

Methodology

Global Methodology for Rating Debt Issued by Investment Funds

Morningstar DBRS

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Related Research

For a list of the Structured Finance-related methodologies for our principal structured finance asset class methodologies that may be used during the credit rating process, please see the *Morningstar DBRS Global Structured Finance Related Methodologies* document on dbrs.morningstar.com. Please note that not every related methodology listed under a principal structured finance asset class methodology may be used to rate or monitor an individual structured finance or debt obligation.

Key Updates in This Methodology

For key updates in this methodology, please refer to the press release titled "Morningstar DBRS Publishes Updated Global Methodology for Rating Debt Issued by Investment Funds," dated September 30, 2025.

Scope and Limitations

A methodology sets forth the key analytical considerations and applicable analytics used when we assign or monitor credit ratings or other opinions. In accordance with our applicable policies and procedures, we apply one methodology or a combination of methodologies, as appropriate, to evaluate a structured finance transaction or debt obligation in a given asset class. We exercise analytical judgment, including through the evaluation of quantitative and qualitative factors and analytical considerations and components set forth in the applicable methodology or combination of methodologies, and it considers the regulatory environment, market standards, and customary practices in addition to other factors deemed relevant to the analysis.

As part of the evaluation process, we may opine as to (1) whether a sponsor's proposed capital structure supports the assignment of a given credit rating, (2) the loss levels the capital structure is able to withstand, or (3) the credit rating levels supported by a sponsor's proposed capital structure. Once completed, this process facilitates the assignment of our credit rating, at a given credit rating level.

In cases where an applicable methodology or combination of methodologies does not address one or more elements of a structured finance transaction or debt obligation, or where one or more such elements differ from the expectations contemplated when each applicable methodology was approved, we may apply analytical judgment in the determination of any related analytical factor, assumption, credit rating, or other opinion.

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Introduction to Morningstar DBRS Methodologies

- In general terms, our credit ratings are opinions that reflect the creditworthiness of an issuer, a security, or an obligation. They are opinions based on an analysis of historical trends and forward-looking evaluations that assess an issuer's ability to make timely payments on outstanding obligations (whether principal, interest, preferred share dividends, or distributions) with respect to the terms of an obligation.
- In addition to general business, regulatory, and financial risk factors, our credit rating methodologies consider many subjective factors, nuances, and intangible considerations. As such, the approach in this methodology is not based solely on statistical analysis but includes a combination of both quantitative and qualitative considerations.
- The considerations outlined in our methodologies are not intended to be exhaustive.
- Our credit rating methodologies are intended to contemplate a full economic cycle, which reduces credit rating movement because of a normal business cycle. We strive to factor the impact of a cyclical economic environment into its credit ratings as applicable. Credit rating revisions do occur, however, when it is clear that a structural change, either positive or negative, has transpired or appears likely to transpire in the near future.

Corporate Debt Fund Overview

We typically focus on funds that have limited redemption rights. Corporate debt funds can source investments in various ways, including originating corporate debt directly, investing in corporate debt via a syndication process where there are multiple lenders in a transaction or by accessing the public capital markets. Generally large companies with publicly traded equity will access the capital markets while private companies will borrow through a direct lending process or through syndication.

Corporate debt investments generate cash flow from coupons, principal amortization and prepayments, transaction fee income (origination fees), discounts to par, and also if and when traded in the secondary market.

In most cases, the fund will have a revolving period when the fund manager can reinvest proceeds from maturing loans or those that prepay into additional investments. Funds usually have a ramp-up period, a reinvestment/revolving period, and an amortization/harvesting period. During the ramp-up period and reinvestment period, the manager may purchase and originate assets subject to eligibility criteria and various covenants set forth in the fund's legal documents. The eligibility criteria will typically include concentration limits at the industry and single obligor level, which can serve to limit the credit risk profile of the portfolio. Common permitted investments can include first-lien; second-lien; first-lien last-out; unitranche; and unsecured corporate debt.

Typical covenants may include leverage ratio or asset coverage ratio constraints, or borrowing base formulas that are set at levels based on the risk profile of the assets (see the Fund and Asset Analysis section) or by regulations for funds covered by the Investment Company Act of 1940 (the 40 Act). There may also be overcollateralization triggers that, when breached, divert interest and/or principal proceeds from the fund's assets to pay down the fund's debt until the asset coverage ratio (ACR), advance rate

(AR), or other metrics driving overcollateralization are back in compliance. Debt interest is paid on a priority basis before principal payments are made to cure trigger breaches.

When rating debt issued by investment funds, we consider the seniority of the debt's claim on the fund investments. Debt issued by funds can be either secured or unsecured. Secured fund debt typically has a first lien on the corporate debt investments while unsecured debt may be subject to some degree of subordination if the fund has a liquidity facility or other debt outstanding. To the extent the debt is either unsecured or structurally subordinate as a result of the legal entity structure of the fund family, there may be covenants or other structural protections that will limit the potential for the rated fund debt to be subordinated to other creditor claims that may be considered in our analysis.

Legal Entity Structure and Structural Subordination

Investment fund debt can be issued by the entity that directly owns the corporate debt investments (the Main Fund) or by a Feeder Fund. Feeder Funds are in essence holding companies whose investments consist of the limited partnership (LP) interests of the Main Fund (e.g., equity interests in the Main Fund). To the extent the Feeder Fund issues debt, its claim on the corporate debt investments will generally be subordinated to any creditor claims at the Main Fund.

In general, when investment fund debt is subordinated because of the legal entity structure of the fund family, we will typically rate the Feeder Fund debt one notch lower than the credit rating that would be assigned if the debt was issued by the Main Fund.¹ We note that there may be mitigants to the structural subordination inherent in the Feeder Fund debt that can warrant no notching penalty. One such mitigant may be covenants that prohibit the Main Fund from issuing any debt, or to the extent permitted, substantially limit the amount of debt the Main Fund can issue. There also may be more complicated capital structures where the credit rating assigned to the Feeder Fund debt could be more than one notch below the credit rating of the debt at the Main Fund.

Application of This Methodology

Exhibit 1 summarizes the analytical framework used to rate investment fund debt. Key steps include the following:

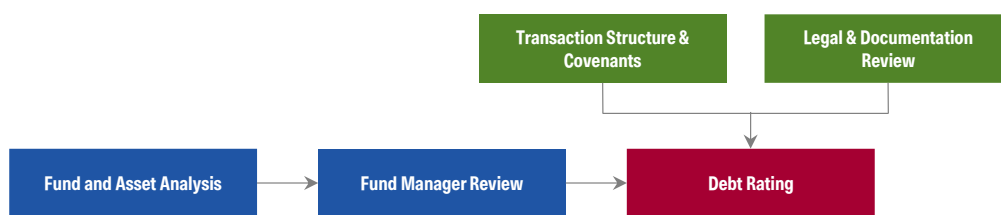
1. **Analysis of Fund Assets**—The credit risk profile and diversity of the fund portfolio are assessed and are key factors when evaluating the adequacy of the transaction's ACR or overcollateralization levels. See the Fund and Asset Analysis section for further details.
2. **Review of Transaction Structure and Covenants**—Transaction documents are expected to provide guidance regarding the fund's overcollateralization or ACR values, fixed charge coverage ratios, limitation on the issuance of other fund debt, investment eligibility criteria and applicable regulations, and any other factors that can affect the fund's risk profile. See the Transaction Structure and Covenants section for further details.
3. **Fund Manager Review**—We analyze the fund manager's credit risk profile using the *Global Methodology for Rating Investment Management Companies* (the IMC Methodology) as a

¹ Jurisdictional laws addressing the priority of creditor claims are contemplated in the notching analysis.

framework. In addition to the credit risk profile of the manager, there are other factors that we review to assess the manager's ability to execute on the investment strategy within a given fund, including the ability to originate, source, and manage the fund investments. The Fund Manager Review is a consideration when determining the applicable ACR level within the specified range for the credit rating category. See the Fund Manager Review section for further details.

4. **Legal and Documentation Review**—We review the key legal documents affecting the transaction to identify legal risks that may be inherent in the transaction. See the Legal and Documentation Review section for further details.

Exhibit 1 Steps for Rating Debt Issued by Investment Funds



Fund and Asset Analysis

The Fund and Asset Analysis incorporates the following components:

- Assessing Fund Credit Risk
- Diversity
- ACR Level
- Fixed Charge Coverage Ratio

Assessing Fund Credit Risk

To assess the credit risk profile of a fund, we first review the eligibility criteria in the fund documents, including credit agreements or bond indentures. Most funds have a revolving or reinvestment period when new loans are added to the pool, and others leave the pool through prepayments or maturities. Consequently, we consider the investment eligibility criteria when assessing the portfolio's credit risk profile.

Investment eligibility criteria typically specify permitted buckets addressing lien status (first lien, second lien, unsecured, etc.), industry and issuer concentrations, and loan or bond credit risk. While some corporate investments may not be rated (i.e., middle market loans), managers often have their own internal scoring or credit rating scale. Although we may consider the fund manager's internal credit scores, we also independently review credit risk, lien status, and other pertinent factors for individual investments.

Typically, some or all of the portfolio investments will have a public credit rating, Morningstar DBRS private credit rating, or Morningstar DBRS Credit Estimate.² These credit ratings or Credit Estimates are used to assess the fund's credit risk profile. The number of investments that we expect to either have Credit Estimates or private/public credit ratings varies based on the number of obligors in the portfolio. Generally, the number of individual obligors that we analyze will account for approximately 40% to 100% of the total notional amount of the portfolio.

To provide some examples:

- For highly granular portfolios (i.e., 100 investments or more), we may request Credit Estimates on at least 40% of the notional value.
- For portfolios with approximately 50 investments, we may request Credit Estimates on at least 50% of the notional value.
- For baseline diversity portfolios (i.e., 25–30 investments), we may request Credit Estimates on at least 70% of the notional value.
- For pools with limited diversity (i.e., fewer than 20 investments), we may request Credit Estimates on the entire portfolio.

Based on the results from the aforementioned investment/obligor level analysis, we aggregate the credit risk score of the individual investments on a weighted-average (WA) basis to arrive at an estimate of the fund's credit risk or default probability at the portfolio level. Note that when fewer than 100% of the obligors are assessed, the portfolio risk score will mirror that of the score applicable to the assessed portion of the fund that was analyzed. Recovery rate assumptions are based on the lien status of the loan and assume an average recovery rate based on historical data for the debt type (e.g., first lien, second lien, or unsecured) for each investment and follows recovery assumptions set forth in the *Global Methodology for Rating CLOs and Corporate CDOs*.

Assessing Fund Credit Risk—Additional Considerations

We may compare public credit ratings or our private credit ratings or Credit Estimates to the fund manager's internal credit scores to assess their alignment. We may also request other investment-level data and details for our review. To the extent we do not receive the relevant information to assess an obligor's risk profile, we generally assume a credit risk score (e.g., default probability) for the investment to be comparable to a Morningstar DBRS credit rating in the CCC credit rating category.

