Private Equity Collateralized Fund Obligations (PE CFO) Rating Criteria

Sector-Specific

Scope

This criteria report details Fitch Ratings' methodology for analyzing obligations backed by portfolios of interests in private equity and other alternative investment funds. These obligations can take the form of loans, preferred equity, or securitizations and are typically referred to as private equity collateralized fund obligations (PE CFOs). The criteria report outlines the qualitative and quantitative factors considered in Fitch's analysis of PE CFOs, for both new and existing ratings globally. For a primer on PE CFOs, see "PE CFOs: Securitizing Private Equity Fund Interests."

Key Rating Drivers

'Asf' Category Rating Cap: Fitch applies an 'Asf' category rating cap to PE CFOs to reflect the less proven nature of the PE CFO asset class relative to other structured finance asset classes, uncertainty related to investment performance and timing of cash flows, variability of asset valuations, and lags in performance reporting.

Loan-to-Value: Fitch limits investment-grade ratings to PE CFO obligations with a loan-to-value (LTV) of up to 50%. Within this limit, 'Asf' and 'BBBsf' category ratings are differentiated by taking into account modeling results and other aspects as discussed in this report. PE CFO obligations with LTV detachment points higher than 50% will be assigned non-investment-grade ratings, even if modeling results show that these obligations could be rated investment grade. PE CFOs typically include LTV-based triggers to de-lever the transaction if the net asset value (NAV) of the PE CFO declines.

Stressed Cash Flow Analysis: PE CFO structural features and the timing of capital calls and distributions are key considerations in cash flow modeling and drive PE CFO performance. The ability of rated notes to pass stress scenarios at a given rating level, based on the cash flow profile of the portfolio and transaction waterfall, is the primary determinant of the ratings.

Liquidity: Fitch evaluates the ability of the PE CFO to meet ongoing obligations, such as capital calls, expenses, and interest payments, through a stress period. While PE CFO portfolios often generate net positive cash flows, contingent liquidity sources may be needed to support the structure during a stress period when cash flows may turn negative. Contingent liquidity sources typically include liquidity facilities, contractual commitments to cover capital calls, or reserve accounts. Fitch reviews whether available sources of liquidity, including modeled portfolio cash flow and the contingent liquidity, are sufficient to cover ongoing obligations at the indicative rating stress.

Portfolio Composition: The composition of the PE CFO portfolio drives the transaction cash flow modeling, while the diversification and quality of the portfolio are also qualitative inputs that can impact the PE CFO ratings. Strategy, age, NAV, and unfunded commitments are the main determinants of the cash flow profile of each underlying fund. Additional inputs in the portfolio analysis and cash flow modeling include fund and general partner (GP) concentrations and track records.

Transaction Manager and Sponsor: Fitch undertakes a qualitative review of the PE CFO manager's experience, track record and operational capabilities. The track record of the

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Related Criteria

Global Structured Finance Rating Criteria (June 2020)

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

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

Structured Finance and Covered Bonds Interest Rate Stresses Rating Criteria (October 2020)

Fitch's Foreign-Currency Stress Assumptions for Residual Foreign-Exchange Exposures in Covered Bonds and Structured Finance - Supplementary Data File (June 2020)

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sponsor and the alignment of interests between the sponsor and noteholders are also considered in the analysis.

Counterparties: Certain structural features of PE CFOs may involve reliance on counterparties, such as the liquidity facility provider and account banks. Counterparty rating requirements and replacement provisions in the transaction documents are reviewed relative to their alignment with Fitch's "Structured Finance and Covered Bonds Counterparty Criteria."

Asset Isolation and Legal Structure: Structured finance transactions are structured to isolate, or "de-link," an underlying pool of assets from the corporate credit risk of the seller of the portfolio interests and the owner of the transaction obligor.

Surveillance: Expected changes in cash flows and liquidity are the primary drivers of rating movement after the initial rating assignment. To avoid undue rating volatility, model-implied rating actions will not be applied by a committee where a permanent change in performance is not expected or where such a change would be expected to be reversed.

Rating Notching

Fitch applies a qualitative overlay to notch PE CFO ratings, up or down, from the model-implied rating. The qualitative overlay will take into account Fitch's analysis of the portfolio, cash flow scenario analysis, structural features, liquidity position, and transaction parties. Exposures Fitch views as additive and detrimental for PE CFO ratings are outlined in subsequent sections of this criteria.

