Exposure Draft: Global Closed-End Funds and Market Value Structures Rating Criteria

Master Criteria

Scope

This criteria report primarily focuses on rating collateralized obligations of U.S. closed-end funds (CEFs) regulated under the Investment Company Act of 1940 (1940 Act). Principles outlined in this report are also applicable to CEFs operating under other regulatory frameworks and other market value structures (MVS) where the primary source of repayment for rated obligations is the liquidation of assets. Examples include Puerto Rican CEFs and U.K. investment trusts.

In general, this criteria report is used in assigning ratings where the primary risk is from market value volatility. However, Fitch Ratings may supplement its analysis with cash flow analysis for structures that do not have similar market value deleveraging triggers as U.S. CEFs or invest in less liquid assets. This report applies to new ratings and for ongoing surveillance on both international and national scale ratings.

Key Rating Drivers

Stressed Asset Values: The ability of CEFs (and most MVS) to fully meet rated obligations is fundamentally linked to the realizable market value of the fund's assets, especially in times of market stress. Stress testing a CEF portfolio's market value is a core element of this rating methodology.

Dynamic Deleveraging/Defeasance a Key Feature: CEFs (and other MVS) typically implement structural deleveraging or liability defeasance mechanisms to protect investors in CEF obligations. The triggers are based on minimum overcollateralization (OC) ratios recalculated on a regular basis, with an allowable cure period before mandatory deleveraging or liability defeasance. Fitch's criteria consider the frequency and robustness of these mechanisms.

Structural Protections Support Ratings: U.S. CEFs must adhere to leverage restrictions and structural features prescribed by the 1940 Act, which provide a baseline set of protections and a strong legal and regulatory framework. Fitch's criteria also consider the stressed price volatility of specific asset types, all forms of on- and off-balance sheet leverage, and the level of portfolio diversification.

Discount Factors Drive Coverage: Stressed discount factors (DFs) are applied to specific portfolio assets based on the assets' historical worst volatility. In turn, the discounted value of the portfolio provides the OC available to rated liabilities.

Rating Caps: Fitch applies a rating cap of 'AA' to CEF obligations backed by certain high-quality and liquid assets, and a rating cap of 'A' to CEF obligations backed by any other eligible assets as described in this report and in Appendix 1.

Importance of Portfolio Diversification: The criteria place heavy emphasis on the fund's portfolio diversification to limit overall portfolio risk. Portfolio guidelines that allow for higher issuer, industry, currency, sector and/or geographic concentrations relative to Fitch's diversification framework will result in lower leverage or lower ratings.

Capturing Economic Leverage: Fitch's OC tests seek to capture all forms of CEF leverage, both traditional and economic. Economic leverage includes derivatives, tender option bonds (TOBs) and other off-balance sheet liabilities, many of which are not captured by 1940 Act asset coverage tests.

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Feedback on the exposure draft. Fitch invites feedback from market participants on the proposed criteria. Comments should be sent to criteria.feedback@fitchratings.com by Sept. 21, 2020.

Fitch will apply the existing criteria to existing ratings. Fitch will apply the criteria described in this exposure draft to new issuer/transactions rating assignments during the exposure draft period.

Fitch will publish on its website any written responses it receives, in full, including the names and addresses of such respondents, unless the response is clearly marked as confidential by the respondent.

Recognition of Subordination Risks: The Fitch net OC test captures the effects of subordination that may pose a risk to rated debt and preferred stock. Subordination arises from the presence of senior debt and other obligations in the fund's capital structure, which may have a first priority on fund assets. Fitch may also make qualitative adjustments in its analysis to account for terms in the transaction documents that affect subordination.

Role of Manager: Fitch assesses the capabilities of the investment manager and relevant third parties to understand whether they are suitably qualified.

Summary of Proposed Key Changes

Fitch proposes material revisions of the methodology that include the following changes.

- No assets can be eligible to receive credit at the 'AAA' rating level. Effectively, this institutes a rating cap on the ratings of obligations backed by market value exposures, including CEFs, under this criteria report.
- Only certain assets can be eligible for credit at the 'AA' rating level. Assets that will continue to receive credit at the 'AA' rating level include:
  - cash;
  - certain high-quality government securities; and
  - certain high-quality municipal and corporate bonds.
- The following assets are not eligible for credit at the 'AA' rating level; these assets will only be eligible for credit at the 'A' rating level and lower:
  - municipal obligations rated below investment grade or unrated;
  - corporate bonds rated below investment grade or unrated;
  - convertible debt;
  - leveraged loans;
  - equity;
  - preferred stock;
  - emerging market sovereign and corporate debt;
  - foreign currency exposure; and
  - structured finance securities.
- Recalibration of applicable discount factors (DFs) at each rating level.
- Recalibration and re-categorization of midstream pipeline assets' DFs to reflect revised observed worst losses.
- Re-categorization of convertible securities' DFs to be based on conversion premium and removing references to rating levels.
- Introduction of new asset concentration limits at different rating stress levels:
  - limiting credit to 20% of a portfolio's assets for 'BBB' category rated assets (corporate and municipal) at the 'AA' rating stress level;
  - limiting credit to 20% of a portfolio's assets for 'CCC' category rated assets at the 'A' rating stress level; and
  - limiting credit to 20% of a portfolio's assets for all structured finance securities combined at the 'A' rating stress level.
- Limit exposure to any issuer backed by a state-level general obligation (GO) or taxing authority to 20% at investment-grade rating stress levels, and 40% at below-investment-grade rating stress levels.
- Introduction of DFs at rating stresses below 'BBB'.

Related Criteria.

Structured Finance and Covered Bonds Counterparty Rating Criteria (January 2020)

Structured Finance and Covered Bonds Counterparty Rating Criteria: Derivative Addendum (January 2020)

Structured Finance and Covered Bonds Country Risk Rating Criteria (February 2020)

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- Removal of the third lien leveraged loan DF category.
- Re-categorization of structured securities categories.

These proposed changes would result in a net effect of a 'AA' debt and preferred stock rating cap for all CEFs, regardless of securities held, and a 'A' debt and preferred stock rating cap for CEFs exposed to emerging market debt, below-investment-grade and unrated debt (all sectors), structured securities and equity, as well as funds with material exposure to 'BBB' category rated assets.

The proposed revisions also include the removal of the private equity collateralized fund obligation (PE CFO) methodology (formerly Appendix 4), which will be published as separate criteria. Until the stand-alone PE CFO criteria are published, Appendix 4 of the existing CEF criteria remains in effect as currently published.

Rationale for Changes

The proposed changes to Fitch's criteria reflect the evolution of Fitch's opinion, over time, of risks inherent in ratings assigned to CEF structures relative to other asset classes. The level of price volatility associated with certain asset classes' underlying market value exposures, as well as the speed with which price changes can affect rated obligations, relative to other sectors Fitch rates, is in Fitch's view, not commensurate with 'AAA' ratings, and for some asset classes, 'AA' ratings. While Fitch-rated CEFs have exhibited strong ratings performance in the past, with no recorded defaults through multiple stress periods, for the reasons discussed below, Fitch proposes that rating caps and the other changes described in this report be adopted.

The speed with which market values of certain assets can move means that, in a severe stress, CEFs' asset coverage could decline precipitously and quickly. This could lead to a high number and magnitude of downgrades suffered by a rated obligation in a short period, which we consider to be incompatible with 'AAA' and 'AA' ratings. Therefore, under the proposed changes in this report, only assets that historically have exhibited relative price stability and liquidity will remain eligible for credit at 'AA' rating levels.

Notably, although the stress experienced in some market segments during the recent coronavirus-related market volatility and its effects on certain CEFs have contributed to Fitch's assessment, this stress is not the primary driver of the changes proposed herein.

Fitch's proposal is informed by structural market changes that have taken place over time, which could affect trading and liquidity in a subsequent stressed environment. Examples include: reduced broker-dealer capacity to intermediate markets due to regulatory and other changes; changes in tax laws that affect investors' appetite for municipal bonds; growth of, and investor concentration in, the municipal high-yield market; growth in high-frequency trading; changes in the usage of ratings for convertible bonds; prevalence of covenant-lite leveraged loans; and changes in the investor base for midstream-focused companies.

These examples are not a comprehensive list of all the structural changes in the markets over the past few years. They are intended to illustrate the limitations of relying on historical price volatility to inform forward-looking DFs, particularly at very high rating levels. In proposing to continue to give credit to certain assets at the 'AA' rating level, Fitch focused on those assets that have more consistently exhibited relative price stability and liquidity.

In addition, CEFs are reliant on other market participants to buy assets from them in a stress period to deleverage. It is possible that, in a severe stress corresponding to a high rating level, buyers will be fewer and more selective, and, therefore, some portions of funds' assets may be completely illiquid for a period. Due to some of the structural market changes noted above, Fitch believes that liquidity from buyers in a stress period may be less forthcoming than in the past.

The stress experienced for some asset classes during the coronavirus-driven market decline was similar in magnitude to, or exceeded, the observed market value declines in 2008. This suggests that valuation declines observed in 2008 could be repeated or exceeded in future stress periods and/or occur more frequently than previously assumed. In Fitch's existing CEF criteria, most DFs are based on the 2008 declines. Fitch's changing expectations concerning the severity and frequency of valuation declines have contributed to its recalibration of DFs. Fitch's proposed recalibration provides CEF obligations more cushion to withstand future potential declines. In this context, Fitch notes that interventions by monetary authorities globally to support markets during

1Q20 obscured market value declines that may have been observed absent the interventions, or if the interventions took a longer time to implement.

Fitch's proposed 20% limitation on credit given to certain assets at certain rating levels reflects its view that these assets can receive some credit in the context of a broader portfolio, but their liquidity and price stability cannot be solely relied upon at certain rating stresses due to observed historical performance of these assets as discussed above.

The proposed re-categorizations of the DFs for the midstream/master limited partnership (MLP) sector, convertibles and structured finance reflect changes in those markets since the existing DFs were developed, as well as an effort to simplify the DFs. The recalibration of the midstream/MLP DFs reflects the materially worse performance of assets in this sector in 1Q20 relative to other historical stresses.

The proposed change to concentration limits for issuers backed by a state-level GO or taxing authority reflects a desire to better capture concentration risks in municipal portfolios.

The introduction of DFs at rating stresses below 'BBB' (i.e. BB to CCC) reflects Fitch's expectation that CEF obligations will be rated lower than in the past.

The proposed removal of the third lien leveraged loan category reflects the limited availability of data on this asset class, as well as Fitch-rated funds' limited exposure to it.

The proposed removal of the PE CFO appendix is due to Fitch's desire to further enhance the transparency of our analysis of PE CFOs through an expanded stand-alone report.

Expected Rating Impact

If implemented, the proposed criteria changes would likely result in rating downgrades of one category or more for certain funds. Preferred shares issued by most municipal funds investing in highly rated securities would likely be downgraded from 'AAA' to 'AA'. For municipal funds investing larger portions of their portfolios in high-yield securities or those rated 'BBB', ratings would likely be downgraded from 'AAA' to 'A'. Many funds that invest in corporate debt and equity and other securities would likely see ratings downgraded from 'AA' to 'A'. Funds investing in midstream/MLP-focused assets would likely see ratings downgraded from 'A' (notes) and 'BBB' (preferred shares) to 'BBB' or lower.

The potential rating changes above are not finalized, and could differ from expectations based on changes that fund managers may make to portfolio compositions or capital structures, as well as detailed reviews of individual funds by Fitch's rating committees, based on the funds' portfolios, strategy and Fitch's stress testing, among other considerations.

Exposure Draft

This report is published as an Exposure Draft, and Fitch invites feedback from market participants on the proposed changes. Comments on the Exposure Draft should be sent to criteria.feedback@fitchratings.com by Sept. 21, 2020. Fitch will publish on its website any written responses it receives, in full, including the names and addresses of such respondents, unless the response is clearly marked as confidential by the respondent.

Fitch will apply the existing "Global Closed-End Funds and Market Value Structures Rating Criteria" (published in March 2020) to existing ratings. Fitch will apply the criteria in the Exposure Draft to new issuer/transaction rating assignments during the Exposure Draft period. When the criteria report is published in its final form, it will be applied to both new and existing ratings.