However, in the absence of Credit Estimates or issuer credit ratings for individual investments, there may be limited circumstances where we may assume a WA risk score between CCC (high) and B (low) for certain investments provided that specified criteria are met. This assumption may be applied when the fund's investments are broadly representative of the middle market, highly diversified, include obligors that are in the middle to upper end of the middle market, and the fund is fully ramped. Additionally, the debt agreement will typically require compliance with a borrowing base mechanism,

² A Morningstar DBRS Credit Estimate is a private, limited point in time assessment of the credit risk of a corporate debt issuer and is not a Morningstar DBRS public credit rating. Credit Estimates are not actively monitored and typically expire one year after assignment. A further description of Credit Estimates is available on the Morningstar DBRS website under Credit Estimates Global Policy.

lender consent when adding new investments, and alignment of interests with other lenders in the facility. We also expect in these cases that the fund manager has an extensive track record and substantial assets under management in the sector. We expect to receive ongoing facility- and investment-level reporting from the facility agent lender or other third-party oversight.

Diversity

The fund's investment eligibility criteria may provide for some degree of portfolio diversification by limiting concentration risk at the industry and issuer level, which can serve to lower the fund's exposure to idiosyncratic or industry-specific credit risks. Fund diversity is a function of the number of obligors and industries included in the portfolio and is captured when deriving the relevant ACR range for the transaction. See the Asset Coverage Ratio section for more details.

Exhibit 2 below highlights the impact of diversity on the ACR range.

Exhibit 2 Diversity Scenarios

Low Diversity	Baseline Diversity	Moderate Diversity
144%–159%	133%–148%	132%–147%
Approximately 8–15 obligors	Approximately 25–30 obligors	Greater than 30 obligors
6–8 industries	Greater than 15 industries	Greater than 15 industries

Note that the ACR range, when the fund has low diversity, needs to be higher, all else being equal. A low-diversity fund has greater idiosyncratic and industry risk relative to the baseline scenario, while a fund with moderate diversity has less industry and idiosyncratic risk and, therefore, a lower ACR range.

Asset Coverage Ratio

We determine ACR ranges based on our analysis of the credit risk profile of the fund (see the Assessing Fund Credit Risk section). We use our CLO Insight Model to derive an implied ACR using assumptions derived from our assessment of the fund credit risk profile (e.g., credit risk score for the portfolio), expected recovery rates, maturity profile, and obligor and industry diversification. The CLO Insight Model generates a minimum credit enhancement level based on the aforementioned assumptions and the desired debt credit rating. The minimum credit enhancement level model output can be interpreted as the advance rate, which is then converted to an implied ACR ($ACR = 1/\text{advance rate}$).

Note that the Morningstar DBRS CLO Insight Model derives overcollateralization levels (e.g., advance rates) based on historical corporate debt default and recovery data, the debt's credit rating, maturity profile, and priority within the capital structure. The Morningstar DBRS CLO Insight Model also incorporates a level of cumulative default stress appropriate for each desired credit rating category.

After the implied ACR is determined, we then typically make a qualitative adjustment to the implied ACR of approximately 5 percentage points to derive a minimum ACR applicable to a fund transaction. This qualitative adjustment incorporates the additional risk embedded in most fund transactions, as compared with securitizations; securitizations benefit from covenants and other structural protections,

while funds may have no or limited covenants. We then typically further add another 15 percentage points to the minimum ACR to determine the ACR range.

To further illustrate this, included below are examples of tables indicating the ACR ranges for certain credit rating categories. A baseline scenario, low-diversity scenario, and moderate diversity scenario are presented in Exhibits 3, 4, and 5. Note these exhibits are for illustrative purposes only, as they incorporate a limited set of assumptions regarding industry and issuer concentrations, as well as the maturity profile of a fund's assets. The tables in Exhibits 3-5 assume the fund debt has a first-priority claim on the corporate debt investments servicing the fund debt. The ranges in the illustrative tables reflect a 5-percentage-point qualitative adjustment from the implied ACR to derive the minimum ACR and a 15-percentage-point range applied to the minimum ACR to determine the ACR range.

Exhibit 3 is the baseline scenario that assumes a seven-year term to maturity for a fund's assets that are first-lien, U.S. dollar-denominated loans, with approximately 25 to 30 investments across a minimum of 15 industries.

Exhibit 3 Asset Coverage Ratio: Baseline Scenario

Credit Quality Fund Investments	Credit Rating Level			
	AA	A	BBB	BB
BB	134%-149%	125%-140%	119%-134%	113%-128%
B	158%-173%	144%-159%	133%-148%	122%-137%
CCC	179%-194%	160%-175%	145%-160%	130%-145%

Exhibit 4 is the low-diversity scenario where the fund has a seven-year term, holds first-lien loans, and has lower diversity in terms of both issuers and industries relative to the baseline scenario. The low-diversity fund has approximately eight to 15 investments across six to eight industries.

Exhibit 4 Asset Coverage Ratio: Low-Diversity Scenario

Credit Quality Fund Investments	Credit Rating Level			
	AA	A	BBB	BB
BB	153%-168%	138%-153%	126%-141%	116%-131%
B	186%-201%	161%-176%	144%-159%	126%-141%
CCC	190%-205%	170%-185%	156%-171%	135%-150%

Exhibit 5 is the moderate diversity scenario where the fund has a seven-year term, holds first-lien loans, and has relatively higher diversity in terms of both issuers and industries versus the baseline scenario. The moderate diversity fund has more than 30 investments across a minimum of 15 industries.

Exhibit 5 Asset Coverage Ratio: Moderate-Diversity Scenario

Credit Quality Fund Investments	Credit Rating Level			
	AA	A	BBB	BB
BB	131%-146%	124%-139%	118%-133%	113%-128%
B	155%-170%	142%-157%	132%-147%	121%-136%
CCC	175%-190%	157%-172%	143%-158%	129%-144%

Note that the ACR generally increases with (1) an increase in the credit risk profile of the fund's assets and (2) a decrease in the fund's diversity. Therefore, a lower-rated corporate debt investment typically warrants a higher ACR for the same fund debt credit rating category, and a higher-rated investment typically warrants a lower ACR. Additionally, lower-diversity funds typically warrant higher ACRs for investments with the same risk profile relative to funds with baseline or moderate diversity.

For example, the ACR range for a fund with first-lien debt, an average credit quality of B, maturity profile of seven years, and baseline diversity would fall in the 144% to 159% ACR range for debt at the single "A" credit rating level (see Exhibit 3). For a low-diversity fund, the ACR range for debt at the single "A" credit rating level for a fund with single B credit quality assets increases to 161% to 176% (see Exhibit 4).

Note the midpoint of the ACR range is typically our starting point. The quality of the fund manager, as reflected in Morningstar DBRS' Fund Manager Review, can affect the final ACR selected. Transactions where the Fund Manager has a strong Fund Manager Review and long and notable track record in the sector may have a final ACR that is closer to the lower end of the ACR range, while transactions where the Fund Manager Review is emerging, and the Fund Manager has more limited experience may have a final ACR that is closer to the high end of the range. See the Fund Manager Review section for more details.

ACR and AR Ranges

Morningstar DBRS notes that transaction documents may reference covenants that are expressed as advance rates. Asset coverage ratios and the corresponding ranges can be converted to advance rate ranges to facilitate comparison with transaction documents.

To illustrate the conversion, we use the ACR range in Exhibit 3 for a fund with a risk profile of a mid-B credit quality and a target credit rating in the A-range on the investment fund debt. In this example, the ACR range is 144% to 159%. The corresponding advance rate range equivalent to this ACR range of 144% to 159% can be calculated using the formula: $ACR = 1/AR$. Using this formula, the comparable AR range for this example is 63% to 69% (see calculation below).

Solving for the AR range for ACR Range of 144% to 159%:

$$ACR = 144\% \quad ACR = 159\%$$

$$144\% = \frac{1}{AR} \quad 159\% = \frac{1}{AR}$$

$$\frac{144}{100} = \frac{1}{AR} \quad \frac{159}{100} = \frac{1}{AR}$$

$$AR = \frac{100}{144} \quad AR = \frac{100}{159}$$

$$AR = 69\% \quad AR = 63\%$$

Fixed Charge Coverage

We expect the debt, after the fund is fully invested, or fully ramped, to have a fixed charge coverage ratio of at least 1.5 times (x) for an investment-grade debt credit rating. When calculating the fixed charge coverage ratio, we include the interest expense for all fund related debt.

Fund Manager Review

We perform a Fund Manager Review, which focuses on various attributes of the Fund Manager including the experience of the investment management team, AUM in the sector, the manager's origination/sourcing platform, portfolio surveillance and risk management process, historical performance in the sector, and other factors that may be relevant to investing and managing assets in a given sector.

Additionally, we will review the credit risk profile of the manager, which typically includes a review of a manager's corporate credit rating or a Morningstar DBRS Internal Assessment³ if the manager does not have a credit rating.

The Fund Manager Review can affect the ACR level selected within the range. Fund managers with strong performance records in the sector through various cycles may result in an ACR that is at the lower end of the range for a given credit rating category. Alternatively, an emerging fund manager with a limited track record may result in an ACR that is at the higher end of the range for a given credit rating category.

Historical Performance

When possible, we assess historical fund composition and performance of the fund or predecessor funds that execute a comparable investment strategy. We view investment management companies (IMCs) that have a considerable track record in the asset class/investment strategy over numerous cycles favorably and may assess an ACR at the lower end of the range, which reflects the benefit of the manager's track record.

³ A further description of Internal Assessments is available on our website under Internal Assessments Global Policy.

Transaction Structure and Covenants

We review the transaction structure, including the length of the ramp-up period, the revolving or reinvestment period, and the amortization period; investment eligibility criteria; advance rate or ACRs; and applicable covenants. Some transactions include overcollateralization triggers. These triggers, when breached, must be cured by the redirection of interest collections or principal payments, which would otherwise go to fund investors and the fund manager, to pay down the fund debt until the overcollateralization ratio is cured.

Funds subject to the 40 Act have specific ACR requirements and are required to cure breaches. We review a fund's compliance with any 40 Act regulations.

40 Act Funds

This methodology can be applied to funds that are governed by the 40 Act. Many closed-end funds are registered under the 40 Act and, as such, are subject to those regulations.

U.S. closed-end funds are registered with the Securities and Exchange Commission and are considered to be publicly offered, which enhances and standardizes public disclosures. The amount of leverage a U.S. closed-end fund may incur is limited by the 40 Act through an ACR requirement of at least 300% of outstanding debt (0.5x debt/equity). U.S. closed-end funds that issue preferred stock must have an ACR of at least 200% of the preferred stock (1.0x preferred stock/equity). We review any regulatory requirements of the jurisdiction in which a fund is registered.

Liquidity and Call Options

Certain corporate debt instruments, including private credit debt and middle market loans, can be illiquid and very thinly traded, if at all. Consequently, funds should provide for an orderly wind down of the fund. The ACR ranges in the exhibits above do not consider the impact of market value volatility on the fund's assets. We expect funds to pay noteholders their return of principal from an orderly wind down of the fund, whereas asset sales are not expected to be the primary source for debt repayment and are likely to be limited, if at all.

We expect the legal final maturity date for the fund debt to exceed the maturity date of the longest dated asset that will be purchased at the end of the revolving or reinvestment period; otherwise, we conduct a refinancing risk analysis (see the Funds With Refinancing Risk section).

