherent risks, including the uncertainty of the amount and timing of distributions, illiquid nature of investments, the degree of transaction leverage, and the subjective nature of NAV calculations.

The ratings for the bonds may be subject to downgrade if cash flows are lower than modeled in stress scenarios, creating a risk that the funds will not generate enough overall cash to repay the issuer's obligations. A material decline in NAV that, in Fitch's view, would indicate insufficient forthcoming cash distributions to support the bonds could also lead to rating downgrades.

A ratings downgrade of a counterparty may also materially affect the ratings of the bonds, given the reliance of the issuer on counterparties to provide functions, including providers of the credit facility and bank accounts.

The ratings are also sensitive to significant depreciation of the euro versus the U.S. dollar, which could affect absolute returns and the U.S. dollar value of distributions. Payments on the currency hedges that are larger than anticipated may leave less cash available to pay interest on the bonds, fund the reserves account and meet capital calls.

As noted, the ratings of the bonds are capped at the ratings of the investments and deposits in the reserve accounts, and a downgrade or default of these investments can negatively impact the bonds, including a potential downgrade.

Fitch relied in its analysis on the legal documentation and opinions for the transaction. If any relevant party to the transaction does not follow its responsibilities and procedures as described in the documentation, the ratings on the bonds may be impacted.

Appendix: Terms of the Bonds

Priority of Payments

Unless and until an enforcement event occurs, the payments to be made on each distribution date from the available cash flow (defined below) of the issuer as of the distribution reference date relating to such distribution date shall be made in the following order of priority:

1. Payment of taxes (if any) of the issuer and the asset-owning companies and expenses (other than those provided for in clauses 2 through 13 of the priority of payments) up to an aggregate cap of $0.9 million per distribution period (which will be proportionately adjusted for a distribution period that is longer or shorter than six months, the “clause 1 cap”).

2. Payment of amounts due and payable to the hedge counterparty under any hedge agreement in respect of swap transactions entered into by the issuer (save for the amounts payable under clause 12.

3. Manager fees.

4. Payment for the following uses relating to the credit facility agreement in the following order:

   (i) Credit facility commitment fees;

   (ii) Credit facility interest expense and any other payables; and

   (iii) Credit facility principal repayment.

5. Class A-1 bonds and class A-2 bonds interest expense on a pari passu and pro rata basis.

6. Class B bonds interest expense.

7. If net cash proceeds are received from sale or disposal of fund investments pursuant to the exercise of the disposal option, payment of 100% of cash flow remaining after clauses 1 through 6:

   (i) so long as any class A-1 bond is outstanding, to the reserves accounts until the reserves accounts cap has been met and thereafter to the repayment of the outstanding principal amount of the class B bonds (regardless of whether the class A-1 bonds or the class A-2 bonds have been redeemed); or

   (ii) upon and after full redemption of all class A-1 bonds, to the repayment of the outstanding principal amount of the class A-2 bonds and thereafter to the repayment of the outstanding principal amount of the class B bonds.

   In either case, until the amount so paid under this clause 7 is equal to (but not exceeding) the total amount of net cash proceeds so received

8. Payment for the following uses in the following order:

   So long as any class A-1 Bond is outstanding

   Payment to the reserves accounts for the following uses in the following order:

   (i) payment for the amount of any losses realized on investments held in the reserves custody account until such losses have been recouped;

   (ii) payment for the unpaid reserve amount applicable to such distribution date; and

   (iii) payment for the reserve amount applicable to such distribution date.

Upon and after full redemption of all class A-1 bonds

(iv) payment of the amount available under this clause 8 to the principal repayment of the class A-2 bonds.

9. Upon and after full redemption of all class A bonds, payment of 90% of cash flow remaining after clauses 1 through 8 to the principal repayment of the class B bonds.
10. If the maximum LTV ratio has been exceeded, payment of 100% of cash flow remaining after clauses 1 through 9:

    (i) so long as any class A-1 bond is outstanding, to the reserves accounts until the reserves accounts cap has been met and thereafter to the repayment of the outstanding principal amount of the class B bonds (regardless of whether the class A-1 or A-2 bonds have been redeemed); or

    (ii) upon and after full redemption of all class A-1 bonds, to the repayment of the outstanding principal amount of the class A-2 bonds and thereafter to the repayment of the outstanding principal amount of the class B bonds.