Ratings Assigned to CEF Obligations

Fitch can assign Long- and Short-Term Issuer Default Ratings (IDRs) and issue ratings to financial obligations of CEFs, consistent with its published ratings definitions. Ratings do not address liquidity in secondary markets.

The long-term credit ratings address the likelihood of full and timely payment of all rated obligations on each payment date and upon optional or mandatory redemption or at maturity. The ratings are based on the key drivers described above.

Fitch may also assign Short-Term IDRs and issue credit ratings to financial obligations with maturities viewed as short term based on market convention (typically up to 13 months), including obligations that offer a demand feature giving investors the right to demand repayment of the obligation by the fund, a liquidity provider, the guarantor or other financial counterparty on pre-specified dates (e.g. variable-rate demand preferred stock). For the latter, Fitch's long-term rating addresses the sufficiency of asset coverage, whereas the short-term rating addresses the strength of the demand feature based on the credit quality of the liquidity provider, guarantor or counterparty, and the legal integrity of the demand feature on a review of its terms and conditions.

Structural Protections Support Ratings

The criteria primarily rely on OC triggers and asset liquidation as primary means for repaying rated debt and preferred stock in a stressed scenario. As such, Fitch reviews structural protections in place and the degree to which they incent or require the manager to take such actions, as well as the quality and sufficiency of the asset pool to cover fund obligations. In general, CEFs with market value liquidation triggers and other MVS expose investors and counterparties to the following risks.

- **Market Risk:** The general risk of declines in the market value of portfolio assets, particularly in periods of market stress, such as experienced in 2008.
- **Liquidity Risk:** The risk that a security cannot be sold quickly enough in the market to prevent a further loss or can only be liquidated at a large haircut to its intrinsic value. This risk is present in the event of mandatory deleveraging or redemption following a breach of certain asset coverage ratios.
- **Leverage Risk:** The risk that leverage carried by the fund will exacerbate market losses allocated to investors and, depending on the exact nature of each form of debt, may also subordinate investors in rated debt and preferred stock.

Model Overview

Fitch uses a proprietary model, the CEF Surveillance Model (Fitch proprietary model), to assess OC.

CEFs with rated obligations maintain minimum OC guidelines or asset coverage tests within their governing documents designed to protect against default. Market value-based mandatory redemption/acceleration triggers serve to maintain this credit enhancement and protect holders of notes and preferred stock. OC is measured by discounting the market value of portfolio assets by asset-specific DFs (see Appendix 1). This discounted value of assets is then compared with outstanding leverage and other liabilities. Fitch assigns ratings by analyzing a fund's minimum asset coverage requirements, applying asset-specific DFs, relative to Fitch's CEF criteria.

Mandatory Deleveraging or Redemption

Fitch's CEF rating criteria are based on an analysis of deleveraging/defeasance provisions over a pre-specified and limited time frame. Fitch reviews mandatory deleveraging and other collateral maintenance provisions within transaction documents to assess whether CEFs will maintain sufficient OC for debt and preferred stock for a given rating level. Additional provisions CEFs incorporate to increase asset coverage on breaching the tests, such as ceasing distributions to common stockholders until OC is restored, are viewed positively.

Typically, funds incorporate a cure period that gives them time to take voluntary action to correct a breach of asset coverage based on either the 1940 Act or Fitch's criteria. During this period, funds may sell assets and use proceeds to deleverage the portfolio. Fund managers may also elect to rebalance the portfolio into more liquid, less risky assets. If the manager fails to cure a breach of a test within the prescribed cure period, the governing documents usually require the fund to restore compliance with failed test(s) within a predefined period.

Market Risk Exposure Period

The exposure period is the maximum number of days that obligations of a CEF are exposed to portfolio market value declines. This period is the length of time from the prior valuation date when OC tests were passing, to the last allowable date when any OC test breach must be cured. The exposure period is specified in security legal documents such as note indentures as the sum of the following periods.

- **Valuation Period:** The frequency with which the fund calculates coverage ratios to ensure it is passing the tests.
- **Cure Period:** The number of days the fund has to cure any breach before entering into a mandatory redemption period.
- **Mandatory Redemption Period:** The covenanted time allotted for redeeming shares or notes, during which time funds cannot issue additional leverage or pay common stock dividends. This period is set to account for mandated shareholder notification periods, auction dates and other structural considerations.

In determining the asset DFs presented in Appendix 1, Fitch used exposure periods of 40–60 business days. Governing documents that specify an exposure period greater than 60 business days may result in more conservative DFs being applied at a given rating level. In these situations, Fitch will review the historical performance of the assets, based on the asset type and the exposure period, in line with the methodology described in Appendix 6. The methodology for DFs calculated in this way would be disclosed as discussed in the Variations from Criteria section, page 17.

For exposure periods that are not materially greater than 60 days and where historical losses for a particular asset type are in line with those observed for the 40–60 day period, Fitch will apply the DFs published in Appendix 1. Fitch will evaluate DFs for shorter exposure periods and apply the DFs published in Appendix 1 unless further analysis is deemed relevant. As discussed above, the methodology for DFs different from those in Appendix 1 will be disclosed as discussed in the Variations from Criteria section.

Investor Actions to Enforce or Waive Deleveraging

Some CEF transaction documents permit their investors to enforce or waive the fund's deleveraging and other collateral maintenance procedures when asset coverage tests are breached. Typically, a minimum number of votes by certain investor classes are needed for the actions to become effective.

Investors are presumed to act to enforce repayment as early as the transaction legally allows. A waiver may extend the length of time investors are exposed to market value volatility of the fund's portfolio and, therefore, could put negative pressure on the ratings. Additionally, Fitch would evaluate whether such provisions would disproportionately benefit any class of investors at the expense of other rated investor classes.

Bank Credit Facilities and Restricted Payments

For funds that have more than one type of creditor, terms in agreements separate from the obligation Fitch is rating may have an impact on the rated security. The most prevalent example of this is in U.S. taxable CEFs, where Fitch is rating preferred shares, and where the funds utilize a bank credit facility in addition to the rated preferred shares. Some of these agreements may restrict payment to the rated preferred shares upon breach of a preferred shares asset coverage test if the fund is not in compliance with certain covenants or terms specified in the bank credit agreement.

If these kinds of provisions exist and have the potential to extend the deleveraging exposure period to the detriment of the rated preferred shares or cause a delay in payment of dividends or redemption of the preferred shares, Fitch will take it into account in its rating. In this scenario, Fitch will analyze the likelihood and potential impact of these provisions and may assign a lower rating to the preferred shares than would otherwise be implied by other factors.

CEF OC Tests

1940 Act — Baseline Protection to Rated Debt and Preferred Stockholders

The 1940 Act requires a minimum asset coverage of 200% for total senior debt (including bank loans) and preferred stock leverage and a minimum asset coverage of 300% for senior debt leverage. These asset coverage tests are based on current, rather than stressed, market values.

The 1940 Act does not mandate fund deleveraging or defeasance of liabilities on breach of asset coverage but does restrict payments/declaration of common dividends and limits the issuance of new leverage until sufficient 1940 Act-mandated asset coverage is restored. However, fund operating documents usually include mandatory deleveraging/defeasance as a mechanism for curing a breach of the 1940 Act. Therefore, 1940 Act asset coverage ratios, as typically

implemented, effectively limit the amount of leverage a fund can maintain. Fitch monitors funds' compliance with such 1940 Act asset coverage ratios, as they are an important structural protection for investors of rated notes and preferred stock.

The 200% asset coverage ratio for senior debt/bank loans and preferred stock is typically calculated in one of two ways, both of which yield the same result, as shown below.

=	[Total Assets at MV - Current Liabilities]
	[All 1940 Act Leverage[a] + Accrued Expenses and Fees on Leverage]
	Or
=	[Common Equity + All 1940 Act Leverage + Accrued Expenses and Fees on Leverage]
	[All 1940 Act Leverage + Associated Accrued Expenses and Fees]

[a]1940 Act leverage only includes leverage that funds interpret to be recognized as leverage under Section 18 of the 1940 Act (e.g. preferred stock, notes and bank facility). Other types of leverage, such as reverse-repurchase agreements, mortgage dollar rolls and noncash settled derivatives, are excluded from this test and, instead, follow asset segregation rules. However, for internal analytical purposes, Fitch treats "Reverse Repo", "Floating-Rate Certificates of TOB", "Securities Lending" and "TBA Security Roll" as senior leverage in the 1940 Act tests.
Source: Fitch Ratings.

The 300% asset coverage ratio for senior debt and bank loans is typically calculated in one of two ways, both of which also yield the same result, as shown below.

=	[Total Assets at Market Value (MV) – Current Liabilities]
	[All Senior 1940 Act Leverage[a] + Accrued Expenses and Fees on Leverage]
	Or
=	[Common Equity + All 1940 Act Leverage + Accrued Expenses and Fees on Leverage]
	[All Senior 1940 Act Leverage + Accrued Expenses and Fees on Leverage]

[a]Senior 1940 Act leverage only includes leverage that funds interpret to be recognized as senior securities other than preferred stock under Section 18 of the 1940 Act (e.g. notes and bank facility). Similar to the 200% test, other types of leverage, such as reverse-repurchase agreements, mortgage dollar rolls and noncash-settled derivatives, are excluded from the 300% test and, instead, follow asset segregation rules. However, for internal analytical purposes Fitch treats "Reverse Repo", "Floating-Rate Certificates of TOB", "Securities Lending" and "TBA Security Roll" as senior leverage in the 1940 Act tests.
Source: Fitch Ratings.

Assigning Ratings Based Only on Investment Company Act of 1940 Asset Coverage Ratios

Fitch may rely on leverage limits embedded in the 1940 Act when rating certain CEFs holding less volatile assets. To determine whether Fitch can rely solely on 1940 Act asset coverage ratios for assigning a rating, Fitch seeks to determine that the fund:

- is limited by governing documents to purchase lower-risk assets with DFs well below the implied asset coverage limits in the 1940 Act;
- is limited by governing documents to minimum levels of issuer, industry and currency diversification consistent with Fitch's criteria, or where stress test analysis demonstrates the portfolio's resilience to higher concentrations;
- substantially restricts forms of leverage to those captured under the 1940 Act; or
- maintains appropriately conservative collateral maintenance triggers that provide a high level of confidence that deleveraging or defeasance of rated obligations will occur within the specified exposure period.

Asset types with lower Fitch DFs than those implied by the 1940 Act's asset coverage tests may be analyzed on the basis of the 1940 Act's asset coverage tests, subject to the caveats above. Fitch's diversification guidelines are outlined in the Portfolio Diversification section that begins on page 9.

Fitch OC Tests: Going Beyond the 1940 Act

The asset coverage/leverage restrictions of the 1940 Act are not sufficiently conservative at higher ratings levels for many of the asset types held by CEFs. Moreover, the 1940 Act tests often do not fully capture all forms of leverage, including derivatives.

OC of debt and preferred stock is measured by the Fitch total OC and net OC tests (together, the Fitch OC tests). The Fitch OC tests address the potential for additional forms of leverage, more volatile asset classes and subordination risk.

Fitch OC tests seek to measure whether the stressed market value of fund assets is sufficient to meet all obligations on optional or mandatory repayment. In the absence of other qualitative considerations, Fitch OC and net OC ratios in excess of 100% are generally deemed to be consistent with the rating assigned.

The Fitch proprietary model is used to calculate the Fitch OC tests, including assigning DFs to every portfolio security, measuring the impact of derivatives and subordination, implementing the diversification framework and assessing asset coverage, as described in the sections below.

Fitch Total OC Test: Sufficiency of Asset Coverage

The Fitch total OC test is the primary test for evaluation of asset coverage for each rated class of obligations. The calculation of the Fitch total OC test includes, in the numerator, all portfolio assets discounted using Fitch DFs and any additional haircuts for insufficient diversification. The denominator includes all liabilities that are pari passu or senior to that class of rated debt or preferred stock.