Fund managers may want the option to call the fund debt to maintain financing flexibility. If the fund manager retains a call option on the fund debt, we expect the documents to reflect that the fund debt is to be paid off in its entirety at par once it is called.

Funds With Refinancing Risk

The fund manager should not rely on asset sales to service debt payments. This necessitates that the fund manager has a plan in place to appropriately provide for the amortization of the debt through an orderly wind down of the fund or through a mechanism where the application of principal payments from investments and/or investment income is used to pay debt down. In certain circumstances, the fund manager may rely on refinancing the debt to repay existing debtholders. When assessing the refinancing risk of the transaction, the credit quality of the fund manager may be a constraining factor to the credit rating. Furthermore, transactions that present refinancing risk may be precluded from reaching the highest credit rating levels.

To evaluate the liquidity risk associated with refinancing the debt, we use the *Global Methodology For Rating Non-Bank Financial Institutions* (the NBF Methodology) when assessing the debt's refinancing risk. Specifically, we may employ analysis, metrics, and methodology grid scores from the NBF Methodology focusing on certain building blocks, such as the Risk Profile and Funding & Liquidity building blocks.

These methodology grid scores provide an added assessment that evaluates the risks related to refinancing debt. To the extent that the methodology grid scores imply a higher risk than implied by the standalone credit rating on the investment fund debt, then it becomes a constraining factor to the investment fund debt credit rating.

Legal and Documentation Review

We review the core fund documents, the debt agreements, and any regulations that the fund is subject to, based on its registration and/or jurisdiction. Documentation review typically looks at the entity issuing the debt and the collateral available to support the debt repayment, bankruptcy remoteness, or the proper isolation of collateral, custody agreements, covenants or triggers, creditors' rights, and

priority of claims in a default scenario, investment parameters, and ability to incur additional debt, among other factors. In reviewing documents and legal opinions, we seek to identify any features, ambiguities, or inconsistencies that could result in the contractual payments of the fund's assets performing in a manner at odds with the credit rating analysis.

The legal final maturity date for a security is the last possible date that a security could be paid off in full without experiencing an event of default. We evaluate the legal final maturity date for rated securities of each transaction with the expectation that the fund can encounter some stress near its expected maturity date or anticipated repayment date (ARD) without causing a payment default on the debt.

Therefore, we expect the legal final maturity date to be set past the expected final maturity date or the ARD. Potential stress scenarios that could extend the investment maturities past the expected maturity date or ARD include payment deferrals, forbearance agreements, extensions, legal and/or procedural recovery delays, or workout periods.

Surveillance

After assigning a debt credit rating, we monitor the fund and its investments in accordance with the [Structured Finance Ratings Surveillance Global Policy](#).

We expect to receive periodic reporting on the collateral in the fund and on the fund's compliance with transaction covenants. Reports may include the following:

- Details on the fund's investments, including annual audited reports, fund manager internal credit scores, or other portfolio data; for funds that are in the ramp-up or revolving period, financial information for new investments on a more frequent basis.
- Notification for amendments granted or noncompliance of financial covenants.

Surveillance generally includes monitoring of the following items:

- The fund's collateral performance
- The IMC's credit rating or Morningstar DBRS Internal Assessment
- The fund's compliance with transaction covenants
- The fund's continuity in investment strategy
- The fund's liquidity profile, if applicable
- Quarterly and annual fund financial statements for changes in the total amount of debt outstanding and debt service coverage

Environmental, Social, and Governance (ESG) Considerations

ESG factors may affect a credit rating and/or the related credit analysis. The impact of ESG factors may vary across industries, sectors, or asset classes and is described in *Morningstar DBRS Criteria: Approach to Environmental, Social, and Governance Factors in Credit Ratings*. We assess ESG factors within the building blocks of the fund manager review.

Appendix I—Subscription Loan Facilities

Subscription Loan Facilities Overview

Subscription Loan Facilities, also called Subscription Loans, are liquidity and financing tools for draw-down style funds such as private equity and private debt funds, which lend against capital call commitments. Such funds are often structured as limited partnerships. In a limited partnership, the investment manager (the General Partner (GP)) manages the partnership and brings in the investors (LPs). LPs participate in the LP by committing capital to the fund (the Subscription Amount or Capital Commitment). When this capital is called upon, the LP will have an ownership stake in the fund. Many funds do not require the full Subscription Amount to be paid into the fund when it is initially launched, instead choosing to request (call) capital when it is needed.

An LP's Unfunded Capital Commitments are the portion of the Subscription Amount that has not yet been paid into the fund. A Capital Call is the process by which GP asks its LPs to fund some or all of their Unfunded Capital Commitments. GPs typically use Subscription Loan Facilities to fund investments, and periodically issue Capital Calls as a source of repayment for the Subscription Loan Facility. LPs have a predetermined amount of time, usually about a week to 10 days, to contribute the funds.

A Subscription Loan is typically a revolving line of credit taken out by a GP to provide liquidity to quickly fund new investments. For example, Capital Calls to LPs may take 10 days to be funded while draws on a Subscription Loan are typically funded within a day or two. Subscription Loans can also smooth out the timing of Capital Calls made to LPs into a predetermined schedule thus easing the burden on LPs to fund Capital Calls on demand. These facilities can also be used as leverage if the borrowings under the facility remain outstanding, which can improve investment fund returns.

A Subscription Loan is secured by the pledges of the LPs' Unfunded Capital Commitments and the GP's right to call capital from the LPs. The Subscription Loan lender also benefits from numerous contractual remedies against defaulting LPs. These remedies generally include the GP's ability to (1) withhold the defaulting LP's distributions and apply them to repay the LP's defaulted amount, (2) obtain additional funds from other LPs in the fund to repay the LP's defaulted amount, (3) transfer or sell the defaulting LP's interest in the fund to another party (e.g., an existing LP or a new LP in the fund), (4) obtain a loan to cover the LP's defaulted amount, or (5) cover the LP's defaulted amount from its own balance sheet.

Finally, a Subscription Loan ranks as a debt obligation of the fund, placing it in a senior position to LPs in the waterfall of payments in the event of a restructuring or a solvent liquidation of the fund (which are both more likely than insolvency of the fund given its typically limited number of creditors and quantum of debt).

Limited Partners

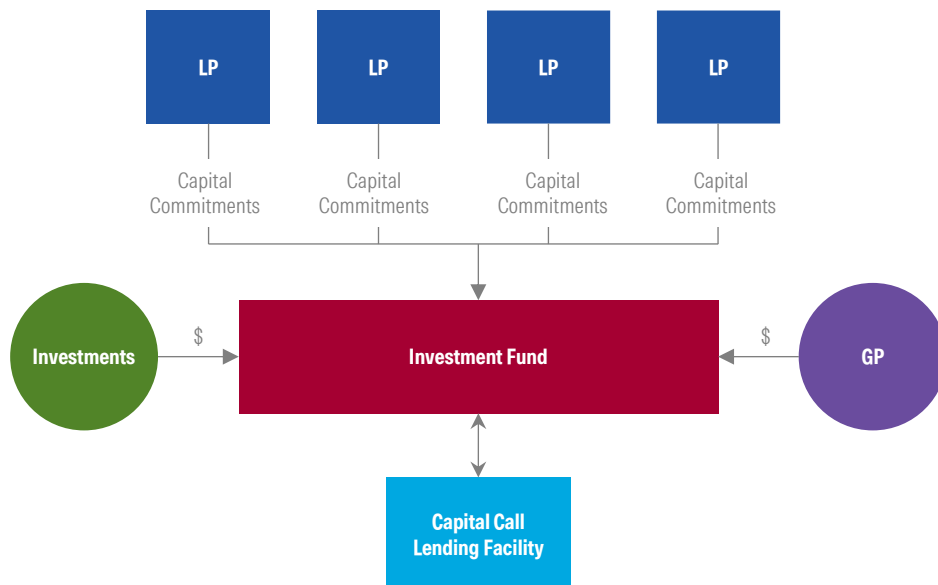
LPs are typically qualified purchasers or accredited investors. LPs generally include pension plans (public and private), endowments, institutional investors, sovereign wealth funds, insurance companies, funds of funds, family offices, and high-net-worth individuals (HNWIs). LPs typically agree via a LP agreement (LPA), or in some cases an investor letter, to fund investments or to repay fund liabilities when called upon by the GP of the fund.

The LPs' commitment period to fund new investments can vary but is generally based on the investment period of the fund; however, the LPs can generally be called upon to repay fund liabilities, which include Subscription Loans, through the term of the partnership, which could last up to 10 years.

Analytical Framework for Assessing Subscription Loans

Our methodology addresses the ultimate payment of interest and principal on or before the latest date for repayment of the Subscription Loan or similar-meaning term set forth in the transaction's legal documents.

Exhibit 6 Subscription Loan Facility—Typical Structure



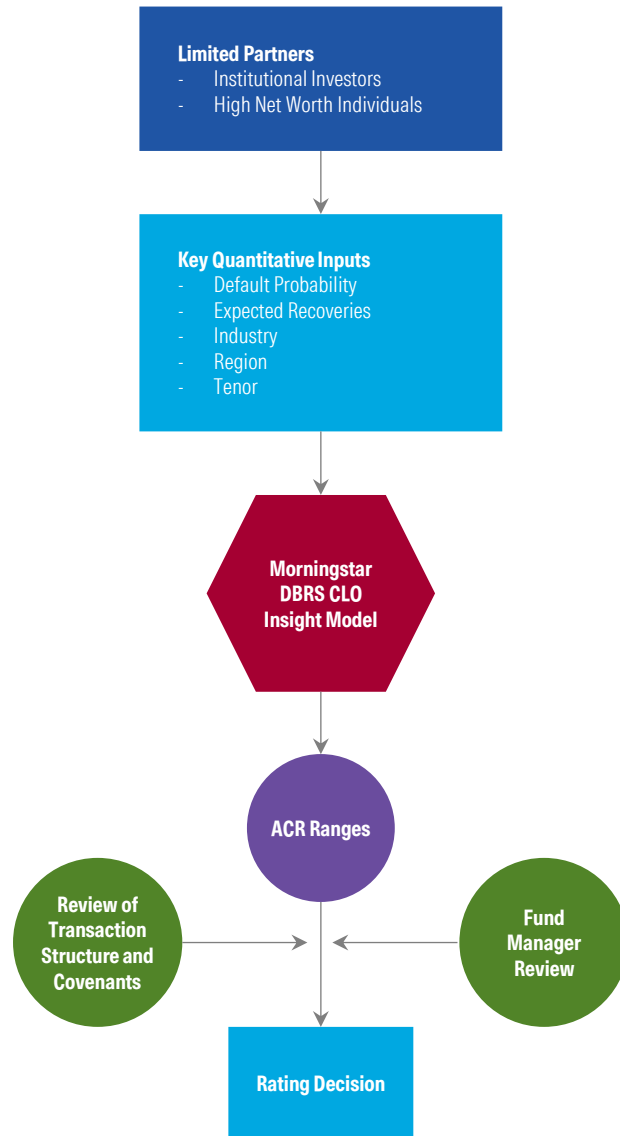
We use similar analytical steps to analyze Subscription Loans Facilities as with Investment Fund Debt, with adjustments to address risks specific to Subscription Loans Facilities. Key steps include the following:

1. **Analysis of LP Unfunded Capital Commitments**—The quantitative analysis of each LP's Unfunded Capital Commitment considers modeling inputs that include credit ratings, expected recoveries, industry, region, and tenor of the facility. The analysis also considers qualitative factors, such as incentives and substitutions, when evaluating the adequacy of the transaction's ACR or overcollateralization levels. See the Analysis of LP Unfunded Capital Commitments section for further details.
2. **Review of Transaction Structure and Covenants**—Transaction documents are expected to provide guidance or limitations on the Allowable Borrowing Base (ABB), including eligibility criteria, exclusions, and concentration limits, as well as advance rate, contractual claim, and payment waterfall. See the Transaction Structure and Covenants section for further details.
3. **Fund Manager Review**—We analyze the fund manager using the IMC Methodology as a framework. The fund manager review is a consideration when determining an appropriate ACR level within specified ranges.
4. **Legal and Documentation Review**—We review the key legal documents and opinions affecting the transaction to identify legal risks that may be inherent in the transaction. See the Legal and Documentation Review section for further details.