    In either case, until the maximum LTV ratio is no longer exceeded.
11. Administrative expenses in excess of the clause 1 cap and any other expenses.
12. Payment of amounts due and payable to any hedge counterparty under any hedge agreement in respect of the early termination of swap transactions entered into by the issuer where such early termination is due to an event of default with respect to which such hedge counterparty is the defaulting party (as defined in such hedge agreement) or a termination event (as defined in such hedge agreement) with respect to which such hedge counterparty is the affected party (as defined in such hedge agreement).
13. Payment for the following uses in the following order:

    Prior to and until the performance threshold has been met on any distribution date falling on or before the class A-1scheduled call date

    (i) payment of 100% of the cash flow remaining after application of clause 1 through clause 12 of the priority of payments to the sponsor until the performance threshold has been met;

    If and after the performance threshold has been met on a distribution date falling on or before the class A-1 scheduled call date, the following order shall apply to the cash flow remaining after application of clause 13(i) on that distribution date as well as to cash flow available under clause 13 on each subsequent distribution date up to and including the distribution date falling on the class A-1 scheduled call date

    (ii) payment to the bonus redemption premium reserves accounts until the aggregate amount so paid under this clause 13(ii) is equal to 0.5% of the principal amount of the class A-1 bonds as of the issue date;

    (iii) payment to the sponsor and the reserves accounts in equal proportions until the reserves accounts cap has been met; and

    (iv) after the reserves accounts cap has been met, payment of 100% of the cash flow remaining after application of clause 1 through clause 12 of the priority of payments to the sponsor.

    On each distribution date falling after the class A-1 scheduled call date

    (v) payment of 100% of the cash flow remaining after application of clause 1 through clause 12 of the priority of payments to the sponsor, *provided always that:*

(i) all capital calls will be paid first from the total cash balance in the operating accounts when due (even if such due date falls on a distribution date);

(ii) for any taxes or administrative expenses of any of the issuer and the asset-owning companies due on any date that is not a distribution date, such taxes or expenses will be paid from the total cash balance in the operating accounts when due. The amount of such payments will, on the next distribution date, be included in the calculation for determining whether the clause 1 cap has been met;

(iii) for any interest or principal repayment due on any loan made under the credit facility agreement (each a CF loan) on a date that is not a distribution date, such interest or principal repayment will be paid from the total cash balance in the operating accounts when due; and

(iv) for any payment due on any swap transaction under clause 2 above on any date that is not a distribution date, such payment will be paid from the total cash balance in the operating accounts.

In relation to each distribution reference date, available cash flow is defined as the total cash balance in the operating accounts as of such distribution reference date less the retained amount. For the avoidance of doubt, the total cash balance in the operating accounts includes, without limitation:

(i) any amounts transferred from the collection accounts;

(ii) interest income and realized gains received from the reserves accounts and the reserves custody account;

(iii) the proceeds of any CF loans;

(iv) any retained amount and additional retained amount from the preceding distribution period;

(v) the proceeds of any equity investments; and

(vi) the transfer of the residual balance from the settlement accounts (after the bond proceeds have been used for (a) repaying a certain portion of the existing shareholder loan(s) from the sponsor that was incurred in connection with the asset-owning companies' acquisition of the fund investments and (b) payment of fees and expenses incurred in connection with the issue and offering of the bonds.

Post-Enforcement Priority of Payments

If an event of default has occurred and the bonds have been accelerated (together, an enforcement event), all cash in the collection accounts will be swept to the operating accounts (via a daily cash flow sweep) and all available funds in the operating accounts, reserves accounts, bonus redemption premium reserves accounts and settlement accounts (except for amounts that have been set aside for repaying a certain portion of the existing shareholder loan[s] from the sponsor incurred in connection with the acquisition of fund investments and payment of fees and expenses incurred in connection with the issue and offering of the bonds) will be applied according to the following post-enforcement priority of payments:

1. Payment of amounts due under clause 1 of the priority of payments. With regard to amounts due for payments of administrative expenses under clause 1 of the priority of

payments, only those amounts required for enforcement of the security or the bonds will be paid under this clause 1. The amounts paid under this clause 1 will be paid without regard to any caps.

2. Payment of any amounts due and outstanding to the hedge counterparty under any hedge agreement in respect of swap transactions entered into by the issuer (save for the amounts payable under clause 10 below).
3. Payment for the following uses relating to the credit facility agreement in the following order:
   (i) credit facility commitment fees;
   (ii) credit facility interest expense and any other payables; and
   (iii) credit facility principal repayment.
4. Payment of accrued and unpaid interest on the class A-1 and A-2 bonds on a pari passu and pro rata basis.
5. Repayment of outstanding principal amount (and, if applicable, premium) of the class A-1 and A-2 bonds on a pari passu and pro rata basis.
6. Payment of accrued and unpaid interest on the class B bonds.
7. Repayment of outstanding principal amount of the class B bonds.
8. Payment of any unpaid administrative expenses or any other expenses not included in clause 1 above.
9. Payment of any capital calls.
10. Payment of amounts due and payable to any hedge counterparty under any hedge agreement in respect of the early termination of swap transactions entered into by the issuer where such early termination is due to an event of default with respect to which such hedge counterparty is the defaulting party (as defined in such hedge agreement) or a termination event (as defined in such hedge agreement) with respect to which such hedge counterparty is the affected party (as defined in such hedge agreement).
11. Payment to sponsor.

The ratings above were solicited and assigned or maintained at the request of the rated entity/Issuer or a related third party. Any exceptions follow below.