Fitch Total OC =	Total Net Discounted Assets at MVa
	Fitch-Rated Liability + Other Liabilities Pari Passu and Senior to Rated Liability

[a]Total net discounted assets at MV equal total portfolio assets at MV and accrued income, including assets held as collateral for other fund liabilities, less non-leverage liabilities that are not part of a rolling leverage strategy (such as TBA securities, futures and forwards, among others), then discounted at the Fitch DFs in the table on pages 18-19 and adjusted per Fitch's criteria discussed in the Portfolio Diversification section, starting on page 9.
Source: Fitch Ratings.

Fitch Net OC Test: Subordination Risk Protection

The Fitch net OC test is relevant if a fund has liabilities that are senior to the Fitch-rated class of leverage and those liabilities are secured by specific assets. The Fitch net OC test assesses whether the fund has sufficient asset coverage to the rated obligations after first repaying liabilities that are legally or structurally senior in the capital structure.

The Fitch net OC test may be either more or less conservative than the Fitch total OC test and may be particularly relevant for CEFs that utilize senior bank lines, depending on collateralization requirements. For instance, the Fitch net OC test could be more conservative when senior bank liabilities are secured by specific assets and the remaining portfolio consists of more volatile asset types or exhibits higher concentration by issuer and/or industry.

Fitch Net OC =	Available Net Discounted Assets[a]
	Fitch-Rated Liability + Other Liabilities that Are Pari Passu

[a]Available net discounted assets equal total portfolio assets at MV and accrued income minus all assets that are either held as collateral for other fund liabilities and/or subject to a first claim of a senior liability in the capital structure minus non-leverage liabilities that are not part of a rolling leverage strategy (such as to-be-announced (TBA) security rolls, futures and forwards, among others), then discounted at the Fitch DFs in the table on pages 18-19 and adjusted per Fitch's criteria discussed in the Portfolio Diversification section, starting on page 9.
Source: Fitch Ratings.

Fitch calculates available net assets after subtracting the total amount of senior liabilities if senior liabilities have a general claim on fund assets. If specific assets are encumbered or segregated, Fitch will exclude these assets from the net OC test. Furthermore, Fitch discounts the portfolio's assets, applying the diversification framework after subtracting any assets encumbered as collateral for senior obligations.

Fitch Discount Factors Reflect Asset Price Volatility and Liquidity

DFs reflect each asset class's unique price volatility based on historically observed worst case price declines and liquidity stress (bid-ask spread widening). Historical worst losses function as base case losses. For most asset classes, historical worst losses are deemed to be equal to either a 'A' or 'BBB' stress. For higher rating levels, historical worst losses are increased by a multiple. (For more information on Fitch's determination of asset-specific DFs, see Appendix 6: Methodology and Data Sources for Development of Discount Factors.)

DFs of many asset classes are more conservative (thus restricting to lower levels of leverage) than the 1940 Act tests and, in some cases, substantially so (see Appendix 1: Fitch Discount Factors). For this reason, Fitch evaluates the sufficiency of a fund's asset coverage in the context of Fitch OC tests when CEFs invest in higher-risk asset classes and/or engage in financing or derivative strategies that are not fully captured by the 1940 Act asset coverage limits.

The DFs published in Appendix 1 are based on an exposure period of 40 to 60 business days, which is the typical exposure period found in governing documents for U.S. CEF debt and preferred shares. When analyzing securities where the exposure period is different from 40 to 60 business days, or where the assets backing the obligation are different from what is displayed in Appendix 1, Fitch will establish transaction-specific DFs based on the methodology described in Appendix 6, applying the same methodology used to develop existing DFs as described in Appendix 6: Methodology and Sources for Development of Discount Factors.

Leverage Outside the 1940 Act

Fitch OC tests seek to capture all senior and pari passu obligations, including those that fall outside the 1940 Act's definitions of leverage. Such nontraditional leverage includes reverse-repurchase agreements, TOBs, securities lending arrangements, forward rolls (e.g. when-issued securities, to-be-announced securities and mortgage dollar rolls), forwards, futures, interest rate swaps, total return swaps, credit default swaps, and purchased and written put and call options, among others.

The full effects of leverage as measured by the 1940 Act may be understated for funds utilizing such nontraditional forms of leverage. Fitch seeks to include all forms of leverage and claims on portfolio assets, whether on- or off-balance sheet, for purposes of the Fitch OC tests. (For more information on how to calculate the Fitch total OC test and net OC test based on various types of traditional and nontraditional leverage, see Appendix 2: Capturing All Forms of CEF Leverage.)

Deferred Tax Liabilities

Most U.S. CEFs elect to be treated as regulated investment companies (RICs) under the Internal Revenue Code of 1986, as amended, allowing them to pass through income tax to common shareholders. However, some CEFs choose to be treated as corporations to invest more than 25% in certain assets, such as MLPs, and take advantage of preferred tax treatment. As a result, these CEFs often carry deferred tax liabilities (DTLs) on their balance sheets due to appreciation of portfolio securities and the tax deferral of capital gains until a sale takes place.

To calculate asset coverage for Fitch OC tests, Fitch reduces the numerator by 10% of the DTL amount. The treatment is designed to capture, in Fitch's opinion, the remote risk that a portion of the liability may be realized upon a sale of securities in a stressed scenario, while recognizing that the bulk of the DTL should be eliminated in such a stressful liquidation scenario.

Refinancing Risks

CEFs can be exposed to refinancing risk when senior debt matures or is called early, forcing the fund to liquidate portfolio assets to provide for repayment. To provide for liquidity, the transactional documents for debt and term preferred stock may require a fund to segregate assets in an amount at least equal to that of maturing securities and to convert the segregated assets to more liquid securities closer to date. Many CEFs, particularly in the municipal sector, have generally adopted these guidelines, as they may serve to minimize forced asset sales in a stressed environment. In cases where such guidelines are absent, particularly for more volatile and/or less liquid assets, Fitch will evaluate whether this creates incremental risk and leads to lower ratings.

Portfolio Diversification

Fitch's CEF ratings guidelines include a minimum diversification framework by issuer, industry/municipal sector, currency and geography, i.e. state. The guidelines augment Fitch's stand-alone DFs, which were based on broad and diverse indices. When rating less diversified portfolios, Fitch reduces the amount of credit afforded to any excess concentration above its diversification framework.

Fitch Diversification Framework – Beyond the 1940 Act

1940 Act Diversification

The 1940 Act provides a baseline diversification framework. CEFs regulated under the 1940 Act may elect to register as a diversified or a nondiversified company, both with respect to single-issuer and industry/sector concentration. The issuer concentration guidelines of the 1940 Act permit diversified funds to invest up to 5% in a single issuer for up to 75% of its portfolio and allow up to 25% in a single issuer (also known as the safe harbor provision). The corporate industry and municipal sector concentration guidelines permit funds to register as diversified and subject their portfolios to a 25% concentration limitation per industry or municipal sector. Alternatively, CEFs may elect to operate as nondiversified CEFs and concentrate their holdings in a particular industry/sector. The nondiversified status is utilized primarily by sector funds, such as real estate- and energy-sector CEFs.

Fitch Diversification Principles

Fitch goes beyond the 1940 Act's diversification framework by addressing concentration risk at the level of individual issuers, corporate industries/municipal sectors, foreign currencies and geography, i.e. state-level exposures, regardless of whether they are directly held or referenced through a derivative instrument.

Fitch's stand-alone DFs are based on diversified indices/datasets. As such, Fitch's rating criteria includes a diversification framework that promotes a comparable level of diversification in portfolios held by CEFs, and penalizing excess concentrations. When rating obligations backed by portfolios that do not fully meet Fitch's diversification framework, the amount of credit given to excessively concentrated positions is reduced by applying higher DFs (achieved by applying multipliers to existing DFs) or by affording no credit in the case of excess obligor concentrations.

Conversely, if the index/dataset already incorporates one or more elements of concentration, Fitch may not apply all elements of its diversification framework. The indices utilized by Fitch to derive DFs - the Alerian MLP Index for equity securities issued by MLPs and the Merrill Lynch Preferred Stock indices - are inherently sector concentrated. As such, the worst case losses and resultant DFs already include a sector concentration element, and, therefore, Fitch does not apply an additional DF multiplier for sector concentration risk. For all other sectors, Fitch applies the concentration guidelines discussed in the Issuer Diversification section below.

Issuer Diversification

Fitch excludes the market value of any single-obligor holdings in excess of the issuer concentration guidelines below when calculating the Fitch OC tests.

Issuer concentration for corporate obligors is calculated as the sum of debt and equity securities issued by an entity on a consolidated basis, rolled up to the holding company level, if applicable.

The issuer diversification framework for municipal CEFs is similar, with the exception of state-level GO bonds and other issues backed by a state-level taxing authority. For investment-grade-rated CEF obligations, state-level GO obligations have a maximum issuer guideline of 20%. This is intended to promote an appropriate amount of portfolio diversification without creating an incentive for portfolios to diversify away from what is traditionally the most creditworthy and liquid of municipal issuances from within a given state.

Concentration for obligors and equity issuers is aggregated on the basis of the revenue source supporting repayment and valuation, respectively. For example, all GO bonds of a particular city are aggregated to calculate issuer concentration. Similarly, all tobacco securitization bonds, regardless of issue domicile, are considered as one obligor. In the MLP sector, when a limited partner entity constitutes the majority of the revenue source of its general partner entity, both exposures would be aggregated.

Issuer concentrations are calculated without taking into account assets that are ineligible to receive credit at a particular rating stress, such as high-yield bonds in a 'AA' stress.

Fitch Municipal Issuer Diversification Guidelines

	Maximum % Eligible for Fitch OC Tests[a]					
	AA	A	BBB	BB	B	CCC
State-Level General Obligations and Other Municipal Issues Backed by State-Level Taxing Authority, Rated at Least BBB–[b]	20	20	20	40	40	40
Largest Obligor[c]	10	10	10	10	10	10
Next Five Largest Obligors	5	5	5	5	5	5
All Other Obligors	3	3	3	3	3	3

[a]Reflects the maximum credit that Fitch affords to such exposures when rating CEF debt and preferred obligations at various rating levels. [b]To calculate concentrations, all state-level obligations, issuers or authorities reliant on the state for payment are combined. If a state GO is rated below investment grade (BB+ or lower) the general issuer concentration thresholds above apply. [c]Fitch may raise its issuer concentration thresholds for exposure to broadly diversified investment portfolios or holding companies. Note: In cases where an obligor is in excess of these guidelines and the exposure is to multiple securities, Fitch excludes the MVs of securities with the highest DF first. Issuer concentration thresholds may be increased for CEF debt or preferred stock rated below investment grade, since such rating reflects, to an extent, increased risk associated with idiosyncratic risk.
Source: Fitch Ratings.

Industry, Currency and Sector Diversification

Fitch also applies a 25% concentration threshold to corporate industries, structured finance sectors and municipal sectors. But unlike with issuer guidelines, excess exposures here are afforded credit at a higher DF multiple. The additional DF for corporate industry and structured finance sectors above 25% is 1.5x. The additional DF applied to municipal assets in excess of the 25% municipal sector guidelines is 1.10x. The additional DF applied to municipal assets in excess of the 25% municipal state concentration guideline is 1.10x or 1.25x, depending on the state GO rating — see table on p. 12.

Corporate Industries/SF Sectors to Determine Funds' Single-Industry/ Sector Exposure[a]

Industries Subject to 25% Threshold per Fund		
Aerospace and Defense	**General Retail**	**RMBS**
Automobiles, Building and Materials, and Chemicals	Healthcare	CMBS
Banking, Finance and Insurance	Industrial/Manufacturing	Consumer ABS
Broadcasting, Media and Cable	Lodging and Restaurants	Commercial ABS
Business Services	Metals and Mining	CDO/Other
Computer/Electronics and Telecommunications	Packaging and Containers	—
Consumer Products	Paper and Forest Products	—
Energy (Oil and Gas)	Pharmaceuticals	—
Environmental Services	Real Estate	—
Farming and Agricultural Services	Sovereigns	—
Food and Drug Retail	Textiles and Furniture	—
Food, Beverage and Tobacco	Transportation and Distribution	—
Gaming, Leisure and Entertainment	Utilities (Power)	—

[a]Based on Fitch corporate CDO criteria and other Fitch research.
Source: Fitch Ratings.