Analysis of LP Unfunded Capital Commitments

To assess the credit risk profile of LP investors, we use its CLO Insight Model to derive a range of ACRs. The ACR ranges incorporate the quantitative result from internal modeling and qualitative factors related to transaction structure.

Exhibit 7 Steps for Rating Subscription Loans



We may depart from the credit rating stresses implied by the predictive model. We typically expect there to be a substantial likelihood that a reasonable investor or other user of a credit rating would consider a three-notch or more deviation from the credit rating stress implied by the predictive model to be a significant factor in evaluating the credit rating. When a credit rating committee determines a credit rating with a material deviation, we disclose the material deviation and its analytical rationale for the material deviation.

Quantitative Result

For the quantitative result, the Morningstar DBRS CLO Insight Model contributes to an assessment of the expected loss level of a pool of Unfunded Capital Commitments at a particular credit rating level. This expected loss level is converted to an ACR range, which can be applied to a credit rating category.

The LPs in the investment fund have agreed, typically in the relevant LPA and/or a separate investor side letter delivered to the Subscription Loan, to fund their capital commitments without defense, set-off, or counterclaim. Those LPs that are not included in the ABB, based on transaction documentation, receive no credit in our analysis.

Our credit rating is based on the LPs' obligation to fund. The inputs of the model reflect the risks inherent in Subscription Loans and include each LP's Unfunded Capital Commitment, credit rating, expected recovery, industry, and region as well as the tenor of the facility.

In assessing the credit risk of an individual LP, the Morningstar DBRS CLO Insight Model uses our public or private credit ratings when available. For sovereign wealth funds (SWF) and corporate pension funds (CPF), we use its private credit ratings for such entities when available. If we do not have a credit rating on an SWF or CPF but have a credit rating on the sovereign or the corporate, that credit rating is used, typically with a minus one-notch differential. In the absence of a public or private credit rating from us, we may rely on public credit ratings assigned and monitored by other credit rating agencies. Where no credit rating is available (which is often the case for HNWIs and may be the case for certain institutional investors), we may use conservative assumptions based on observed historical performance data within the asset class and/or proxy performance data from other asset classes within structured finance.

Generally, recovery assumptions are aligned with senior secured recovery rates based on the domicile of the fund. There are a number of contractual remedies which support the expectation of high recovery rates, including the (1) acceleration of the defaulting LP's Unfunded Capital Commitments, which become immediately due and payable; (2) suspension of voting rights for a defaulting LP; (3) write-down and/or forfeiture of the defaulting LP's existing investments; (4) withholding of distributions to the defaulting LP; (5) exclusion of the defaulting LP from future investments of the fund; (6) the ability to impose financial penalties; and/or (7) the forced transfer or sale of part of the defaulting LP's interest. These contractual remedies are highly dissuasive and an LP in difficulty (or an administrator in bankruptcy of such LP) would likely prioritize its commitments and/or find a replacement LP rather than default and relinquish both control of the sale of its interest and part of the sale proceeds.

While the investment fund is typically not structured as a bankruptcy-remote entity, we understand investment fund bankruptcies are rare. Precipitating a fund bankruptcy, the fund manager and the fund LPs have remedies prescribed in fund documentation and/or Subscription Loan documentation. A fund manager could replace or enhance the investment management team or increase operational support (i.e., loan workout teams or operating partners). The majority of fund LPs, on behalf of all fund investors, can generally make recommendations on remedies, and ultimately remove or replace the fund manager. During these periods of uncertainty (fund underperformance, fund manager removal), an LP's

incentive to fund could be reduced, despite its legal obligation to fund up to its Unfunded Capital Commitment. Certain events can trigger the end of the investment period, and as this typically includes the fund manager removal, the fund would cease any capital calls to LPs as it begins to amortize. Proceeds from amortization (and/or asset sales) would typically be used to repay the Subscription Loan, ahead of any distribution to LPs.

Qualitative Factors

We consider the features of each transaction and may overlay qualitative factors in its analysis. These qualitative factors may consider the fund investments (i.e., sector or geography), fund structure, or transaction structure. These qualitative factors are considered when determining ACR ranges specific to a Subscription Loan transaction.

We also note the following general features of Subscription Loan transactions:

Cross-Collateralization of LPs

If an LP were unable to replace itself and defaulted on its commitment to fund, the other LPs would typically be obligated to fund up to their Unfunded Capital Commitments. Thus, there is a cross-collateralization among LPs that benefits the Subscription Loan. Each LP has a commitment and is legally compelled to fund up to its limit. If an LP were unable to fund, all the other LPs are obligated for their pro rata share of the shortfall. Some LPs may have restrictions prohibiting their ability to fund certain investments. While this adds operational complexity for the fund manager, and these restrictions are noted inside letters and reviewed by us, these restrictions are generally accounted for within the Fund Manager Review. Cross-collateralization is at its peak in the beginning of the investment period because the uncalled commitments are at their highest levels. Cross-collateralization is at its lowest when the majority of committed capital has been called into the fund.

LPs' Incentives to Fund

In general, if an LP in an Investment Fund decides not to fund its Unfunded Capital Commitment, that LP faces a penalty, which generally includes a diminution of its ownership interest in the fund. Penalties are set in each partnership agreement. Thus, each LP, after it has funded capital, generally has a strong incentive to continue to fund future capital calls on its Unfunded Capital Commitment. It should be noted that the strength of this feature is at its peak at the end of the investment period when LPs are heavily invested. This is the inverse of the peak of the cross-collateralization strength (as discussed above).

Substitutions

In the event that an LP is unable to fund a Capital Call, the GP may seek a replacement to assume that LP's commitment, rather than risking losing part or all of its investment. This feature of replacing LPs is the expected protocol and represents a strength of Subscription Loan structures. It should also be noted that, typically, the Subscription Facility Agent (acting for the lenders) and the GP must consent to any new LPs.

Net Loss Experience

In instances where there have been no recorded losses in rated Subscription Loan transactions, we may ask for the prior default history of each GP's past funds in order to establish a benchmark.

Asset Coverage Ratio

ACR ranges vary with our credit rating categories and can also vary based on the Quantitative Result and Qualitative Factors. For illustrative purposes, we have calculated ACR tables for two different scenarios that could be present in a Subscription Loan transaction. These exhibits are for illustrative purposes only as they incorporate a limited set of assumptions.

Exhibit 8 is a scenario that assumes approximately 20 LPs that are 100% institutional investors. The aggregate credit quality of the ABB is BB, and the term of the facility is two years. For example, based on this scenario, the ACR range for a Subscription Loan in the "A" credit rating category is 131% to 146%. This equates to an advance rate of 68% to 76% (the advance rate = 1/ACR).

Exhibit 8 ACR Scenario 1**ACR Table**

Assumptions		ACR Ranges by Credit Rating									
		AAA		AA		A		BBB		BB	
Credit Quality	Tenor (yr)	Low	High	Low	High	Low	High	Low	High	Low	High
BB	2	146%	161%	141%	156%	131%	146%	105%	120%	103%	118%

Exhibit 9 is a scenario that assumes more than 150 LPs, of which about half are HNWI and half are institutional investors. The aggregate credit quality of the ABB is B (low), and the term of the facility is one year. For example, based on this scenario, the ACR range for a Subscription Loan in the "A" credit rating category is 119% to 134%. This equates to an advance rate of 74% to 84%.

Exhibit 9 ACR Scenario 2**ACR Table**

Assumptions		ACR Ranges by Credit Rating									
		AAA		AA		A		BBB		BB	
Credit Quality	Tenor (yr)	Low	High	Low	High	Low	High	Low	High	Low	High
B (low)	1	128%	143%	125%	140%	119%	134%	114%	129%	108%	123%

The midpoint of the ACR range is typically our starting point for a Subscription Loan. The quality of the fund manager, as reflected in the credit rating of the Investment Management Company or the Morningstar DBRS Internal Assessment and historical performance under the fund's strategy, can affect the final ACR selected. Highly rated fund managers with strong performance records through various cycles can gravitate toward the lower end of the ACR range.

Fund Manager Review

Given the strong linkages to the Fund Manager as a mitigant to fund bankruptcy, the Fund Manager Review plays a critical part in the analysis. We perform a review of the Fund Manager, as described in the main body of this methodology (see page 7).

The Fund Manager Review can affect the ACR selected. For a strong fund manager review, we may select an ACR at the lower end of the range for a given credit rating category. Alternatively, an emerging fund manager review may result in an ACR that is at the higher end of the range for a given credit rating category.

Review of Transaction Structure and Covenants

We review the transaction structure, including the length of the ramp-up period, the revolving or reinvestment period, and the amortization period; advance rate; and applicable covenants. Transaction documents are expected to provide guidance or limitations on the ABB, including eligibility criteria, exclusions, and concentration limits, as well as advance rate, security interest, and payment waterfall.

LP Commitments in the ABB

In order to be included in the ABB, the documentation governing an LP's commitment typically includes the following:

- An unsecured contractual claim on the Unfunded Capital Commitments of the LPs in the fund. In the investment fund's partnership agreement, the transaction credit agreement, or the side letter summary provided in connection with the subscription facility, there typically is:
 - A consent to the subscription facility (to the incurrence of debt) and to the:
 - Grant of an effective Security Interest in the Loan Agreement,
 - Assignment of the GP's right to call capital,⁴ and
 - Right to receive capital contributions.
 - An agreement to fund all capital contributions that will be used to repay the subscription facility without set-off, defense, or counterclaim. An agreement to fund all capital contributions to a specifically designated account⁵ pledged to the subscription facility agent.
 - We review the side letter summary for carveouts, which could prohibit the appropriate application of the methodology framework.

⁴ We note that, in addition to an assignment of the right to call capital as part of an enforcement of the security arrangements, it is common in Subscription Loans for the facility agent to have the right to call commitments directly from LPs in the event that a specified number of LPs default on their commitments.