An individual factor may not necessarily lead Fitch to notch the rating up or down from the model-implied rating. Instead, these factors are considered together in the rating process and may or may not result in changes from the implied rating. As an illustration, notes of transactions that are likely to be notched up to 'A+sf' from 'Asf' modeling results tend to have lower LTVs, higher levels of liquidity, higher quality portfolios, stronger modeling results, and stronger alignment of interests, relative to other PE CFOs. Notes of transactions that may be notched down to 'A-sf' tend to have lower liquidity, concentrations in more volatile sectors or geographies, subordination, and/or weaker alignment of interests, relative to other PE CFOs.

Overview of Criteria Framework

In assigning ratings to PE CFOs, Fitch follows the framework as described below and in further detail throughout this report.

1. Analyze the portfolio of funds quantitatively and qualitatively.
2. Model portfolio cash flows, incorporating adjustments based on the portfolio analysis.
3. Apply the cash flows to the PE CFO waterfall under various scenarios, taking into account the transaction's structural features. The scenario analysis yields model-implied ratings based on the levels of stress the notes can pass.
4. Review the transaction's liquidity, LTV, and other structural features.
5. Assess the transaction's counterparties in line with Fitch's "Structured Finance and Covered Bonds Counterparty Criteria."
6. Review the legal structure of the transaction in line with Fitch's "Global Structured Finance Rating Criteria."
7. Review the capabilities of the transaction's manager.
8. Apply qualitative overlay to potentially notch up or down from the model-implied rating.
9. Apply overall rating cap of 'Asf' category.
10. After the initial rating, monitor and assess the transaction's on-going performance by updating modeling, and taking into account quantitative and qualitative factors discussed in this report.

Portfolio Analysis

The composition of the PE CFO portfolio is a key input in the cash flow modeling that forms that basis for the PE CFO ratings. In addition, Fitch's analysis of the portfolio provides a qualitative overlay that could lead Fitch to apply notching from the model-implied ratings. The sections below describe how each aspect of the portfolio impacts the ratings quantitatively and qualitatively.

Fund Strategies

Typical fund strategies within the scope of this criteria report include buyout, growth, venture, real estate, infrastructure, energy, natural resources, credit, and funds of funds. Fitch can analyze other fund strategies on a case by case basis, subject to the availability of sufficient data. The funds in PE CFO portfolios are typically drawdown-style commingled funds in the form of limited partnership (LP) interests.

The composition of the PE CFO portfolio by fund strategy is a key input to modeling the cash flow profiles of the underlying funds. For example, certain strategies such as venture capital and distressed debt are historically more volatile than buyout and growth strategies. Income-generating strategies, such as credit or real assets, can contribute to a more stable cash flow profile. All else equal, portfolios composed of strategies identified as riskier will result in more negative expected performance in Fitch's modeling than portfolios comprising strategies with more stable income and return profiles. Fitch's opinion of strategy risk is informed, in part, by third-party historical cash flow data and used to project the expected performance of a PE CFO transaction. Fund strategies that have more robust historical data will typically require fewer adjustments and less punitive stress assumptions in modeling. Fitch will make conservative data adjustments based on proxy data to strategies that have less robust historical data, as further discussed in the "Data Adjustments" section.

Portfolios with riskier strategies, or those that have less robust data, will result in relatively lower ratings, due to weaker model results and Fitch's qualitative overlay.

Other Investment Types

Participants in the alternative investment sector can employ structures or funds that fall outside of the typical commingled fund structure, such as co-investments.

Co-investments are exposures to individual private companies outside of the typical commingled fund. Fitch will aggregate the PE CFO's exposures to these investments into their respective main funds for modeling consistent with the methodology in this report. For example, if a PE CFO has a $10 million investment in Buyout Fund X, as well as a $2 million co-investment in Company Y, which is one of the portfolio companies owned by Buyout Fund X, then Fitch will aggregate the two investments into a $12 million exposure in Buyout Fund X. If the main fund cannot be mapped to, the exposure to these types of investments is not afforded credit within the quantitative analysis. Credit given to any one portfolio company through a co-investment is limited to 3% of the PE CFO's total asset exposure (NAV + unfunded commitments).

Vintages

The age of funds in the portfolio is an important input in determining the cash profile and liquidity needs of a PE CFO transaction. Older vintages typically exhibit greater net cash flow generation, which could reduce the external liquidity needs of the PE CFO to cover remaining unfunded commitments, expenses, interest and note amortization. On the other hand, younger funds would be expected to generate positive net cash flows once they season after a few years, potentially contributing to a more stable cash flow profile of the PE CFO over time.

Analysis of PE CFOs with new or younger funds will involve greater stress due to the vintage concentration, higher level of blind pool risk, less cash flow generation as well as the more significant liquidity requirements of the structure in its early years related to uncalled capital commitments.