The particular multiples Fitch applies to DFs on the basis of portfolio concentration were derived by comparing the performance of broad market indices with indices concentrated in particular corporate industries, and municipal sectors and states.

Certain indices utilized by Fitch to derive DFs, such as the Merrill Lynch Preferred Stock indices for preferred stock securities and the Alerian MLP Index for equity securities issued by MLPs, are inherently sector concentrated. As such, the worst case losses and resultant DFs already include

the concentration element, and, therefore, Fitch does not apply the additional DF multiple to them. For all other corporate industries, see treatment in the table on the prior page.

Municipal Sectors to Determine Funds' Single-Sector Exposure

Sectors Subject to 25% Threshold[a]	
Pre-Refunded/Escrowed	Municipal Essential Service Revenue[c]
General Obligation and Lease/Appropriation Backed	Transportation Revenue
Special Tax Backed	Corporate Backed[d]
Healthcare Revenue[b]	Housing Revenue
Higher Education Revenue	—

[a]Investments in bonds that have been pre-refunded or escrowed to maturity, and in bonds that are backed by state-level general obligation and state-level taxing authority, are exempt from the 25% threshold. [b]Includes hospital, nursing and senior care facility bonds, among others. [c]Includes power, water and sewer bonds, among others. [d]Includes tobacco bonds, investor-owned utilities and industrial-development bonds, among others.
Source: Fitch Ratings.

Summary of Industry Diversification Guidelines for Taxable CEFs

Treatment for Exposure in Excess of 25% to a Single Foreign Currency:	Treatment for Exposure in Excess of 25% to a Single Corporate Industry:
Additional 1.1x Multiple to Applicable Asset DF	Additional 1.5x Multiple to Applicable Asset DF

Note: In instances where a fund has concentration in excess of 25%, Fitch's diversification framework applies the DF multiple on a pro-rata basis across all instruments within such group.
Source: Fitch Ratings.

Geographic Concentration — Single-State Municipal CEFs

Fitch's CEF criteria consider geographic concentration risks such as presented by single-state CEFs, which typically invest 75%–100% of assets in a given state. For concentrations above 25%, Fitch applies a DF multiple of 1.1x for securities of issuers located in a state rated at least 'BBB' and a 1.25x multiple for securities of issuers located in a state rated below 'BBB'. The dial-up is intended to capture an increased likelihood of price volatility and contagion among portfolio assets from a single state under a credit stress, which may be exacerbated by headline risk and/or forced selling.

Summary of Sector/State Diversification Guidelines for Tax-Exempt CEFs[a]

State General Obligation Rating	Treatment for Exposures in Excess of 25% to a Single Municipal Sector[b]	Treatment for Exposures in Excess of 25% to a Single State
BBB or Higher	Additional 1.1x Multiple to Applicable Asset DF	Additional 1.10x Multiple to Applicable Asset DF
BBB– or Lower	Additional 1.1x Multiple to Applicable Asset DF	Additional 1.25x Multiple to Applicable Asset DF

[a]This table summarizes sector/state diversification guidelines applicable to municipal CEFs. Other general guidelines, such as the issuer diversification framework, continue to apply. [b]Excludes state-level general obligation bonds and issues backed by a state-level taxing authority. Note: In instances where a fund has concentration in excess of 25%, Fitch's diversification framework applies the DF multiple on a pro-rata basis across all instruments within such group.
Source: Fitch Ratings.

Asset Concentration

The DFs published in appendix 1 reflect Fitch's expectation that the assets listed in the appendix form a part of a broader portfolio, and not the entire portfolio. Credit given to the assets listed below is capped at 20% of the total portfolio:

- 'BBB' category rated assets (corporate and municipal) at the 'AA' rating stress level.
- 'CCC' category rated assets at the 'A' rating stress level.
- All structured finance securities combined at the 'A' rating stress level.

To illustrate, if a municipal bond portfolio is comprised of 23% 'BBB'-rated bonds, 3% of these bonds will be given no credit, while the listed DF for 'BBB' municipal bonds will be applied to the remaining 20%.

Other Rating Considerations

Make-Whole Amounts and Prepayment Premiums

Transaction documents of certain CEF liabilities at times incorporate a variable make-whole amount required to be paid to investors as a result of a breach of asset coverage tests. The increased payment may put additional pressure on the CEF's ability to restore appropriate levels of asset coverage and/or redeem obligations. Therefore, Fitch includes any make-whole amount dictated by transaction documents for purposes of calculating the Fitch asset coverage. Fitch may also elect to apply an additional stress factor in a higher and/or more volatile interest rate environment.

Similar to make-whole amounts, fixed prepayment premium obligations are also added to total principal and accrued expenses when totaling the fund's liabilities to calculate the Fitch OC tests. Given the fixed and pre-specified nature of the potential liability to the fund, no additional stress beyond the prepayment premium amount is applied.

Some CEF liabilities have a make-whole provision enacted solely in the event of a voluntary and optional prepayment of the notes at the discretion of the fund and not applicable in the event of an early redemption due to a breach of the fund's asset coverage/deleveraging tests. In such instances, Fitch makes no adjustments in calculating OC tests.

Fund Legal Framework

Funds can take multiple legal forms, but those using financing are generally close-ended to avoid liquidity risks stemming from the early sale of assets to meet redemptions. Fitch considers the following to be key considerations.

- **Legal/Regulatory Framework:** valid formation of the fund, segregation of assets, regulatory oversight, restrictions on activities to reduce the risk of new liabilities and creditors, tax considerations and others.
- **Leverage Legal Structure:** review of transaction legal documents and legal opinions for determining the rights of note and preferred shareholders.
- **Clear Cash Flow Allocation:** regulatory framework and/or transaction documents should establish clearly the priorities of investors and other transaction parties.
- **Operational Capacity:** responsibilities of the fund's key operational counterparties, including the manager, custodian and trustee, should be clearly defined in the legal documents.
- **Liquidity and Treasury Operations:** operational support should provide timely trade settlements and payment of obligatory interest and/or dividend payments, and cash management to build liquidity in anticipation of debt maturity.

Fitch performs reviews of bankruptcy remoteness, asset segregation and independent oversight as relevant to its analysis. Fitch reviews all legal documentation relevant to its analysis, including the fund prospectus, note indentures, statements of preferences, purchase and loan facility agreements, and margin requirements.

Recourse to Fund Assets and Priority of Payments

Fitch expects lenders, debtholders or other senior investors to benefit from legally enforceable recourse to fund assets. Such recourse means assets cannot be pledged to other parties outside of the contemplated transaction documentation and indicates that rated note or preferred holders have a clearly defined security interest, individually or collectively, in a fund's assets. Furthermore, the control rights of equity or junior investors in the portfolio should be subordinated to the rights of the rated classes of debt/preferred securities. The rights of the debt, preferred and common shareholders should be clearly laid out in the fund prospectus and transaction legal documents.

Fitch assesses the priority of payments as set forth in the legal documentation, notably with respect to amounts payable to other parties, such as fees (including senior/subordinated management fees), ongoing and termination payments arising from derivatives transactions, expenses and taxes.

Supplemental Portfolio Cash Flow Analysis

For CEFs and MVS that do not rely on the structural protections and deleveraging mechanisms generally seen in U.S. CEFs, Fitch may supplement its market value analysis with additional cash flow analysis. The analysis consists of developing cash flow scenarios (including stressed scenarios) that are relevant for the assets held by the portfolio and the rating level. This analysis will involve, as needed, other analytical groups within Fitch, drawing on the most relevant expertise and criteria for the asset class in which the fund invests.

For example, for non-1940 Act CEFs that invest in a corporate loan portfolio, we may apply supplemental cash flow analysis using the Fitch proprietary model and rating factors under the framework described in the most recently published "Global Rating Criteria for CLOs and Corporate CDOs". Fitch also may take a hybrid approach, utilizing, as appropriate, elements of market value and cash flow analysis, if this creates a more fulsome, robust approach

Third Parties

Third parties such as the trustee, the custodian bank, the administrator or auditors are reviewed for their ability to perform their assigned roles. Even if the fund's assets and deposit accounts are generally segregated, timeliness and ultimate recovery can be affected by a credit event affecting the custodian bank or trustee. For certain counterparty relationships that could have a material impact on the rating, such as liquidity providers and derivative counterparties where a material hedge is relied on in the rating analysis, Fitch will analyze counterparty limits and minimum rating levels and remedial procedures (e.g. transfer of responsibilities to custodian or trustee, appointment of a new party and posting of collateral) in case counterparties are no longer in a position to fulfil their duties. In these cases, the analysis will be done in line with the structured finance counterparty criteria. However, in most other cases where funds use derivatives for leverage or hedging, and where the exposure to any counterparty would not have an outsize impact on the rating, Fitch's assessment of counterparty risk is performed in the context of reviewing the fund manager's overall risk management practices.

Fitch evaluates counterparty risk arising from funds' over-the-counter derivative and leverage positions when assigning ratings to CEF liabilities. The credit risk and performance of counterparties can impact the effectiveness of hedges and the ability to quickly access portfolio positions. This, in turn, can impact the degree of asset protection the portfolio offers and the ability to rollover maturing obligations.

Collateral posted by the funds' counterparties in nonhedging derivative transactions are included as part of the Fitch OC tests' numerator because such amounts are already reflected in Fitch's treatment of derivatives, as described in Appendix 2. However, Fitch affords credit to any assets posted by the fund to a counterparty in the Fitch total OC test numerator, subject to appropriate DFs, as these assets would be returned to the fund if the associated leverage/derivative is unwound.

For other counterparty transactions, such as securities lending arrangements, counterparty concentration remains a risk, regardless of the market value of the transaction. In securities lending arrangements, securities lent are typically handled by the same counterparty that retains the cash collateral received, exposing the fund to risk of loss on both the securities lent and the cash collateral. Fitch will assess such risk and calculate the Fitch net OC test by subtracting the higher of discounted cash collateral received or the discounted securities lent from the numerator.

Implementation of Structural Mechanisms

Historically, CEF governing documents incorporated most, if not every, aspect of the rating criteria that prevailed when the fund was originally rated. However, the absence of detailed descriptions of Fitch's CEF rating criteria, including asset-specific DFs, will not, on its own, have adverse rating implications, provided that the fund maintains sufficient deleveraging/liability defeasance mechanisms and adheres to guidelines that are conservative relative to Fitch's current rating criteria. Structural mechanisms that do not exactly match Fitch's criteria are reflected through additional stress testing as described below. From the perspective of the investor and fund

manager, Fitch believes this offers greater transparency and easier implementation of any future criteria changes.

Stress Testing as Part of the Analysis

Fitch may conduct stress tests on CEF portfolios in cases where the fund's structure and/or portfolio guidelines materially differ from the agency's criteria at a given rating level. Stress tests contemplate adverse-case scenarios to ensure the assigned rating can withstand adverse changes in the fund's profile. For example, tests conducted using the Fitch proprietary model may demonstrate the potential for migration in the fund's portfolio composition and leverage toward the limits of the fund's operating and investment guidelines. Fitch uses stress tests to determine the comparability of the structural protections outlined in a given transaction's documentation to what is outlined in Fitch's criteria and will assign lower ratings if a transaction's structural protections are materially weaker.

In Fitch-rated CEF transactions, this primarily occurs in instances where the transaction documents do not require deleveraging in the event of a breach of the Fitch OC tests. In this case, the Fitch proprietary model would be used to analyze various adverse scenarios, migrating the fund's portfolio composition and leverage to the limits of the fund's operating and investment guidelines. Fitch would expect that the structural protections provided in the transaction's governing documents provide asset coverage levels comparable to assigned rating thresholds.

Stress testing plays a key role in the rating analysis of securities issued by an interval fund. Interval funds typically adopt a fundamental investment policy to make quarterly offers to repurchase between 5% and 25% of outstanding common shares at net asset value, reduced by any applicable repurchase fee. Interval funds are governed by rule 23c-3 of the 1940 Act.