⁵ We evaluate the consistency of the account bank with the criteria set forth in our *Legal Criteria for U.S. Structured Finance*.

– Investor agreement not to cancel, reduce, or modify its capital commitment without the consent of the subscription facility agent.

– Investor agreement not to transfer its interest in the fund without the consent of the subscription facility agent.

– Agreements addressing waiver of sovereign immunity (for governmental and sovereign wealth fund investors), ERISA compliance (for ERISA plan Investors), and consent to acceptable jurisdiction (for non-U.S. investors).

– Agreement of the investor to provide the subscription facility agent from time to time with financial information and, if requested, a confirmation of the investor's current unfunded capital commitment amount.

Example of ABB and Advance Rate Calculations

Unfunded LP Commitments (\$)	1,500,000,000.00
Non-Included LPs in the ABB (based on documentation) (\$)	-350,000,000.00
ABB (\$)	1,150,000,000.00
Maximum Advance Amount (\$)*	585,000,000.00
ABB Advance Rate (%)	50.87

* The Maximum Advance Amount is the total amount that can be financed in the facility. This amount includes reductions for excess concentrations.

Generally, inclusion in the ABB includes the following steps:

- The LP signs the Subscription Loan Agreement or/and LPA.⁶
- If the LP signs only the Subscription Loan Agreement, that agreement will refer to the LPA.
- The LPA contains the aforementioned prescribed legal language of Set-Off, Counterclaim, and All Defense.
- Sponsor Bank Lawyers verify that the Subscription Agreement LPs match the Borrowing Base LPs submitted to us and are evaluated in this procedure stage.

Legal and Documentation Review

We review the documents related to the transaction, including the loan or security agreement, side letters/side letter summary, fund LPA, among other relevant documents. We also assess:

1. Enforceability opinion(s) related to the loan/security agreement.
2. Contractual claim in the loan/security agreement.

LP Rights

We note that LPs typically waive all rights, namely:

1. Set-Off
2. Counterclaim
3. All Defenses⁷

Contractual Claim

The lenders have a contractual claim on the Unfunded Capital Commitments of the LPs. We expect that the Subscription Agent has been given an assignment, on behalf of the lenders, of the right to call such Unfunded Capital Commitment. The Subscription Agent has security over the fund's collection account. Upon the occurrence of any event of default under the Subscription Loan Facility, the Subscription Agent has the rights to: (1) call the LPs to fund their Unfunded Capital Commitments, (2) receive the capital contributions, and (3) direct those funds into the collection account for the benefit of the Subscription Loan.

⁶ In some cases, a side letter may be signed.

⁷ All defenses include any rights, claims, defenses, or set offs that the investor may have against the fund or its GP, including claims of fraud and breach of fiduciary duty.

Surveillance

We conduct surveillance in accordance with the *Structured Finance Ratings Surveillance Global Policy* on <https://dbrs.morningstar.com>. For subscription loan transactions, we may request information that is similar to that for Investment Fund Debt surveillance. In addition, we may review ABB reporting and request any notification of change of LPs within the ABB.

Appendix II—Credit Funds

Introduction

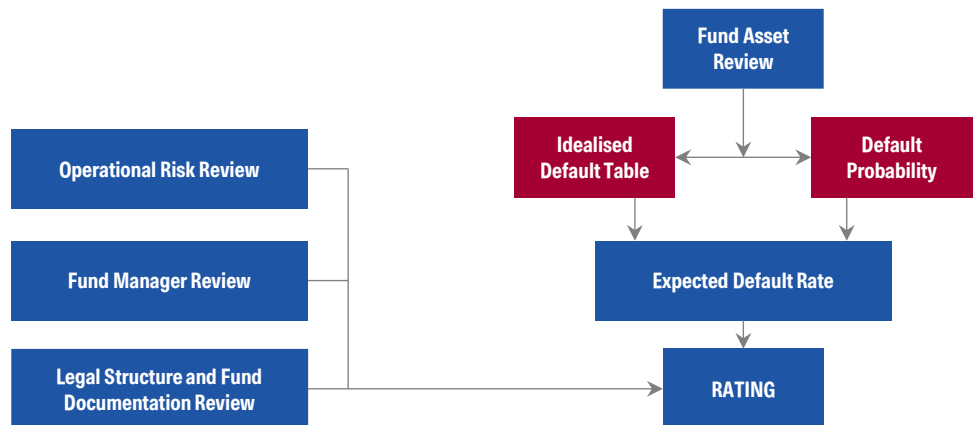
This Appendix II outlines our methodology for assigning credit ratings that reflect an assessment of the credit risk embedded in Fund assets. This framework may be applied in conjunction with our other methodologies to determine the risk profile of the assets in a given pool. In these circumstances, we disclose these methodologies if relied upon when assigning credit ratings with this approach.

Note that the Long-Term Obligations scale is not applicable as we are assessing the credit risk profile of the Fund assets. No consideration is given to any Fund debt or other risk factors affecting the performance of the fund under this framework when assigning Credit Fund credit ratings.

The following diagram describes the credit rating process used to analyze credit fund assets:

1. We perform an operational risk review of the Credit Fund manager and review any significant Credit Fund parties.
2. We review legal aspects of the Credit Fund to identify legal risks inherent in the documents and to evaluate consistency with our appropriate legal criteria based on the jurisdiction of the issuer.
3. We analyze the credit quality of the Credit Fund assets and determine an expected default rate for these assets.

Credit Funds Credit Rating Process



Source: Morningstar DBRS.

Operational Risk Review

Our operational risk review for Credit Funds is designed to evaluate the quality of the parties that perform certain key roles in a Credit Fund that we rate. These roles may include, but are not limited to, the following:

- Ongoing management
- Administrative services
- Custodial services
- Accounting

While we do not assign formal credit ratings to these processes, we do conduct operational risk reviews to determine if the key parties are acceptable and then incorporate the results of the review into the credit rating and surveillance processes. In the event that we determine that a key Credit Fund participant does not meet minimum standards and there are insufficient mitigating factors, we may decline to rate the Credit Fund.

Fund Manager Review

We perform a review of the fund manager as previously described in the body of the main methodology section Fund Manager Review.

Asset Analysis

We evaluate Credit Fund assets based on credit assessments of the underlying assets. If the manager is able to trade within the Credit Fund, we typically assess the assets based on either the current composition or a hypothetical pool constructed using the worst-case portfolio allowed by the Credit Fund guidelines.

Morningstar DBRS Obligor Credit Rating

The individual assets of the Credit Fund have (1) a long-term credit rating (public or private) that we issue, or, where such credit rating does not exist, a default probability or opinion that may be mapped to our long-term credit rating, such as (2) a credit estimate issued by us, (3) a Morningstar DBRS Internal Assessment, and/or (4) internal risk scores.

A Morningstar DBRS Credit Estimate is a private, limited assessment of the credit risk of a corporate debt issuer. It is not our public credit rating. Credit Estimates are not actively monitored and typically expire one year after assignment. Further description of Credit Estimates is available on our website under *Credit Estimates Global Policy*.⁸

⁸ Please refer to <https://dbrs.morningstar.com> for an explanation of our rating scales and rating policies.

A Morningstar DBRS Internal Assessment is an opinion regarding the creditworthiness of an issuer, or a security based on public credit ratings issued and maintained by other credit rating agencies that are registered in accordance with jurisdictional regulations and/or an opinion based on our analysis/review, which should not be equated to the depth of analysis/review conducted on public or private credit ratings. Further description of Internal Assessments is available on our website under *Internal Assessments Global Policy*.

If, at any time, our credit rating, Credit Estimate, or Internal Assessment cannot be determined as above, we may use other forms of risk assessment to determine them, which may include mapping the issuer's internal risk scores. If none of the options stated above are applicable, then the exposure for term instruments is generally assumed in the CCC category, which is also applied to assets where our opinion has been requested but not yet provided.

Asset Types Receiving Alternative Treatment

Treatment of Defaulted and Distressed Assets

Defaulted and nonperforming assets are typically assumed to have a 100% probability of default.

Assets Experiencing Extended Delinquency

In general, any asset that has defaulted on a scheduled payment—irrespective of waiver of such default—is considered defaulted for analysis purposes. In situations where an asset has not technically defaulted as per its contractual conditions but has deferred any payment for a year or longer, the asset is also typically treated as a default for analysis purposes.

Variable Funding and Delayed Draw Instruments

We create a worst-case scenario that may include full draws and funding of revolving and delayed-draw assets.

Equity Securities and Instruments that are Convertible, Exchangeable, or Have Attached Warrants

If such assets are in the pool, we generally assign a C default probability to equity securities. Debt securities with attached warrants would be similarly penalized on the nondebt portion of the security. In general, we would expect to see limitations on the purchasing of such assets.

Quantitative Analysis

We use a model to generate the expected default rate of the Credit Fund assets. The following inputs are used for each asset:

- Individual asset and a unique identifier associated with its obligor
- Amount of exposure (generally par value; although, other valuations may be used)
- Tenor of exposure
- Morningstar DBRS obligor credit rating (derived as described in the Morningstar DBRS Obligor Credit Rating section)

The Expected Default Rate of the Credit Fund assets is equal to the exposure WA Default Rate of those assets. The Default Rate of each asset is equal to its probability of default, derived from its Morningstar DBRS Obligor Credit Rating and corresponding to the relevant tenor.

The Expected Default Rate is compared with the comparable credit rating level in the Idealized Default Table (IDT; see Exhibit 14 in Appendix IV—Tables Relating to Quantitative Analysis) for the WA life of the assets used. The WA lives between two columns are linearly interpolated to derive the applicable Idealized Default Rate for each credit rating level. The next Idealized Default Rate level below the Expected Default Rate of the assets is considered the model output for the credit rating. A description of the scale applicable to fund ratings can be found in Appendix II, Exhibit 10—Morningstar DBRS Credit Fund Rating Definitions.

While certain limitations and tests explicitly drive the quantitative analysis, a general review is undertaken to ensure that the transaction is not subject to outsize concentration risk and that the composition of the asset pool is appropriately circumscribed to the stated nature of the transaction.

Legal Structure and Fund Documentation Review

Documentation and Legal Risks

We review the legal structure of a Credit Fund to evaluate consistency with our legal criteria for the appropriate jurisdiction and to reflect investment limitations.

Our legal analysis of the administrative structure of the Credit Fund also typically includes a review of various governing documents based on the jurisdiction of the Issuer, as well as review of various legal opinions. A major focus of our legal analysis is the fund separateness of the assets from both the portfolio manager and other funds under management.

In reviewing documents and opinions, we seek to identify any features, ambiguities, or inconsistencies that could result in the contractual payments of the Credit Fund assets performing in a manner at odds with the credit rating analysis.

Credit Fund Surveillance

We generally use similar asset and quantitative analysis in monitoring its Credit Funds as we do for assigning new credit ratings.

Monitoring

We monitor a number of factors in Credit Fund surveillance, including any portfolio limits and test levels that are observed. We generally expect to receive a report outlining holdings in the Credit Fund and their current credit ratings, as well as par and market values on at least a monthly basis.

