CLO Structural Protections

Interest and principal payment waterfalls

- There are two quarterly payment waterfalls in a CLO: the interest and principal waterfalls; which are subject to overcollateralization ("OC") and interest coverage ("IC") tests.
- The quarterly interest and principal waterfall payment mechanism are outlined in the CLO indenture. The AAA debt tranche has first payment priority, followed by the AA debt tranche and so on. Any potential collateral losses are incurred in reverse order, with the CLO equity absorbing such losses first, and if such losses exceed the equity outstanding, followed by the junior debt tranches and so on.

Overcollateralization and interest coverage tests

- The OC test requires that the par value of collateral assets divided by the par value of CLO debt tranches exceeds a certain financial ratio set at the closing of the CLO.
- The IC test measures investment income of collateral assets divided by CLO debt interest.
- OC and IC tests are determined after the AAA and AA payments in the waterfall.
- The OC and IC tests have a tighter financial covenant ratio for the lower rated debt tranche, since it includes in the ratio the aggregate amount of debt senior to that tranche and is also structured with a smaller initial coverage cushion at closing.
- Should an OC or IC test fail, a "self-curing" mechanism per the CLO indenture either:
    - Partially or fully diverts interest payments ("interest diversion") from the junior tranche alongside any applicable diverted reinvestment principal proceeds to pay down the most senior debt tranche outstanding in order of priority (AAA, AA and so on) or
    - Purchases additional collateral until the test(s) is in compliance.
- ***The self-curing mechanism is an important protection measure for the debt tranches, especially the Senior Notes (the AAA and AA tranches) of the CLO.***

CLOs are structured as a cash flow transaction

- CLO investments are generally carried at par (with some exceptions) for calculation purposes of the various financial tests.
- The benefit of a non-mark-to-market structure is that the CLO will generally not be a forced seller of collateral assets during market volatility.
    - In some cases, mark-to-market valuations are required for certain collateral assets. Typically, if the asset is in default, the purchase price of an asset is 85% of par or lower, or the total amount of CCC rated assets in the CLO portfolio exceeds the standard 7.5% limit.

Priority of Payments – Principal and Interest Waterfalls[1]

Priority of payment

- The AAA and AA tranches (the "Senior Notes" of the CLO) are not subject to the OC or IC tests, and therefore are not subject to any interest diversion.
- OC and IC tests are determined after the AAA and AA debt payments in the waterfall.

Interest Waterfall

- Interest Proceeds Received
- Trustee Fees, Taxes (if applicable)
- CLO Manager - Senior Management Fee
- Class A: AAA Debt Interest Payment
- Class B: AA Debt Interest Payment

Senior Notes Interest Payments are paid ***prior*** to OC and IC tests

- If OC and IC test (for AAA & AA Debt Tranches) Fails → *Self-curing Mechanism:* Paydown Senior most debt until OC and IC Test Passes
- If OC and IC test (for AAA & AA Debt Tranches) Passes →
  - If OC and IC tests (for A, BBB and BB debt tranches) Passes →
    - Class C: A Debt Interest (and deferred interest) Payment
    - Class D: BBB Debt Interest (and deferred interest) Payment
    - Class E: BB Debt Interest (and deferred interest) Payment
    - CLO Manager – Subordinated Management Fee (and deferred fees)
    - Residual Paid to Equity until IRR hurdle reached and then to CLO Manager for Incentive Fee (at termination of CLO)
  - If OC and IC tests (for A, BBB and BB debt tranches) Fails → *Self-curing Mechanism:* Paydown Senior most debt until OC and IC Test (for A, BBB and BB debt tranches) Passes

Principal Waterfall

- Principal Proceeds Received
- Fees, Taxes not covered by Interest Proceeds
- Class A: AAA Debt not covered by interest proceeds
- Class B: AA Debt not covered by interest proceeds
- If OC or IC test fails, or any shortfall, follow Interest Waterfall

Senior Notes Payments are paid ***prior*** to OC and IC tests

- During the Reinvestment Period (if OC and IC tests pass) → Purchase new assets in accordance with indenture
- After the Reinvestment Period →
  - Paydown the CLO debt in order of priority
  - Payoff of accrued Subordinated Management Fees
  - Residual Paid to Equity until IRR hurdle reached and then to CLO Manager for Incentive Fee (at termination of CLO)

1) The interest and principal waterfalls are for illustrative purposes only. They do not include every expense or payment in an actual CLO waterfall. They do not present every situation which can lead to diversion of payments to the CLO equity or debt tranche investors. During the reinvestment period only, if the interest diversion test (highest threshold OC test) is not in compliance, the lesser amount of up to 50% (of the available interest proceeds) or the amount needed to cure the interest diversion test is diverted and used to purchase additional collateral, rather than all available interest proceeds being used to paydown debt (per the other OC tests).