Fitch analyzes the obligation of interval funds to periodically repurchase common shares by reducing total assets by the full amount of the expected case common share repurchase for the upcoming quarter in the Fitch OC test calculations. In addition, Fitch stresses the expected case by reducing total assets by the maximum quarterly common share repurchase allowable under rule 23c-3 of 25% in the Fitch OC test. Similar to the discussion above, Fitch would expect the structural protections provided in the governing documents of an interval fund transaction provide asset coverage levels comparable to assigned rating thresholds. For a new rating, Fitch would expect structural protections be comparable to criteria guidelines to proceed with the rating assignment.

Stress testing may be used to analyze cases where the portfolio contained risk elements not commonly seen in rated transactions or not fully covered under Fitch's existing criteria. If Fitch believes the stress testing achieved comparability to criteria guidelines, it would proceed with the rating assignment. Transactions where portfolio risk elements and governing document structural protections are comparable to Fitch's criteria guidelines would typically not require stress testing. Examples of risk elements that may lead Fitch to perform additional stress testing are excessive foreign exchange exposure, or exposure to very low rated assets.

Stress testing also plays a role in assessing portfolios that are marginally passing modelling results at a given rating level. For example, if a municipal fund passes the modelling results at the 'AA' rating level at a Fitch asset coverage close to 100%, Fitch may conduct additional stress testing to assess the break-even price decline that would cause the fund to breach the asset coverage tests. Funds that on a relative basis have materially less cushion to asset coverage tests may be rated at the next lower rating category.

Information Used to Determine a Rating

Analysis and rating decisions are based on relevant public and nonpublic information. Main sources of this information are the issuer and/or fund administrator and the public domain. This includes publicly available information pertaining to the fund, such as audited and unaudited (e.g. interim) financial statements and regulatory filings. The rating process may incorporate information provided by third-party sources.

Fitch conducts a reasonable investigation of the factual information relied on by it, in accordance with its rating methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or jurisdiction. Issuers may choose not to share certain information with external parties, including rating agencies, at any time. While Fitch expects each issuer that has agreed to participate in the rating process, or

its agents, will supply promptly all information relevant for evaluating both the ratings of the issuer and all relevant securities, Fitch neither has, nor would it seek, the right to compel the disclosure of information by any issuer or any agents of the issuer.

Investment Manager

Fitch evaluates the investment manager for actively-managed portfolios to determine whether they are suitably qualified and competent to manage the portfolio in question, consistent with the structure and the roles the manager is expected to play. A failed review would likely preclude Fitch from assigning a new rating or result in negative rating action in the case of an existing rating. Areas of focus include the manager's track record in managing comparable portfolios and asset types, as well as its staffing, resources, and viability.

Surveillance

Fitch monitors fund compliance with the Fitch OC and 1940 Act tests as follows:

- Funds internally calculate the Fitch OC and 1940 Act tests. Funds are expected to provide notice to Fitch if the resultant ratios are less than 5% above the minimum passing threshold (e.g. 105% for a Fitch OC test and 210% for a 1940 Act test for preferred stock) to initiate further dialogue.
- At least monthly, funds calculate and provide Fitch with updated portfolio holdings and results of the Fitch OC and 1940 Act tests. In periods of heightened credit and/or liquidity stress, Fitch reserves the right to initiate more frequent/detailed surveillance procedures.

The regular reporting of asset coverage tests and updated portfolio holdings to Fitch by the fund manager and administrator/trustee is central to Fitch's surveillance process and critical to maintaining the outstanding ratings on CEF debt and preferred stock. Failure to receive this information in a timely manner may result in negative rating actions and/or the withdrawal of assigned ratings.

To facilitate standardized reporting of fund information and assist in the adoption of the new criteria and surveillance, Fitch developed a reporting template. The Microsoft Excel-based template includes a coverage page that summarizes the fund's assets, liabilities, and relevant asset coverage ratios, and a portfolio holdings page, with built-in formulas for determining asset DFs and diversification guidelines. Parties interested in receiving a copy of the reporting template may contact any of the analysts listed on page 2.

Rating Assumption Sensitivity

Ratings assigned to CEF obligations may be sensitive to material changes in the leverage level, portfolio composition, market risk of the rated fund or cash flow expectations for less liquid assets, and existing structural protections for the rated instruments.

The short-term ratings assigned to certain CEF obligations may also be sensitive to changes in the financial condition of the relevant liquidity provider, when applicable. A change to the rating of a liquidity provider to rated CEF obligations will likely lead to a similar change to the short-term rating of the rated CEF obligation.

Ratings are also sensitive to changes to the DFs outlined on pages 18 and 19 of the criteria. If Fitch were to observe levels of heightened volatility for certain asset(s) that are more severe than those observed in the current rating analysis, Fitch may increase the DF(s) applied to the asset(s). An increase in DFs would put negative pressure on the Fitch overcollateralization tests outlined on pages 6 through 9 and in turn may adversely affect ratings in the event of unremedied test breaches.

In the case of PE CFOs (as outlined in Appendix 4), the ratings may be lowered if distributions are realized at lower levels than projected in various scenarios.

Ratings of transactions that exhibit a high reliance on counterparties may be sensitive to the credit quality of the counterparties if replacement and collateralization documentation is not in line with Fitch's "Counterparty Criteria for Structured Finance and Covered Bonds."

Limitations

Ratings, including Rating Watches and Outlooks, assigned by Fitch are subject to the limitations specified in Fitch's Ratings Definitions and available at https://www.fitchratings.com/site/definitions.

Variations from Criteria

Fitch's criteria are designed to be used in conjunction with experienced analytical judgment exercised through a committee process. The combination of transparent criteria, analytical judgment applied on a transaction-by-transaction or issuer-by-issuer basis, and full disclosure via rating commentary strengthens Fitch's rating process while assisting market participants in understanding the analysis behind our ratings.

A rating committee may adjust the application of these criteria to reflect the risks of a specific transaction or entity. Such adjustments are called variations. All variations will be disclosed in the respective rating action commentaries, including their impact on the rating where appropriate.

A variation can be approved by a ratings committee where the risk, feature or other factor relevant to the assignment of a rating and the methodology applied to it are both included within the scope of the criteria, but where the analysis described in the criteria requires modification to address factors specific to the particular transaction or entity.

Criteria Disclosures

In the rating action commentary or rating report, Fitch expects to disclose the following items:

- A description of the transaction's structural protections;
- An analysis of any relevant subordination risk;
- Any variations to criteria, as mentioned in the section Variations from Criteria above, including for any DFs that differ from those noted in Appendix 1 below.

Appendix 1: Published CEF Discount Factors

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Fitch Discount Factors

	DFs Appropriate for Different Rating Levels of CEF Debt and Preferred Stock					
Criteria Asset Class	**AA**	**A**	**BBB**	**BB**	**B**	**CCC**
Cash and Short-Term Investments						
Cash and Receivables Due in 10 Business Days or Less	1.00	1.00	1.00	1.00	1.00	1.00
Securities Rated in the A to AAA Rating Categories, <= 1 Year	1.10	1.08	1.05	1.00	1.00	1.00
U.S. Government and Supranationals						
Treasuries, Supranationals, Direct U.S. Agency Debt / Agency MBS, 1–10 Years[a]	1.10	1.08	1.05	1.00	1.00	1.00
Treasuries, Supranationals, Direct U.S. Agency Debt / Agency MBS, 10+ Years[a]	1.25	1.20	1.15	1.10	1.07	1.06
Sovereigns						
Sovereign Debt of Developed Countries, 1–10 Years[b,c]	1.15	1.10	1.08	1.05	1.04	1.03
Sovereign Debt of Developed Countries, 10+ Years[b,c]	1.30	1.25	1.20	1.15	1.09	1.07
Sovereign Debt, of Emerging Countries[d]	NC	2.40	1.75	1.50	1.27	1.21
Municipals						
Municipal Obligations, in the AAA or AA Rating Categories, 1–10 Years[e]	1.20	1.15	1.10	1.08	1.05	1.04
Municipal Obligations, in the A Rating Category, 1–10 Years	1.30	1.20	1.15	1.10	1.07	1.06
Municipal Obligations, in the AAA or AA Rating Categories, 10+ Years	1.45	1.35	1.25	1.20	1.11	1.09
Municipal Obligations, in the BBB Rating Category, 0–10 Years	1.45	1.35	1.25	1.20	1.11	1.09
Municipal Obligations, in the A Rating Category, 10+ Years	1.50	1.40	1.30	1.20	1.13	1.10
Municipal Obligations, in the BBB Rating Category, 10+ Years	1.70	1.50	1.40	1.25	1.17	1.13
Municipal Obligations, Below Investment Grade or Unrated	NC	2.00	1.70	1.45	1.26	1.20
Corporates[f]						
Corporate Bonds, Developed Countries, in the AAA or AA Rating Categories, 1–10 Years	1.30	1.20	1.15	1.10	1.07	1.06
Corporate Bonds, Developed Countries, in the A Rating Category (1-10 Years) or BBB Rating Category (0–10 Years)	1.40	1.30	1.25	1.20	1.11	1.09
Corporate Bonds, Developed Countries, in the AAA or AA Rating Categories or Unrated, 10+ Years	1.40	1.30	1.25	1.20	1.11	1.09
Corporate Bonds, Developed Countries, in the A or BBB Rating Categories, 10+ Years	1.65	1.50	1.35	1.25	1.15	1.12
Corporate Bonds, Developed Countries, in the BB Rating Category	NC	1.60	1.40	1.30	1.17	1.13
Corporate Bonds, Developed Countries, in the B Rating Category	NC	1.80	1.55	1.40	1.22	1.17
Corporate Bonds, Developed Countries, Rated CCC or Lower, or Non-Rated	NC	2.55	1.95	1.60	1.32	1.24
Corporate Bonds, Emerging Countries	NC	2.90	2.10	1.65	1.35	1.27
Convertibles						
Convertible Debt – Busted[g]	NC	1.55	1.39	1.27	1.16	1.13
Convertible Debt – Typical[h]	NC	1.89	1.60	1.39	1.23	1.18
Convertible Debt - Equity Sensitive[i]	NC	2.26	1.81	1.51	1.34	1.23
Convertible Debt - Emerging Countries and Distressed[j]	NC	3.42	2.30	1.74	1.47	1.32
Leveraged Loans[k]						
BSLC Loans, U.S., CAD and EU, First Lien, in the BB Rating Category or Higher	NC	1.40	1.30	1.25	1.13	1.10

Appendix 1: Published CEF Discount Factors

Fitch Discount Factors

	DFs Appropriate for Different Rating Levels of CEF Debt and Preferred Stock					
Criteria Asset Class	**AA**	**A**	**BBB**	**BB**	**B**	**CCC**
BSLC Loans, U.S., CAD and EU, First Lien, in the B Rating Category	NC	1.60	1.40	1.30	1.17	1.13
BSLC Loans, U.S., CAD and EU, Second Lien, in the BB and B Rating Categories	NC	2.00	1.60	1.40	1.23	1.18
BSLC Loans, U.S., CAD and EU, First Lien and Second Lien, in the CCC Rating Category	NC	2.55	1.95	1.60	1.32	1.24
Equity						
U.S. and Developed Countries, Large Capitalization[l]	NC	2.10	1.70	1.50	1.26	1.20
U.S. and Developed Countries, Medium and Small Capitalization[m,n]	NC	2.70	2.05	1.60	1.34	1.26
Emerging and Developing Market Equities	NC	3.75	2.20	1.75	1.38	1.28
MLPs & Midstreams, >= USD10 Bil. Market Cap[o]	NC	2.96	2.13	1.66	1.36	1.27
MLPs & Midstreams, < USD10 Bil. Market Cap[o]	NC	10.00	4.17	2.33	1.61	1.44
Preferred Stock						
Preferred Stock	NC	2.00	1.60	1.40	1.23	1.18
Foreign Currency						
Unhedged Foreign Currency Exposure ,Investment-Grade Countries, (in addition to standard DFs)	NC	1.40	1.30	1.25	1.13	1.10
Structured Securities						
ABS rated AAA	NC	1.30	1.22	1.18	1.10	1.08
Non-Agency RMBS, CMBS and CLOs Rated AAA	NC	1.60	1.40	1.27	1.17	1.13
Non-Agency RMBS, CMBS, CLOs and ABS in the AA or A Rating Categories	NC	2.00	1.60	1.39	1.23	1.18
Other						
All Other Assets	NC	NC	NC	NC	NC	NC