The Credit Fund Credit Rating Scale is used when assigning credit ratings pursuant to Appendix II. The Credit Fund Credit Rating Scale is an indication of our expected default probability attributed to the credit risk embedded in the Fund assets aggregated at the portfolio level. For further information, please refer to Rating Scales at https://dbrs.morningstar.com/understanding-ratings#about_ratings.

The scales are summarized below. All credit rating categories from AA-cf to CCC-cf also contain subcategories (high) and (low), indicating incremental differences in credit quality. A credit rating without a subcategory is in the middle of the category.

Exhibit 10 Morningstar DBRS Credit Fund Credit Rating Definitions

AAA-cf	The fund portfolio is considered to be of the highest credit quality.
AA-cf	The fund portfolio is considered to be of a high credit quality.
A-cf	The fund portfolio is considered to be of a good credit quality.
BBB-cf	The fund portfolio is considered to be of an adequate credit quality.
BB-cf	The fund portfolio is considered to be of a speculative, non-investment-grade credit quality.
B-cf	The fund portfolio is considered to be of a highly speculative credit quality.
CCC-cf	The fund portfolio is considered to be of a very highly speculative credit quality.

For an example of the application of the Credit Fund Credit Rating Scale see Exhibit 11.

Exhibit 11 Morningstar DBRS Credit Fund Credit Rating Examples

Investment-Grade Fund

Credit Rating	Percentage	Tenor
AAA	40	1 Year
AA	30	1 Year
A	20	1 Year
BBB	10	1 Year

To calculate the expected default rate for an investment-grade fund, the IDT, which can be found below in Exhibit 14 in Appendix IV—Tables Relating to Quantitative Analysis, is used to first find the default value given the tenor and credit rating. For example, a credit rating of AAA with a tenor of 1 year has an idealized default of 0.0110%. This value is then multiplied by the percentage of the pool that is AAA, which is this instance is 40%. The WA idealized default value is then summed based on the distribution of the pool which is shown below. Based on this calculation, the expected default rate of the pool is 0.0437%, which is in between the A (high) and “A” levels. The lower of the credit ratings is the model result.

$$(40\% * 0.0110\%) + (30\% * 0.0212\%) + (20\% * 0.0487\%) + (10\% * 0.2318\%) = 0.0437\%$$

Credit Rating	Percentage
A (high)	0.0419
A	0.0487
A (low)	0.0945

Fund Model Rating: A-cf

Noninvestment-Grade Fund

Credit Rating	Percentage	Tenor
BB	45	1 Year
B	50	1 Year
Nonperforming/Defaulted Assets/Equity	5	n/a

To calculate the expected default rate for a non-investment-grade fund, the IDT, which can be found below in Exhibit 14 in Appendix IV—Tables Relating to Quantitative Analysis, is used to first find the default value given the tenor and credit rating. For any nonperforming assets, defaulted assets or equity, the idealized default value is assumed to be 100% for any tenor value. The WA idealized default value is then summed based on the distribution of the pool which is shown below. Based on this calculation, the expected default rate of the pool is 8.0384%, which is in between the B and B (low) levels. The lower of the credit ratings is the model result.

$$(45\% * 1.3627\%) + (50\% * 4.8503\%) + (5\% * 100.0\%) = 8.0384\%$$

Fund Model Rating: B (low)-cf

Varied Tenor Fund

Credit Rating	Percentage	Tenor
AAA	10	1.0 Year
AAA	20	1.5 Years
AA	40	1.0 Year
A	20	2.5 Years
BBB	10	1.0 Year

To calculate the expected default rate for a varied tenor fund, the IDT, which can be found below in Exhibit 14 in Appendix IV—Tables Relating to Quantitative Analysis, is used to first find the default value given the tenor and credit rating. To calculate the idealized default for an AAA credit rating with a tenor of 1.5 years, the idealized default value for one year is taken and 50% of the difference between the 1 year and 2 years IDT values is added. The WA idealized default value based on tenor is then multiplied by the percentage of the pool that falls under that category. The varied tenor WA idealized default values are then summed based on the distribution of the pool, which is shown below. Based on this calculation, the expected default rate of the pool is 0.0736%, which is in between the A (high) and “A” levels. The lower of the credit ratings is the model result.

$$(10\% * 0.0110\%) + 20\% * (0.0110\% + 0.5 * (0.0264\% - 0.0110\%)) + 40\% * 0.0212\% + 20\% * (0.1287\% + 0.5 * (0.2419\% - 0.1287\%)) + (10\% * 0.2318\%) = 0.0736\%$$

WA Tenor: 1.4 Years

Fund Model Rating: A-cf

Appendix III—Collateralized Fund Obligations Backed by Private Capital

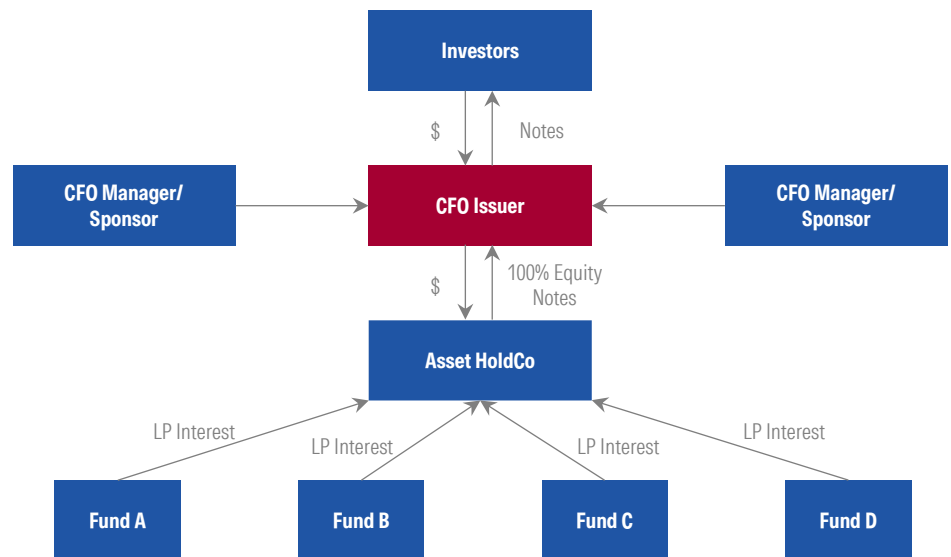
Collateralized Fund Obligations Overview

A collateralized fund obligation (CFO) is a traditional or synthetic securitization of a portfolio of LP interests in private equity, private credit funds, or similar funds (Private Funds). Given Private Funds are typically sourced in the private market, we refer to a CFO secured by such assets as a Private Capital CFO (PC CFO).

Private Funds are often structured as LP funds. In an LP fund, the fund manager typically sponsors the fund as a GP and also maintains an investment management agreement with the fund. The fund manager sources capital for the fund via third-party investors (LPs) who invest money in the fund (LP Interests). LP Interests are pooled together (the Portfolio) and purchased by the CFO using proceeds raised through the issuance of one or more tranches of PC CFO debt and equity.

The terms of LP Interests may prohibit these interests from being pledged to secure a financing without consent of the GP. This typically results in the LP Interests being held in a subsidiary of the CFO Issuer (Asset HoldCo). The assets of the Asset HoldCo (i.e., the LP Interests) are not subject to a pledge or a security interest; however, equity interests in the Asset HoldCo are pledged to secure repayment of the Notes or other obligations of the CFO Issuer. For a typical PC CFO structure, please see Exhibit 12 below.

Exhibit 12 Typical PC CFO Structure



PC CFOs can be broadly described as LP-led or GP-led. LP-led PC CFOs are securitizations, typically from a single investor's portfolio, of LP Interests across numerous Private Funds that are managed by a diverse group of fund managers. LP-led PC CFOs provide investors, who typically serve as the CFO Manager, with a capital market alternative to borrow against their Private Funds. GP-led PC CFOs are securitizations of a concentrated portfolio of LP Interests that are typically sponsored by a single fund manager. GP-led PC CFOs provide fund managers, who are typically the CFO Manager, with a capital market alternative to bundle exposure to two or more PC Funds into a single asset that can be placed with investors in the secondary market. This methodology applies to both LP-led and GP-led PC CFOs.

Application of this Methodology

Key steps in the analytical framework used to rate PC CFOs include the following:

1. **Analysis of Fund Assets**—We assess the risk profile and diversity of the PC CFO portfolio. Key factors include Fund Asset Group and sub-strategy, Fund Manager (GP) quality, Fund Region, Fund Holding Sectors and correlation among the funds. See Step 1—Portfolio Analysis section for more information.
2. **Review of Transaction Structure and Covenants**—Transaction documents are expected to provide guidance on PC CFO portfolio composition including eligibility criteria, exclusions and concentration limitations, as well as transaction structure, payment waterfall, LTV triggers, transaction counterparties, sources of liquidity, and other relevant structural features. See Step 2—Review of Transaction Structure and Covenants section for more information.
3. **Cash Flow Analysis**—We project stressed cash flows for each fund or expected fund in the portfolio and apply them to the relevant transaction structure. Stress cash flows include assumptions on Fund Size, Capital Calls to Date, Fund Age, and include adjustments for PC CFO portfolio composition including Fund Manager (GP) quality, Fund Region, and underlying Fund Holding Sector Diversity. Cash flows for each stress are determined by applying our IDT to the distribution of the trial-level results, and the liabilities are analyzed to determine whether they received their promised cash flows. The appropriate credit rating for each liability in the structure is determined by the highest-rated cash flow scenario under which the liabilities do not default. See Step 3—Cash Flow Analysis section for more information.
4. **Legal and Documentation Review**—We review the key legal documents and opinions affecting the transaction to identify legal risks that may be inherent in the transaction. See Step 4—Legal and Documentation Review section for more information.
5. **PC CFO Manager Review—Operational Risk Analysis**—We typically perform an operational risk analysis on the PC CFO collateral manager. See Step 5—PC CFO Manager Review section for more information.

We generally expect that PC CFO credit ratings will not reach the highest credit rating category.

We base our analysis on fund, cash flow, and investment holdings data primarily from PitchBook Data, Inc. (PitchBook).⁹ We use fund-related data, including but not limited to their respective cash flows and investment holdings, from PitchBook in the design and development of the Methodology.

Step 1—Portfolio Analysis

We perform an analysis of the funds held or expected to be held in the PC CFO portfolio. This step involves requesting information for each fund in the pool from the PC CFO manager. As outlined below, output of our Portfolio Analysis is primarily (1) the classification of Fund Asset Group and sub-strategy, (2) analysis of Fund Holdings, (3) the determination of qualitative adjustments (less than 1.0x is haircut; greater than 1.0x is a benefit) on certain fund attributes, and (4) the determination of the seasoning and net asset values (NAVs) of the Funds that will be incorporated in our projected cash flows done in Step 3.