CLO COVENANT PROTECTIONS AND REPORTING REQUIREMENTS

Concentration limit and collateral quality tests

- Min/max % of senior secured/unsecured debt, floating/fixed, among concentration limits.
- CLOs also have credit quality tests.
  - Limit on covenant lite loans (typically up to 60%) and the amount of CCC rated loans (usually capped at 7.5%).

Diversification requirements

- To avoid concentration of investments, CLOs limit the amount of each asset owned and industry concentrations. This usually results in the CLO holding between ~150 and 300 unique collateral assets among 20 to 30 different industries.

Covenant Protections

- Certain portfolio criteria include weighted average spread (WAS), weighted average life (WAL) and weighted average risk factor (WARF).

These tests are "maintain or improve". If the CLO is not in compliance with any of these tests, the collateral manager's ability to buy and sell assets on a going forward basis is limited. Any purchase or sale of an asset must maintain or improve the financial ratio that was in non-compliance until the ratio is back in compliance.

Reporting requirements and Transparency of the CLO market

- CLO collateral primarily consists of broadly syndicated loans (at least 90%) which benefit from a secondary trading market and multiple loan pricing services. Most loans (~98%) held by CLOs, are individually rated by a nationally recognized statistical rating organization ("NRSRO").
- CLOs are governed by a series of underlying documents, the most prominent being the indenture. The indenture provides the provisions the CLO manager must follow.
- Each CLO has a trustee who oversees compliance for the benefit of the CLO investors.
- CLO trustees include such firms as State Street, US Bank and BNY Mellon, among others.
- A monthly trustee report is prepared for the investors which discloses all the assets held by the CLO and confirms compliance with all terms and conditions of the indenture.
- A quarterly payment report is prepared by the trustee for the investors which lists all cash disbursements per the interest and principal "waterfalls", and the amount of the interest and principal payable to the CLO investors.
- Almost every CLO debt tranche is rated by a NRSRO at the time of closing. Throughout the life of the CLO, the CLO debt tranche ratings are continuously monitored by the NRSRO.

Risk Profile of Debt Tranches and CLO Collateral

Minimal Default rates

- Since the establishment of the CLO market in the early 1990's through year-end 2021, no U.S. AAA CLO tranche has defaulted[1].
- During this same time period, there has been one default of an AA tranche, five defaults of an A tranche, nine defaults of a BBB tranche, twenty-four defaults of a BB tranche and six defaults of a B tranche[1].

Ratings upgrades and downgrades, by tranche from the early 1990s through year-end 2021[1]:

	Number of Ratings	Upgrades	Downgrades
AAA	4,869	N.A.	2.7%
AA	3,281	24.6%	1.0%
A	3,010	28.2%	1.8%
BBB	2,787	23.5%	8.1%
BB	2,217	15.7%	18.5%
B	401	3.7%	19.7%

CLO collateral consists primarily (at least 90%) of first lien leveraged loans

- First lien leveraged loans are floating rate, senior secured debt, with maturities of ~6 to ~7-years, that may have covenants which may include incurrence and/or maintenance tests.
- Borrowers are cash flow positive companies that can be either publicly or privately owned.
- During the period 2000 to 2021, the annual default rate of first lien loans averaged ~2.9%[1].
- CLO managers generally experience a lower default rate due to active management.
- Financial institutions participate in a daily secondary trading market (bids/offers) on many leveraged loans held by CLOs.
- The aggregate size of leveraged loan market was ~$1.4 trillion, and the US CLO market was ~$900 billion as of year-end 2022.

1) *Based on the ratings issued by a NRSRO.*

Important Risk Disclosures

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