[a]The Agencies category excludes agency-backed MBS interest- and principal-only issues, support tranches, inverse floaters and inverse interest-only issues. [b]Sovereign debt excludes U.S. [c]Developed countries are advanced economies, as defined by the IMF. [d]Emerging countries are defined as all countries not included in the aforementioned definition of developed countries. [e]'AAA' rated municipals include refunded and pre-refunded municipal bonds, backed by U.S. government collateral. [f]The bonds category includes the collateralized bond asset class. [g]Busted convertible securities are defined as convertible securities having a conversion premium in excess of 70%. Conversion premium is calculated as: (market value [MV] of the convertible security minus MV of total stock into which the security may be converted to)/MV of the convertible security). Convertibles rated in the 'A' to'AAA' rating categories and maturing in less than one year receive no credit at the 'AA' stress level, and for 'A' to 'CCC' stress levels receive the credit provided to securities rated in 'A' to 'AAA' rating categories, < 1 Year. [h]Typical convertible securities are defined as convertible securities that have a conversion premium between 20% and 70%.[i]Equity-sensitive convertible securities are defined as convertible securities that have a conversion premium less than 20%. [j]Distressed convertibles have a bid price below 60% of par, as defined on page 303 of the March 2008 edition of "A Guide to the Lehman Brothers Global Family of Indices." [k]Fitch's DFs on leveraged loans are primarily derived from the performance of the U.S. leveraged loan market and reflect the jurisdictional support of creditor's rights in the U.S. To date, this analysis has also been applicable to leveraged loans originating from Canada and the EU, which, together with U.S. leveraged loans, constitute the majority of investments made by Fitch-rated loan CEFs. However, should a marked change in jurisdictional mix and creditor's rights take place in any of these geographical locations, Fitch will re-evaluate its DFs to reflect such data. BSLC refers to Broadly Syndicated and Large Corporate loans. [l]Large capitalization is defined as company stock that has market capitalization greater than $5.0 billion. [m]Medium capitalization is defined as company stock that has market capitalization of less than or equal to $5.0 billion and greater than $1.0 billion. [n]Small capitalization is defined as company stock that has market capitalization of less than or equal to $1.0 billion. [o]Reflects the calculation methodology of the Alerian Midstream Energy Index (AMNA). Consistent with the AMNA, excludes closely held stock and cross holdings, also includes publicly traded c-corps with more than 80% of assets in master limited partnerships (MLPs), royalty or income trusts (RITs) and marine transportation securities (MTS).Notwithstanding this, MLPs, RITs and MTS restricted from trading within 180 days until the first available registration date are afforded the same DFs as MLPs, RITs and MTS with less than $10 billion of market capitalization, subject to a 10% overall limit on exposure. Notes: For all asset classes, asset maturity is calculated on the basis of the security's final maturity, except for securities that contain a put provision at the securityholder's option. In such instances and for the purpose of determining the appropriate asset DF, the next available put date may be assumed to be the asset maturity date. For investments that synthetically reference diversified indices or portfolios, Fitch calculates the average credit quality needed to select the appropriate DF by: looking to the Fitch rating of each underlying security, if available, otherwise, at the lowest available rating of other global rating agencies; assigning a probability of default value to each underlying security based on Fitch's corporate CDO criteria; and calculating the probability-of-default weighted average credit rating of that index/portfolio, consistent with Fitch's most recently published "Global Bond Fund Rating Criteria," available on its website at www.fitchratings.com. NC – No credit given, unless evidence of stable MV risk can be demonstrated. Source: Fitch Ratings.

Appendix 2: Capturing All Forms of CEF Leverage

Analytical Treatment of Fund Liabilities in Fitch OC Test Calculations

	Fitch OC Tests for Rated Debt or Preferred Stock			
	Fitch Total OC Test		Fitch Net OC Test	
Column 1	**Column 2**	**Column 3**	**Column 4**	**Column 5**
Treatment of Nonrated Liabilities in Fund's Capital Structure	**Numerator**	**Denominator**	**Numerator**	**Denominator**
Current Liabilities	- Current liabilities that will settle within 10 days (does not include rolled securities, forwards, futures and other leverage instruments)	No adjustments	+ Amount in column 2	No adjustments
Notes or Preferred Stock (Subordinate to Rated Liability)	+ Discounted market value (MV) of reinvested assets	No adjustments	+ Amount in column 2 - Any earmarked asset collateral MV for the liabilities	No adjustments
Notes or Preferred Stock (Pari Passu to Rated Liability)	+ Discounted MV of reinvested assets	+ Outstanding liability + Accrued interest and fees	+ Amount in column 2 - Any earmarked asset collateral MV for the liabilities	+ Outstanding liability + Accrued interest and fees
Notes or Preferred Stock (Senior to Rated Liability)	+ Discounted MV of reinvested assets	+ Outstanding liability + Accrued interest and fees	+ Amount in column 2 - Any earmarked asset collateral MV for the liabilities; if no earmarked collateral, then – column 3	No adjustments
Bank Credit Facilities	+ Discounted MV of reinvested assets	+ Outstanding liability + Accrued interest and fees	+ Amount in column 2 - Any earmarked asset collateral MV for the liabilities; if no earmarked collateral, then - column 3	No adjustments
ABCP Conduit Financing Facilities	+ Discounted MV of reinvested assets	+ Outstanding liability + Accrued interest and fees	+ Amount in column 2 - Any earmarked asset collateral MV for the liabilities; if no earmarked collateral, then - column 3	No adjustments
Reverse-Repurchase Agreements	+ Discounted MV of reinvested assets	+ Outstanding liability + Accrued interest and fees	+ Amount in column 2 - Any earmarked asset collateral MV for the liabilities	No adjustments
Floating-Rate Certificates of Tender Option Bonds (TOBs) ¾ Corresponding to Any Inverse Floaters (Residuals) Held by the Fund	+ Discounted MV of reinvested assets + Discounted MV of bond in TOB	+ Note liability + accrued interest and fees	+ Amount in column 2 - Bond collateral MV held in TOB trust	No adjustments
Securities Lending	+ Discounted MV of securities lent + Discounted MV of collateral held for securities lent	+ Liability due upon return of securities	+ Amount in column 2 - Amount in column 3	No adjustments

Analytical Treatment of Fund Liabilities in Fitch OC Test Calculations

	Fitch OC Tests for Rated Debt or Preferred Stock			
	Fitch Total OC Test		Fitch Net OC Test	
Column 1	**Column 2**	**Column 3**	**Column 4**	**Column 5**
Treatment of Nonrated Liabilities in Fund's Capital Structure	**Numerator**	**Denominator**	**Numerator**	**Denominator**
Security Rolls (e.g. Mortgage Dollar Rolls)	+ Discounted MV of referenced assets	+ Liability due on settlement date	+ Amount in column 2 - Amount in column 3	No adjustments
Futures and Forwards, Long (Includes Eurodollar, Euribor and U.K. 90-Day Futures "Money Market Futures")	+ Discounted MV of referenced assets + Discounted MV of collateral held	+ Liability due on settlement date	+ Amount in column 2 - Amount in column 3	No adjustments
Futures and Forwards, Short (Includes Money Market Futures)[a]	+ Amount receivable on settlement date + Discounted MV of collateral held	+ Referenced asset MV multiplied by 1 + [1 – (1/DF)]	+ Amount in column 2 - Amount in column 3	No adjustments
Securities Sold Short[a]	+ Discounted MV of reinvested assets + Discounted MV of collateral held	+ MV of securities sold short multiplied by 1 + [1 - (1/DF)]	+ Amount in column 2 - Amount in column 3	No adjustments
Interest Rate Swaps (Long, Receive Fixed and Pay Floating)	+ Discounted value of (swap notional ± MV of fixed-rate leg)	+ Swap notional	+ Amount in column 2 - Amount in column 3	No adjustments
Interest Rate Swaps (Short, Receive Floating and Pay Fixed)	+ Swap notional	+ Swap Notional multiplied by 1 + [1 - (1/DF)]	+ Amount in column 2 - Amount in column 3	No adjustments
Total Return Swaps (Long)	+ Discounted referenced assets MV	+ (Referenced asset MV - equity stake or collateral put up)	+ Amount in column 2 - Amount in column 3	No adjustments
Credit Default Swaps (Long Credit, Protection Seller)	+ Discounted (CDS notional ± MV) + Discounted MV of assets' reinvested proceeds or assets segregated as a result of entering into the position (such as received upfront fee and any collateral held)	+ CDS notional	+ Amount in column 2 - Amount in column 3	No adjustments
Credit Default Swaps (Short Credit, Protection Buyer)	+ Lower of 0 or (CDS MV)	No adjustments	+ Amount in column 2	No adjustments
Deferred Swaps	Same as active swaps	Same as active swaps	Same as active swaps	Same as active swaps
Put Options (Purchased)	+ Max {0, (Strike Price - Reference Asset MV x [1 + (1 - (1/DF))] }	No adjustments	+ Amount in column 2	No adjustments
Call Options (Purchased)	+ Max {0, (Reference Asset MV/ DF) - Strike Price}	No adjustments	+ Amount in column 2	No adjustments
Put Options (Written)	+ Min {0, (Reference Asset MV/ DF) - Strike Price}	No adjustments	+ Amount in column 2	No adjustments
Call Options (Written)	+ Min {0, (Strike Price – Reference Asset MV x [1 + (1 – (1/DF))] }	No adjustments	+ Amount in column 2	No adjustments

Analytical Treatment of Fund Liabilities in Fitch OC Test Calculations

	Fitch OC Tests for Rated Debt or Preferred Stock			
	Fitch Total OC Test		Fitch Net OC Test	
Column 1	Column 2	Column 3	Column 4	Column 5
Treatment of Nonrated Liabilities in Fund's Capital Structure	**Numerator**	**Denominator**	**Numerator**	**Denominator**
Any On- and Off-Balance Sheet Liabilities Not Addressed Above	Evaluate MV risk	Evaluate impact on leverage	Evaluate MV risk	Evaluate impact on leverage

[a]Fitch considers naked short selling as a form of leverage. Naked short selling is economically similar to a short future or forward contract, except the asset value recovered on the date of unwind/call is unknown in advance because it is driven by the value of the reinvested assets on that date. Whereas, in a short future or forward contract, the value received on the date of contract expiration is known in advance. As a general matter, Fitch will evaluate the use of naked short selling, paying particular attention to issuer and industry concentration added by the positions in the context of the overall portfolio. Note: derivative positions that are used to hedge portfolio assets should first be netted before determining any net long or short derivative exposure. Treatment for any net derivative exposure (an amount not used to hedge or offset other derivatives or portfolio assets) is described in the table above. Appropriate DFs from the Fitch DF table on pages 18-19 apply where noted. Derivatives referencing money market indices, such as the three-month LIBOR, three-month Euribor and the U.K. 90-day rate, would utilize a DF of 1.01. Interest rate swaps, futures and forwards utilize a DF equal to that of the referenced asset or an equivalent economic exposure (typically government or agency securities matched to relevant maturity buckets). Where no DFs are published for a certain reference asset at the 'AA' rating stress (for example, high-yield corporate bonds), the 'A' rating stress DF will be used, multiplied by 1.25.
Source: Fitch Ratings.

Appendix 3: Market Value Structures

The main sections of this criteria report primarily focus on U.S. CEFs subject to the 1940 Act since they represent the majority of ratings assigned under Fitch's CEF and MVS rating criteria.

Closed-end funds (CEFs) are properly considered a type of market value structure (MVS). The term MVS is used generically to describe transaction types where repayment of the liabilities are dependent on monetizing an actual or reference portfolio of securities. MVS transactions can be bespoke and heterogeneous, including market value CLOs, exchange-traded notes, margin loan collateralized fund obligations, pension funds, collateralized fund obligations (CFOs), and debt or programs secured by collateral, among others.