Fund Asset Group

We classify funds held or expected to be held in the PC CFO portfolio according to its Fund Asset Group based on the nature of their underlying investments. This classification will be used in the J-curve sampling approach performed in Step 3—Cash Flow Analysis. Fund Asset Groups include:

1. Private Equity
2. Venture Capital
3. Real Assets/Real Estate
4. Private Debt
5. Infrastructure
6. Real Assets/Natural Resources
7. Co-Investment
8. Secondaries
9. Fund of Funds

Underlying Fund Manager (GP) Review

We typically perform a review of each of the underlying fund managers (GPs) using aspects of the Fund Manager Review that is described above in the main body of the methodology. We may also request information regarding the Fund Manager's (GP's) track record (historical fund performance, etc.) from the PC CFO manager. The outcome of our Fund Manager (GP) Review classifies a GP into one of three categories: (1) Strong, (2) Moderate, and (3) Emerging. The typical maximum and minimum adjustments based on our review of the Fund Manager (GP) for each tier are below. These adjustments below will be applied to each fund's projected cash flows in Step 3—Cash Flow Analysis: To qualify for an adjustment to more than 1.00x, an Underlying Fund Manager additionally demonstrates historical fund returns in at least the 75th percentile across five or more funds since 1998 each with at least five years of observable life. Underlying Fund Managers that qualify as Emerging or demonstrate historical fund returns in the 25th percentile or lower across five or more funds since 1998 with at least five years of observable life qualify for an adjustment below 1.00x.

⁹ Morningstar DBRS and PitchBook are wholly owned subsidiaries of Morningstar, Inc. Morningstar DBRS provides independent credit rating services for financial institutions, corporate and sovereign entities, and structured finance products and instruments. Morningstar DBRS operates separately from PitchBook.

Strong	1.20x
Moderate	1.00x
Emerging	0.80x

Fund Region

We classify funds held or expected to be held in the PC CFO portfolio according to its Fund Region based on the where the fund manager is located. Fund Managers may be located in various geographical regions such as North America, Europe, Asia (APAC), or the Rest-of-World (ROW). The adjustments below will be applied in Step 3—Cash Flow Analysis to each fund's projected cash flows based on its Fund Region classification:

North America	1.00x
Europe	1.00x
APAC	0.90x
ROW	0.80x

Fund Holding Sectors

We further classify funds according to their holdings' industry exposure. Fund Holding Sectors are used to determine correlation in Step 3—Cash Flow Analysis. The Fund Holding Sectors include:

1. Technology
2. Healthcare
3. Industrials
4. Consumer Cyclical
5. Communication Services
6. Financial Services
7. Energy
8. Real Estate
9. Other

Seasoning

Seasoning, in the context of the funds in a PC CFO portfolio, is determined by what percent of a fund's aggregate subscription amount has been called from its LPs and invested by the GP. An unseasoned fund may have 0% of aggregate subscription amount called and invested while a very seasoned fund may have 100% aggregate subscription amount called and invested. We use seasoning to determine where the starting point on the sampled J-curves for our projected cash flows for each fund.

Fund-Level Leverage Review

While fund-level leverage has not been widely used in most Fund Asset Groups (with the exception of private debt funds), GPs have started using NAV lending facilities (NAV Loans) and similar financial instruments secured by fund assets in more funds in recent years. Private debt funds are typically leveraged with 60% to 70% advance rates while NAV Loans in other Fund Asset Groups tend to have much lower loan-to-value ratios (LTVs), generally below 25% LTV; although, occasionally as high as 50%. While NAV Loans are a financial tool employed to improve fund returns, imprudent use can have the opposite effect. To date, NAV Loans on funds in CFO portfolios have been relatively rare, but can be used by GPs later in a fund's lifecycle. Additionally, the terms on NAV Loans have been relatively bespoke.

To assess the potential impact of fund-level leverage, we expect the PC CFO manager to provide us with information on fund-level leverage used on any funds with interests in the PC CFO portfolio at the time of our initial credit rating credit as well as during the life of the PC CFO to support our ongoing monitoring and surveillance. In instances where we observe fund-level leverage on one or more funds in a PC CFO Portfolio, we may choose to reduce the projected cash flows on some or all of the leveraged funds depending on factors such as the prevalence of leveraged funds across the PC CFO Portfolio; the outcome of our Fund Manager Review on the GPs managing the leveraged funds; the terms of the NAV Loans (or similar financial instruments) including the LTVs; and/or other factors we deem significant.

If we do not receive the information outlined above for a particular fund included in the PC CFO portfolio, the fund may be given zero or reduced projected cash flow credit in the following steps.

Step 2—Review of Transaction Structure and Covenants

The following section addresses certain features that we use in analyzing a transaction's structural characteristics. To the extent that additional risks are identified in the course of this modeling and waterfall cash flow analysis process, we may supplement the analysis described with further stresses to account for any risks not contemplated by the below.

Deal-Specific Structures

1. Priority of Payments

We review relevant deal waterfalls as described in the operative legal documents of the transaction and analyze them using a proprietary cash flow engine. We may also take into account alternate waterfalls in use, in the case of engagement of the enforcement mechanisms, or waterfalls that may differ during different phases of a deal's lifecycle.

2. Cash Diversion Mechanisms

We generally conduct waterfall cash flow analysis on all diversion mechanisms including LTV triggers as per the transaction documents. The legal review examines applicable waterfall placement and the extent to which credit is given for the diversion. To the extent that large amounts of cash could be paid to equity in periods of significant distributions on the underlying portfolio, we may perform additional analysis assuming large distributions as a stress on the deal structure.

To the extent needed to analyze cash flow diversion mechanisms or other tests, we also project portfolio NAVs over time. We generate portfolio NAVs based on stressed values generated for fund cumulative Capital Calls and cumulative distributions for any projection period t as calculated by the following formula

$$NAV_t = NAV_{t=0} + Calls_t - 0.5 \times Distributions_t$$

3. Timing of Distributions

For investment-grade rated PC CFO tranches in structures with LTV triggers, we typically run two distribution timing scenarios—a front-loaded curve and a back-loaded curve—to test the transaction's ability to repay notes under different scenarios. To the extent that LTV triggers are not tripped, a front-loaded distribution scenario stresses a transaction's ability to withstand the release of excess cash flow to the PC CFO equityholder. Conversely, a back-loaded distribution scenario stresses a transaction's ability to repay notes when distributions are delayed. For non-investment-grade PC CFO tranches and transactions without LTV triggers, the distribution timing from the Distributions (as calculated above) typically will be used.

4. Reserve Accounts

Depending on the nature of the reserve accounts in the deal, they may either be directed into the waterfall on each payment date or held on an ongoing basis for the purposes of supporting a class or classes of notes. Accounts where a deal party has discretion over the amounts to be deposited are usually assumed not to be used. In general, reserve accounts are assumed to earn cash at the cash reinvestment rate and these amounts are available to the deal waterfall, unless otherwise specified in the transaction's legal documents. Reserve accounts are generally assumed to be available for the waterfall upon deal maturity or liquidation, allocated according to the transaction's legal documents.

5. Capital Call Treatment

We review the manner in which Capital Calls from the underlying funds are treated in the structure. Depending on the funding mechanism used, we may also conduct a review of the counterparty funding the calls, reserve accounts or other funding mechanisms to determine that the assets held by the deal are not put at risk on the basis of the funding provider's performance.

6. Variable Funding and Delayed Draw Instruments

We analyze variable funding or delayed draw instruments according to their stated purpose and likelihood of draw. In general, we assume full funding of revolving and delayed draw liabilities. The fully funded assumption on the side of the liabilities maximizes leverage assumed in the deal and hence structural stress; however, to the extent that these draws are intended to be invested in cash flow-producing assets, we may assume that these draws are not made or may assume that they remain in cash accounts. For instruments that are intended to be used to fund clawbacks, full draws are assumed.

7. Fees and Expenses

All fees that may lessen amounts available to the rated tranches are generally analyzed. For deals with a cap on senior expenses, fees are analyzed at the cap level. Taxes are not currently analyzed; however,

this may be reconsidered if there were taxation regime changes in a region where obligors of underlying collateral are domiciled. In cases where payable amounts are variable and not subject to a cap, we generally review the transaction's sensitivity to estimated increases to assess consistency with the assigned credit rating.

8. Eligible Investments

For cash held within the deal that meets the criteria in the transaction's legal documents regarding quality and depository institution, such as that in reserve or amortization accounts, we generally assume that it accrues interest at the rate of the dominant index in the transaction, less 25 basis points (bps). This may be adjusted according to market conditions. We usually do not assume accruals on cash flows received by the deal intra-period.

9. Structure Type

PC CFOs can be cash funded or synthetic. We apply this methodology in either case.

10. Hedges

We analyze any interest rate hedges or asset swaps in a deal according to the underlying transaction documents. A variety of interest rate stress scenarios test the ability of the deal to withstand movements in interest rates.

Step 3—Cash Flow Analysis

Asset Cash Flow Sampling

We project cash flows for each underlying fund in the PC CFO portfolio using a sampling approach, where each fund's Capital Calls, Distributions and Net Asset Values (NAV) performance are based on the historical performance of a randomly drawn fund with similar characteristics. The sampling is conditioned on each fund's Asset Group (e.g., Private Equity, Venture Capital, etc.), Capital Calls to date, and age, and are adjusted based on Fund Manager (GP) Review and Fund Region (see Step 1—Portfolio Analysis section). Draws are also correlated across funds in the pool.

These results are then aggregated at the portfolio level, weighting by the size of each fund's contributing share to the overall portfolio to reflect the total cash flow available to the PC CFO. Typically, this process is run over many trials to generate a distribution of outcomes at the portfolio level, with credit rating stress levels generated by applying the IDT (see Exhibit 14 in Appendix IV—Tables Relating to Quantitative Analysis) to the distribution.

1. Base Correlation

A baseline correlation matrix is calculated, with each fund pair's correlation calculated at 15% for same Fund Asset Group, and 6% for different Fund Asset Group. These values align with the *Global Methodology for Rating CLOs and Corporate CDOs*.

2. Correlation Adjustments for Portfolio Concentration

Generally, most PC CFOs (and most of their underlying funds) are highly diversified across sectors. However, higher concentrations could expose portfolios to idiosyncratic risk, such as a downturn in a particular sector for a sector-concentrated portfolio. As such, correlations may be increased to account for sector concentration in underlying fund holdings.

A PC CFO portfolio-wide sector-level concentration of underlying deal holdings is measured using the Diversity Score (Morningstar DBRS D-Score) concept also used in CLO portfolios. This D-Score ranges from 1 to a maximum value of 45 (where higher numbers are more diversified), and considers not only the number of funds in a PC CFO portfolio but also the number of deals within each fund and the respective sectors each deal is in.

Using the Morningstar DBRS D-Score, the pairwise correlations are adjusted up to a multiple of 2x (e.g., 12%/30% for different/same asset group) for higher-concentration portfolios. These are applied on a sliding scale, where any portfolio with a Morningstar DBRS D-Score below 12 (the 25th percentile of the range) typically receives the maximum 2x penalty, and a Morningstar DBRS D-Score above 35 (the 75th percentile of the range) typically is unadjusted from base correlations, with linear interpolation in between. If the PC CFO manager demonstrates substantial fund management history and positive active management impact in comparable higher-concentration portfolio strategies, the 2x penalty can potentially be reduced up to a 1.5x penalty.

3. Fund Sampling Process

Using the pairwise correlation matrix derived in the steps above, correlated random numbers are created which are then each converted to a range between 0 and 1. For each fund draw, this random number is used as a percentile to draw funds based on their 10-year total returns from the relevant eligible sample pool. For example, the random number 0.05 would select the fund with the 50th lowest 10-year return from an eligible sample set of 1,000 funds.

4. Calculation of Fund Cash flows

We adjust cash flows from the drawn funds following their sampling to adjust for each portfolio's age, Capital Calls to date, Fund Region, and Manager Quality.

Once a drawn fund has been pulled for each input fund, the drawn fund cash flows must be adjusted to reflect the expected remaining life, since a fund only has exposure to the calls and distributions from the point of its inclusion in the fund forward.

Cash flows for drawn funds are additionally matched according either to (1) Capital Calls to Date Percentage or (2) Fund Age of the individual funds found in a PC CFO portfolio. This is done to ensure that the forward-looking cash flows of each drawn fund accurately reflect the current state of funds found in the PC CFO portfolio that the drawn funds are based on.

For every drawn fund based on a PC CFO portfolio fund, cash flow periods of the drawn fund are only recorded from the period in which Capital Calls to date percentage values closest match those found in the individual input fund. The difference in Capital Calls to date percentage values from the drawn fund and the input fund are added back into the Capital Calls of the drawn fund to "true-up" the values.

In certain cases where Capital Calls to Date Percentage cannot be matched because the drawn fund's Capital Calls to date percentage is lower in every cash flow period than of that found in the input fund (for example the drawn fund from the historic pool of funds never called all of its capital), we match cash flows according to the Fund Age of the input fund to the drawn fund.

Qualitative Adjustments for Fund Manager (GP) Review, and Fund Region

Once a fund has been drawn and the start value determined using the process described above, the adjustments described in Step 1—Portfolio Analysis may be applied to incorporate our Fund Manager (GP) Review and Fund Region classification on the fund. These adjustments act as a multiplier to a drawn fund's Distributions, while Capital Call and NAV values for the drawn funds remain untouched, meaning for example that a Low-Quality manager will have 20% lower distributions for the same level of calls.

Adjustments are also made based on the geographic location of the PC CFO fund, consistent with historic performance in these regions. As additional performance is observed for APAC and ROW, which have fewer funds and shorter observed time horizons, these values may be adjusted. See Step 1—Portfolio Analysis for more information.

Fund Weighting

Cash flows in the sampling pool are normalized (e.g., returns are percentages), so after the above adjustments, returns must be multiplied by the position sizes for each fund in the portfolio. Each drawn fund's cash flows are weighted by the Remaining Capital Calls + NAV of the related input fund, which reflects their relative size, accounting for both current asset values and future expected investments.

Application of IDT and Stress Calculations

After trials are run to generate distribution of cash flows, Capital Calls and capital distributions, credit rating level stresses are determined by applying the IDT to these distributions. Distributions are done periodically, applying the five-year IDT at each credit rating level to each projection period. This is consistent with the concept that only x% of the time are cash flows expected to be below value y, where x% is the five-year IDT percentile, and y is the IDT application at each stress level. The IDT is applied separately to Cash Flow and Calls at each credit rating stress. Distributions for each stress level are then calculated from the following: Distributions = Cash Flows - Calls.

Interest Rate Stresses

Interest rate paths are typically based on our *Interest Rate Stresses for U.S. Structured Finance Transactions*, *Interest Rate Stresses for European Structured Finance Transactions*, and other interest rate frameworks as applicable. We run a series of interest curves to test the sensitivity of the structure to interest rate volatility. These curves generally include the applicable forward curve as well as upward and downward stresses. Curves are typically generated within certain credit rating ranges and are applied according to the credit rating of the tranches being evaluated.

Step 4—Legal and Documentation Review

Legal and Documentation Review

We expect PC CFO transactions to align with our Legal and Documentation Review described in the above methodology. There are also legal and structural considerations common to all structured finance transactions, including PC CFO transactions. Consequently, the structural and legal considerations of any transaction should be read in conjunction with our *Legal Criteria for U.S. Structured Finance*, *Legal and Derivative Criteria for European Structured Finance Transactions*, and the *Legal and Derivatives Criteria for Canadian Structured Finance* methodologies, as applicable, for further discussion of legal and documentation review.

Step 5—PC CFO Manager Review

Operational Risk Review Process

1. Introduction

Our operational risk reviews for PC CFO managers are designed to evaluate the quality of the parties that manage a PC CFO we rate. While we do not assign formal credit ratings to this process, we typically conduct operational risk reviews to assess the strengths and weaknesses of a PC CFO collateral manager.

We typically begin the initial PC CFO manager review process by sending a questionnaire to the manager that outlines the topics to be covered during discussions with management (see Exhibit 13). In instances where we determine that the manager is below average, the manager may incorporate certain structural enhancements into a transaction such as additional credit support, collateral posting, dynamic triggers or the presence of a strong backup collateral manager so we are able to rate the transaction or for the Issuer to obtain a credit rating. In the event that we determine that a manager is unacceptable and the transaction lacks mitigating factors, we may refuse to rate the deal.

PC CFO Manager Review Process

The PC CFO manager review process typically involves a review and analysis of the following:

1. Company and management
2. Financial condition
3. Controls and compliance
4. Investment strategy
5. Investment monitoring
6. Performance relative to benchmarks

7. Middle and back-office functions
8. Investor reporting
9. Technology

Underlying Fund Auditor Review

At a minimum, we generally expect that the NAV of a given fund be audited by an accounting firm registered with the Public Company Accounting Oversight Board and have significant history and experience in auditing the applicable type of fund. To the extent that we find an auditing firm not to meet the aforementioned standards, NAVs from the relevant fund may be disregarded or reduced for the purposes of the analysis.

Counterparty Risks

Additional risk contributed by counterparties is generally analyzed for each transaction. Results of the counterparty risk analysis could result in adjustments to model input parameters, such as introducing joint default probabilities or weak linkage to a counterparty credit rating. Please refer to our *Legal Criteria for U.S. Structured Finance, Legal and Derivative Criteria for European Structured Finance Transactions*, and the *Legal and Derivatives Criteria for Canadian Structured Finance* methodologies, as applicable, for further discussion of counterparty risk.

Environmental, Social, and Governance

We consider ESG factors when performing a credit analysis on CFOs. ESG factors may affect a credit rating and/or the related credit analysis. The impact of ESG factors may vary across industries, sectors, or asset classes and is described in the *Morningstar DBRS Criteria: Approach to Environmental, Social, and Governance Factors in Credit Ratings*.

Transaction Surveillance

Once we assign a final short and/or long-term credit rating to a security, the surveillance process begins and is continued for as long as we maintain a credit rating on the security. For additional information regarding our approach to surveillance, please see the *Structured and Corporate Finance Rating Surveillance Global Policy* at <https://dbrs.morningstar.com>.

To facilitate the surveillance analysis, we typically anticipate reviewing the following:

- Periodic (e.g., monthly or quarterly) servicer reports from issuers, detailing note paydown and available credit support;
- Updated collateral characteristics;
- Updates regarding amendments to a transaction; and
- Information on key transaction parties.

Surveillance reviews we conduct may consist of analyzing performance trends, comparing actual performance with our initial expectations, forecasting collateral behavior, reviewing transaction triggers, or reviewing transaction parties. Data obtained from trustee/servicer reports is also normally used to calculate performance metrics. When a review indicates that a transaction's current credit

rating may be inconsistent with its performance, an evaluation is typically conducted to assess such credit rating.

Revolving structures, or those structures constructed by issuers as master trusts, may pose potential risk migration in transactions. The collateral profile in such transactions can be dynamic because they allow addition by the originator of new collateral to support the prefunding or future funding through a revolving warehouse series or the issuance of additional term series of debt. Transaction legal documents for revolving structures usually include pool-wide concentration limit triggers designed to contain excessive exposures that could otherwise exist. Surveillance typically reviews such triggers for breaches of these triggers.

Exhibit 13 Sample Morningstar DBRS Operational Risk Questions for CFO Managers**Company and Management**

- Company history, ownership, and operating experience.
- Financial condition/profitability.
- Assets under management by size and asset class.
- Discussion of investment philosophy.
- Standard of care and liability of manager.
- List of investment vehicles/funds and CFOs managed.
- Strategic initiatives.
- Recent or planned mergers or acquisitions.
- Board structure.
- Management experience.
- Number of employees.
- Staffing, training, and retention rates.
- Organizational charts.
- Third-party outsourcing/servicing arrangements (including selection process, back, middle office, risk and valuation support).
- Transaction history and future plans.
- Conditions governing termination of manager.
- Have you ever been terminated from a transaction for cause? If so, please explain.
- Market outlook and competitive position in the industry.
- Employee remuneration, performance, and monitoring procedures.

Controls and Compliance

- Compliance and governance processes to validate adherence to investment and administrative processes.
- Internal and external audit procedures and results.
- Review frequency of review policies and procedures.
- Efforts to maintain regulatory compliance.
- Have you been or are you now the subject of a regulatory or state investigation? If so, discuss any findings.
- Have you ever been terminated or not in good standing with any regulatory body? If so, please explain.
- Material litigation (past, present, and expected).
- Controls for managing potential conflicts of interest related to the administration of investment vehicles.
- Controls and monitoring of third-party service providers.

Investment Process

- Investment Process: Identification, origination, sourcing, and underwriting strategy for investments (including warehousing).
- Key investment group professionals and overall number of investment analysts supporting investment management activities (by strategy, if multiple strategies are employed).
- Investment Committee (composition, authority and controls).
- Samples of investment proposal memos.
- Discuss ramp-up strategy (warehousing, etc.), if applicable.
- Discuss portfolio construction strategy(ies).
- Discuss asset allocation.
- Process to allocate investments across multiple funds.
- Portfolio management tools used.
- Discuss GP use and reporting of fund-level leverage.

Investment Monitoring

- Portfolio monitoring process and frequency.
- Ongoing performance tracking.
- What is the frequency of the investment reviews and the circumstances that may prompt an unscheduled review?
- Investments monitored per investment professional.
- Escalation practices and procedures.
- Risk-management practices.
- Investment monitoring tools used.

Performance Relative to Benchmarks

- Performance measurement methods.
- History of fund performance, in absolute terms and relative to benchmarks.
- PC CFO performance history.
- PC CFO portfolio construction history.
- History of PC CFO credit rating actions.
- History of PC CFO covenant breaches, if any.
- History of PC CFO cash flow diversions, if any.
- History of PC CFO equity performance.

Middle and Back Office Functions

- Describe your operating model, including staffing, systems used and outsourced functions.
- Describe your CFO management operations and process.
- Describe the marking of positions and valuations process. Is internal or third-party pricing used (if so, frequency and methods of validation)? How often is NAV audited and by which firm?
- Describe your ongoing reconciliation process with the trustee and the GP.
- Are accounts commingled? If so, how long?

Investor Reporting

- Average number of investors reported to on a monthly basis (last 12 months).
- Average dollar amount of remittances (last 12 months).
- Number of late remittances in the last 12 months.

Technology

- Core systems used in research, trading, portfolio management, compliance, administration, and risk.
- Website availability, usage, and security.
- Disaster recovery/business continuity plans and success of last test.
- Frequency of full-system backup.
- Future initiatives.

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