The key rating drivers outlined in this criteria report for CEFs are also applied when rating other MVS, including whether the structure provides the same level of legal and structural protections.

Fitch analyzes whether the structure includes minimum DFs that serve as a cap on overall leverage in addition to the asset-specific DFs. This may be important for certain less volatile asset classes where asset-specific DFs could result in excessively high leverage. Restrictions on maximum leverage support transactions rated at the highest levels (AA). The importance of the minimum DFs in the table below in the rating analysis depends on the structure of the transaction as well as the portfolio composition.

Minimum Overall Discount Factors

	Liability Rating			
	AA or F1+	A or F1	BBB or F2	BB or F3, or Lower
Minimum Discount Factor	2.00	1.70	1.40	1.10

Source: Fitch Ratings.

In cases where an obligation is backed by both a counterparty and collateral, Fitch may analyze the sufficiency of collateral to provide uplift from the counterparty's rating. In rating MVS, Fitch will analyze the robustness of data available on the relevant asset class, including whether it encompasses observable stress periods. Fitch will also analyze the liquidity of markets and asset classes that are outside of the ones that usually appear in U.S. CEFs. Weaker or shorter datasets, or markets or assets that Fitch determines to be less liquid, will be afforded less credit in Fitch's analysis, which may result in lower leverage or rating levels.

Fitch affords little or no market value credit for asset classes that are deemed truly illiquid. Notwithstanding, a portfolio that has some exposure to illiquid assets may still be rated under a market value analytical framework, provided the illiquid assets are given little or no credit in the analysis and the remaining portfolio is analyzed in accordance with these criteria (i.e. via a component of cash flow analysis).

Appendix 4: Puerto Rican CEFs

This appendix describes the regulatory framework for Puerto Rican closed-end funds (PR CEFs) and outlines unique criteria for rating debt and preferred stock issued by CEFs organized in the U.S. commonwealth of Puerto Rico and regulated by the Investment Company Act of Puerto Rico (the PR Act).

Regulatory Framework: Investment Companies Act of Puerto Rico

PR funds launched prior to 2013 are generally regulated under the Investment Companies Act of Puerto Rico of 1954 (Old PR Act). The Puerto Rico Investment Companies Act of 2013 (New PR Act) covers newly launched funds or PR CEFs that have proactively converted from the Old PR Act to the New PR Act. Fitch applies the same criteria for funds regulated under both the old and new regulations, although we view the New PR Act as having the potential to be credit positive, particularly with respect to diversification.

The New PR Act revamps compliance and governance rules, allows for greater diversification outside of Puerto Rico, establishes formal fund leverage limits, creates a new type of tax-advantaged structure and mandates all rulings by the Commissioner of Financial Institutions (the commissioner) be made public going forward.

Under the Old PR Act, PR investment companies invest mainly in municipal debt issued by the island's government, in line with a 67% minimum investment requirement. The new law notably lowers the PR investment requirement to 20% for PR CEFs that invest in municipal debt and eliminates it completely for PR CEFs that do not invest in municipal debt. This allows greater diversification of fund portfolios away from distressed PR issuers.

Existing funds are, for the most part, grandfathered in under the Old PR Act, except for compliance with new rules with respect to affiliate transactions; tighter governance over fund directors and officers; and uniformity over repurchasing fund stock from investors. These changes more closely align local investment companies with protections already in place for investors in U.S. mutual funds under the U.S. 1940 Act. Shareholder approval is needed to convert existing funds to the new law, which may prove challenging.

Both laws established minimum diversification requirements, which vary depending on whether the fund is classified as a diversified or nondiversified fund. Diversified funds are limited to investing 5% or less of total assets in any single issuer while retaining 20% or less of the outstanding voting securities of any other issuer. Nondiversified funds are limited to investing 25% or less of total assets in any single issuer while retaining 75% or less of the outstanding voting securities of any other issuer.

Leverage Limits

PR CEFs operating under the Old PR Act have established operating guidelines effectively restricting them from issuing additional leverage when leverage ratios exceed 50% of total assets. When there is a breach of up to 5%, funds must submit reporting to the commissioner on a monthly basis. When there is a breach beyond 55%, funds may obtain authorization from the commissioner to maintain levels without deleveraging. The New PR Act establishes formalized regulatory procedures.

Additionally, the Old and New PR Acts do not prohibit funds from paying out common stock dividends when in breach of their leverage thresholds, unlike the U.S. 1940 Act. Despite this, some PR managers have explicitly incorporated the restriction, which Fitch views positively as a credit protection for the rated obligations.

Capital Structure and Leverage

Leveraged PR CEFs may issue multiple forms of liabilities that include reverse repurchase agreements, margin loans, medium-term notes, short-term notes and preferred stock. PR CEFs segregate portfolio assets into separate subaccounts, with each subaccount holding collateral for a given fund liability. PR CEF managers have the ability to transfer assets between accounts and top-up collateral as needed, subject to the leverage covenants of each lending arrangement. Each fund liability has a secured legal claim to the collateral in its subaccount, and the liabilities also share jointly in any assets that remain unencumbered at the overall portfolio level.

Fitch primarily looks to the specific collateral at the subaccount level when assigning ratings to debt and preferred stock issued by PR CEFs. Other collateral subaccounts and any unencumbered assets in the fund are not explicitly recognized for purposes of calculating the OC tests. This reflects the uncertain quality and quantity of assets held elsewhere in the fund, as those assets may be encumbered by other borrowers or have limited liquidity.

Fitch also evaluates assets unencumbered, or pledged to other creditors of the fund. This information helps Fitch evaluate the fund's ability to segregate sufficient collateral to meet obligations to all creditors. Analyzing asset coverage to all liabilities provides a clearer picture to the fund's ability to continue and provide the rated notes/preferred stock with sufficient collateral.

Capital Structure of U.S. CEFs

Portfolio Assets	Nonrated Bank Line, Reverse Repos, etc.
	Rated Senior Notes
	Rated Preferred Stock
	Common Equity

Capital Structure of PR CEFs

Fungible Assets			
Subaccount Assets	**Subaccount Assets**	**Subaccount Assets**	**Subaccount Assets**
Nonrated Reverse Repos	Rated Medium-Term Notes	Rated Short-Term Notes	Rated Term Preferred Stock
Common Equity			

Source: Fitch Ratings.

Challenges in Achieving Highest Rating Level

Historically, PR CEFs had typically invested a large portion of their portfolio in non-103 bonds (per Section 103 of the Internal Revenue Code). Non-103 bonds are sold primarily to Puerto Rico investors and are characterized by smaller issue sizes and lower liquidity. Their interest income is exempt from federal, commonwealth, and local taxes for Puerto Rico residents but may be subject to taxes for residents outside Puerto Rico (hence limiting their demand). PR CEFs purchase non-103 bonds because the after-tax interest income for the funds' investors is typically greater than that of 103 bonds from the same issuer.

A drawback to non-103 bonds is that they are held predominantly by a concentrated and homogenous group of investors in the Puerto Rico market, namely PR CEFs that may be reliant on the liquidity of the underlying assets to repay liabilities during periods of mandatory deleveraging/defeasance. This concentration introduces additional liquidity considerations not explicitly captured in Fitch's asset discount factors (DFs).

Liquidity constraints, combined with the low credit quality of Puerto Rico, make it difficult for PR CEFs with significant direct exposures to PR issuers to achieve the highest rating levels on debt and preferred stock (exceptions are funds that do not assume outsized leverage at the overall fund or any individual subaccount, and invest predominantly in direct U.S. Treasury/agency obligations and/or direct U.S. corporate/municipal obligations).

Structured Conduit Transactions

At times, PR CEFs may invest in secured notes issued by certain structured conduits that are owned and operated by PR governmental entities. These notes are utilized by PR CEFs to diversify outside of PR when the collateral consists of non-PR obligations (despite being eligible as Puerto Rico securities for the minimum Puerto Rico two-third investment requirement set forth by the PR Act).

In evaluating structured conduit transactions, Fitch seeks to understand whether the fund's collateral agent will retain possession of the note collateral at the subaccount level and whether the conduit transactional documents grant the collateral agent full authority to liquidate the collateral. In general, Fitch affords limited credit for conduit notes meeting these guidelines, as presented in the table on the next page.

Fitch Guidelines for Qualifying Notes Issued by Structured PR Conduits

	Maximum % Eligible for Fitch Total OC Test[a]		
	AA	A	BBB
Aggregate Exposure to Notes of Structured Puerto Rico Conduits	20	40	60

Note: Fitch applies standard DFs for different rating levels of PR CEF debt and preferred stock.
Source: Fitch Ratings.

Structured conduit transactions, including an operational review of the PR conduit operator, will be reviewed, and, at minimum, the exposure would remain subject to issuer concentration guidelines and DFs (determined by the conduits' collateral) in this criteria report.

Appendix 5: Methodology and Data Sources for Development of Discount Factors

Rating Stress Scenarios

Discounted portfolio asset values are calculated by dividing the current portfolio market value by the appropriate DF for each asset type. The sum of the value of the discounted portfolio assets are then used as the numerator for the Fitch OC tests. DFs are not intended to provide a static view of asset performance, but, rather, they express current views of potential market value loss through current economic conditions and the credit cycle. Fitch will perform a periodic review of DFs using the methodology described in this criteria report. Fitch's determination of asset DFs was primarily based on worst-loss events experienced by each asset class. Therefore, even if future analysis indicates more positive and/or stable asset performance than implied in the currently presented DFs, Fitch may leave the DFs unchanged.

Categorization of Asset Classes

Fitch reviewed major asset classes within the CEF investable universe and assigned asset groups differentiated by type, and exhibited the magnitude of market value risk (see Appendix 1). This approach segregated assets by sector and subordination in the issuer's capital structure, domicile, credit rating and duration.

The identification and segmentation of asset classes and sector strikes a balance between having transparency into differences in the market value performance of asset subclasses versus the diminishing benefit of overly specific classifications (due to the correlation of similar assets and the possible introduction of idiosyncratic risks). By striking this balance, it also provides the ability to utilize sufficiently transparent, robust and diversified index proxies that are representative of a portfolios investment mandate in order to develop DFs.

Quantitative Analysis, Data Sources for Proprietary Model

For each asset class, Fitch constructed a base case stress based on historical index performance and considered the volatility and liquidity of the given index. The base case stress was then converted into an expected loss at each rating level by multiplying the base case stress by a representative factor for higher rating stress scenarios.

Data Sources and Volatility

Data Quality

The starting point for determining market value DFs for a given asset class or sector is an analysis of rolling observed worst-case price declines experienced by the index over the relevant exposure period expressed in business days. Fitch typically uses a 40-60 business day exposure period for U.S. CEFs since this represents the typical time period from a breach of a market value-based OC test and a mandatory cure through deleveraging or defeasance of rated obligations. For materially longer exposure periods, Fitch will use the worst observed maximum drawdown within the exposure period, rather than a rolling timeframe analysis, when assigning investment-grade ratings. This is intended to avoid giving credit for historically-observed market recoveries that may not be replicated in the future.

The analysis used historical price data drawn from an asset's representative index. To assign investment-grade ratings, qualified indices will have a robust set of available data, including one or more stress periods including the financial crisis of 2008. The factors Fitch considers in determining data robustness include the frequency of data points, the length of pricing history, inclusion of multiple stress periods and business cycles and appropriateness of the data series for the asset category under consideration. For example, Fitch uses S&P 500 Index, including notable periods of stress like the October 1987 "crash" to determine a base case worst loss for U.S. large cap common stocks.

At times, Fitch used multiple indices for its analysis, looking at both price volatility and index constituents. Representative indices for each asset class were selected on the basis of the best fit between the index constituents and typical CEF portfolio holdings.

Liquidity

Fitch views market liquidity in periods of stress to be particularly relevant to ensure that portfolio liquidation mechanisms work as intended, following breaches in leverage collateral tests. Therefore, Fitch added further liquidity haircuts to its analysis based on observations of stressed liquidations and discussions with various internal sector analysts and external market participants.

Additional liquidity haircuts varied by asset type; for example, publicly traded equities received no additional liquidity haircut given the deep, established market for such securities, and investment-grade corporate bonds received an additional nominal 5% loss, which was then added to the historical worst loss.

In extreme conditions liquidity for certain assets might dry up completely or nearly completely. This risk is addressed by certain assets not being eligible for credit at certain rating levels.

Expected Loss

A base case stress for each asset class is the sum of the worst loss plus any illiquidity adjustment. Each base case stress was classified by Fitch as being consistent with a particular rating stress, as determined by reviewing the main worst-loss drivers, the scale of decline during the specific economic period and the magnitude of worst loss relative to other historical losses.

Once a rating level was determined for each base case stress, the base case stress was increased using corresponding multipliers to reflect higher expected losses under higher rating stress scenarios. The multiplier was based on historical asset performance by rating category.

For example, to increase a ‘BBB’ rating stress to a ‘AA’ level, a multiple of 1.5 was used. Therefore, if an asset class’s observed worst-case loss for a 45-business-day period was 10%, and this loss was deemed consistent with a ‘BBB’ rating stress, then a ‘AA’ level worst loss was estimated at 15% over the 45-day period, assuming no additional liquidity add on.

Qualitative Assessment

Calculating base case historical stresses per asset category was only one of several factors Fitch considered when determining DFs. Fitch also analyzed the fundamental characteristics of assets, which included an analysis of the asset’s structure (e.g. convertible securities) and information transparency (e.g. liquidity).

An asset class’s seniority/subordination was also analyzed, and more subordinated assets typically received higher DFs. For example, equities received more conservative DFs, compared with bonds. However, this was not always the case; for instance, third lien secured leveraged loans received lower DFs than unsecured high-yield bonds, primarily due to the relatively poor liquidity associated with such loans.

Given the importance of robust historical data in determining worst-loss estimates, asset classes that did not include significant periods of stress were afforded little to no credit for the purpose of Fitch’s analysis.

Appendix 6: Example of CEF OC Tests and Rating Analysis

The example of our CEF analysis provided below is not exhaustive but is intended to illustrate certain key elements of Fitch's analytical process.

Fund Overview

The fund in the example is a U.S. CEF investing primarily in high-yield corporate bonds. The fund is managed by an asset manager with significant experience and a large asset base in the sector, good level of staffing and operational controls.

Transaction Overview

The fund currently has $575 million of assets and $175 million drawn on a bank credit facility, which makes for a leverage ratio of about 30%. The fund manager would like the fund to issue preferred shares to diversify funding sources, provide the fund with more cushion above regulatory leverage asset coverage requirements, and increase leverage. The fund will issue $100 million of mandatory redeemable preferred shares (MRPS) and will use $50 million of the proceeds to pay down the bank credit facility and the other $50 million to buy additional assets proportionally to the current composition of the portfolio, increasing leverage to 36%. See table below for an overview of the transaction.

Example: Transaction Summary

	Fund Current Portfolio		Fund Portfolio Pro Forma to MRPS Issuance	
Asset Category	**Market Value ($ Mil.)**	**% of Assets**	**Market Value ($ Mil.)**	**% of Assets**
Corporate Bonds, Developed Countries, in BBB Rating Category; 10+ Years to Maturity	75	13	82	13
Corporate Bonds, Developed Countries, in BB Rating Category	275	48	299	48
Corporate Bonds, Developed Countries, in B Rating Category	175	30	190	30
Corporate Bonds, Developed Countries, Rated CCC or Lower or Unrated	50	9	54	9
Total Assets	**575**	**100**	**625**	**100**
Leverage: Bank Credit Facility	175		125	
Leverage: MRPS	0		100	
Total Leverage	**175**		**225**	
Leverage Ratios	**Pre-Issuance Value (%)**		**Post-Issuance Value (%)**	
Senior Leverage	30		20	
Total Leverage	**30**		**36**	
Asset Coverage Ratios				
1940 Act 300% Asset Coverage	329		500	
1940 Act 200% Asset Coverage	329		278	

Note: All figures are hypothetical and shown for illustrative purposes.
Source: Fitch Ratings.

Analysis of Legal Documentation

Fitch reviews the legal documentation for the transaction to understand how asset coverage tests are defined. In this example, the MRPS documentation states that the fund covenants to maintain the Fitch overcollateralization (OC) tests. The documents define the test as the ratio of discounted assets to the amount of MRPS outstanding (a 100% coverage requirement). Furthermore, discounted assets are defined as the assets of the fund at market value, discounted based on the DFs outlined in Fitch's rating criteria for 'A' fund ratings (the most current criteria, as may be amended from time to time).

Because the documents refer to the 'A' rating level DFs in Fitch's criteria, Fitch will calculate the OC tests based on these DFs. More often documents refer to DFs "at the rating then assigned," which Fitch then interprets based on discussions with the fund manager regarding the rating level it covenants to maintain.

Fitch also analyzes the legal documentation to determine the exposure period for the OC test, or the period during which the rated securities may be exposed to market value declines. An exposure period is comprised of the frequency of OC test calculations, a cure period, and a redemption period. Adding all three together yields the exposure period. In its analysis, Fitch generally assumes that a fund will wait until the last day allowed by the legal documentation to take action.

In this example, the fund covenants to calculate the Fitch OC tests every week on Fridays, which is a calculation period of five business days. It means that since the last time the fund calculated the test (on Friday), there could have been five days on which it did not pass the test (starting the following Monday) until it calculated the test again. Next, the fund covenants that if it breaches the Fitch OC tests, it will have 20 business days to cure the test. Finally, if the fund cannot cure the test by the end of the cure period, it will have 30 calendar days to redeem enough MRPS to bring the test back into compliance. Therefore the total exposure period adds up to 48 business days (five business days during the calculation period plus 20 business days for the cure period plus 30 calendar days, or about 23 business days, for the redemption period).

The total exposure period of 48 business days falls within Fitch's criteria of 40–60 business days, so the DFs outlined in the criteria can be used for the OC tests.

OC Test

Fitch will analyze the portfolio on a pro forma basis, using the expected composition of the portfolio following the transaction. As the transaction documents covenant that the fund will calculate the OC tests at the 'A' DFs, these are the DFs Fitch will use in calculating the tests. DFs for the portfolio in the example will be applied as shown in the table below.

Example: Fitch Overcollateralization Test Calculation

	Fund Portfolio Pro Forma to MRPS Issuance			
Asset Category	**Market Value ($ Mil.)**	**% of Assets**	**Fitch 'A' Discount Factor**	**Discounted Value ($ Mil.)**
Corporate Bonds, Developed Countries, in BBB Rating Category; 10+ Years to Maturity	82	13	1.50	54
Corporate Bonds, Developed Countries, in BB Rating Category	299	48	1.60	187
Corporate Bonds, Developed Countries, in B Rating Category	190	30	1.80	106
Corporate Bonds, Developed Countries, Rated CCC or Lower or Unrated	54	9	2.55	21
Total Assets	**625**	**100**	**—**	**368**
Leverage				
Leverage: Bank Credit Facility	125		—	
Leverage: MRPS	100		—	
Total Leverage	**225**		**—**	
Leverage Ratios	**Post-Issuance Value (%)**		**Formula**	
Senior Leverage	20		Bank Credit Facility/Total Assets	
Total Leverage	36		(Bank Debt + MRPS)/Total Assets	
Asset Coverage Ratios				
'A' Total OC	164		Total Discounted Assets/ (Bank Debt + MRPS)	
'A' Net OC	243		(Total Discounted Assets - Bank Debt)/ MRPS	
1940 Act 300%	500		Total Assets/Bank Debt	
1940 Act 200%	278		Total Assets/(Bank Debt + MRPS)	

Note: All figures are hypothetical and shown for illustrative purposes.
Source: Fitch Ratings.

This analysis assumes the portfolio is diversified by issuer and sector and has no additional exposures that need to be captured, such as foreign exchange or derivatives. Excess

concentration above Fitch's criteria or additional exposures that need to be captured will lead to higher DFs.

To calculate the Fitch Total OC test, the sum of discounted market value from the table on the prior page, $368 million, is divided by the total leverage of $225 million, to yield asset coverage of 164%, which is above the 100% threshold for this test.

To calculate the Fitch Net OC test, the debt senior to the rated MRPS, $125 million, is subtracted from the sum of discounted market value from the table on the prior page, $368 million. The result, $243 million, is divided by the junior rated leverage of $100 million, to yield asset coverage of 243%, which is above the 100% threshold for this test.

The fund meets the asset coverage requirements at the 'A' level.

Bank Credit Agreement

Since the fund has a credit facility Fitch will review the agreement governing the facility to assess the impact of any provisions in the agreement on the rated MRPS. In this example the MRPS documentation states that payments to the MRPS will be restricted upon breach of certain provisions of the bank facility credit agreement. The credit agreement states that payment to the MRPS will be restricted if the fund breaches the 1940 Act 300% asset coverage test for senior debt and does not cure the breach within five business days.

The asset coverage for this test in the example is currently 500% (the market value of the portfolio divided by the amount of the credit facility outstanding), so a breach of the coverage is a remote possibility. However, under certain configurations of the capital structure, such as if the credit facility made up a much bigger portion of the leverage than now, a breach of this test is more likely. In that case there may be a payment interruption to the MRPS if a payment is due because of mandatory redemption or a dividend payment. Fitch views positively the fact that a breach of the test in itself will not restrict payment to the preferred, only a breach and failure to cure within five business days.

Final Rating

A rating committee considers all of the factors above and votes to assign a 'A' rating to the MRPS. The rating and key factors driving it are described in a press release that is sent to the fund manager for a factual review, and then made public. Once the MRPS are issued the fund manager calculates the Fitch OC tests on a weekly basis as covenanted in the documents, and Fitch receives and reviews the fund's OC tests and portfolio on a monthly basis.

Appendix 7: Application of Criteria to Non-Market Value Exposures

In addition to the structures discussed above, this rating criteria is also applicable to obligations of funds or portfolios that invest in less liquid or illiquid assets, or which do not rely on market value-based structural protections such as deleveraging mechanisms. The main principle of the methodology will be to match the analysis to the performance of the asset class in question based on the structural protections in the transaction. For example, for debt backed by a portfolio of loans to municipal or infrastructure projects, Fitch reviews the default and performance history of similar assets.

To maintain consistency across Fitch, these criteria may use elements of other rating criteria from Fitch where relevant. For example, we may look to the CLO criteria to apply corporate default probabilities to issuers in a portfolio. The criteria are not applicable to transactions that can be rated under another stand-alone criteria at Fitch, which will be determined based on the structural protections present in legal documentation.

Structures that do not have a well-established historical track record will be capped at a 'A' rating.

Key elements of these criteria are:

- Asset analysis
  - As noted above, this will involve matching the assets in the portfolio to relevant historical data through different market conditions. Performance thresholds will be calibrated to similar relevant measures at Fitch, such as transition and default studies for relevant sectors. For example, the expected performance of a portfolio of municipal loans will be matched to the relevant default rate in the municipal transition and default studies to derive the rating. Fitch may also use stressed analysis of management's projected performance to inform Fitch's expected performance of the assets.
- Structural protections
  - Structural protection mechanisms, such as cash trapping, asset coverage requirements, reserve accounts, minimum investment thresholds, or other features, will inform the asset analysis described above. For example, for a transaction that relies on the default trend of assets, this performance will be analyzed relative to the maturity timeframe of the rated obligation.
- Management and other counterparties
  - The expertise, resources, and performance of counterparties relevant to the transaction are important qualitative considerations. Fitch reviews the experience of relevant counterparties in managing or providing services to similar transactions or asset types. Fitch expects that in most cases the management and counterparty review will be neutral to the indicative rating derived from the analysis of the assets and structural protections. Where the portfolio manager or counterparty exhibits weaknesses that could impact the outcome of the transaction, such as in its resources, past performance, or risk management for example, this will have a negative influence on the indicative rating. Conversely, managers or counterparties that exhibit very strong attributes that may positively influence the outcome of the transaction may see a positive rating influence.

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