There is no additional haircut applied to fund concentrations by vintage, as this will be embedded in the cash flow assumptions based on the historical data, and will be reflected in weaker modeling results and hence lower relative ratings. For example, a portfolio of a single

vintage will be applied the performance of the worst-performing vintage in Fitch's data set, while taking into account the characteristics of the portfolio as described in this report. Vintage diversification is also taken into account in Fitch's qualitative overlay, and could result in higher or lower ratings than implied by the modeling.

Diversification

The level of portfolio diversification in a PE CFO can impact cash flow modeling results, as well as lead to notching from the model-implied rating as a qualitative overlay. PE CFOs may be diversified by funds, the funds' GPs, strategies, vintages, geographies, underlying holdings and underlying sectors.

Fitch employs concentration limits of 25% to any single GP and 10% to any single fund, and exposures above these limits are not given credit in cash flow modeling.

Fitch may apply additional quantitative and/or qualitative stress scenarios or notching from model-implied ratings to portfolios with sector or geographic concentrations. Additional stresses are not imposed on geographic concentrations in developed countries and markets such as the United States, Western Europe, and developed Asia-Pacific. Fitch considers portfolios with emerging market-centric strategies to be ratings negative, and would subject such portfolios to additional stress in the sensitivity analysis. In such instances, Fitch will compare the performance of private equity funds, and public markets, in emerging markets to those in developed markets and apply the relative observed performance differences to the emerging markets-centric funds in the PE CFO portfolio. Exposures to diversified, multi-regional strategies are not subject to this concentration limit.

Fund and General Partner Performance

Fitch applies additional haircuts in stress scenarios to the distributions of funds that it expects to have poor performance based on its analysis of the funds and their GPs. Fitch's review of the funds and GPs in the portfolio also influences the qualitative overlay that could lead to notching from the model-implied rating.

Fitch's analysis of the funds takes into account quartiles, internal rates of return (IRRs), multiples of invested capital, and/or the GP's track record and resources based on information available publicly, from third-party data providers and from the PE CFO sponsor. Fitch reviews GPs' history, resources, recent capital-raising ability, and/or previous fund performance.

Higher exposure to lower quartile funds does not always indicate poor absolute performance in the past or going forward. For example, according to Preqin data, a North American buyout fund with a 2012 vintage would need a net IRR below 13.5% to be in the fourth quartile. Conversely, a North American buyout fund with a 2005 vintage would need a net IRR below a 3.4% to be considered a fourth quartile performer. Fund valuations are subjective in nature, but are intended to incorporate a fund's past performance and reflect the GP's estimate of the value expected to be realized in the future.

Underlying Holdings

Fitch's analysis focuses primarily on the fund-level, and not the underlying portfolio company level, given the highly diversified nature of the underlying holdings in a PE CFO and the often limited and/or lagged data available at the underlying portfolio company level. Fitch's qualitative overlay will take into account available data on such aspects as the underlying sector exposure and top company concentrations, and could lead to notching from the model-implied rating.

Foreign Exchange

Some PE CFO transactions may have a currency mismatch between the assets and liabilities resulting from a subset, or all, of the underlying fund investments being denominated in a different currency than the liabilities of the issued notes.

Hedges such as forward contracts entered into with a rated counterparty can be used to manage foreign exchange (FX) risk, but this is typically imperfect. Given the uncertain timing of cash flows from the investment portfolio, hedging strategies are primarily driven by the manager's estimation of the projected cash flow profile of the foreign currency-denominated

funds. Alternatively, a portion of the PE CFO's debt may be issued in a foreign currency to match the currency exposure of the underlying portfolio.

Fitch will assess the sufficiency of FX hedges, with any remaining FX risk subject to stress analysis. Fitch runs FX stress scenarios in its cash flow modeling based on stress assumptions for currency movements, as outlined in Fitch's "Foreign-Currency Stress Assumptions for Residual Foreign-Exchange Exposures in Covered Bonds and Structured Finance Criteria" report. The FX movements are applied to periodic cash flows, factoring in the PE CFO's hedges. Unhedged FX exposure above the limits contemplated in the criteria report referenced above, generally 10% of exposure, will not receive any credit in the stress scenarios.

The application of the FX stress analysis will impact cash flow modeling results, and therefore could result in lower PE CFO ratings than for a comparable portfolio with no FX risk. In addition, exposure to FX risk features in Fitch's qualitative overlay that could lead to notching from the model-implied rating.

Interest Rate Sensitivity

PE CFO transactions may be exposed to interest rate risk associated with floating-rate notes or certain fees (i.e. on a liquidity facility). In such instances, Fitch will apply interest rate stresses to these floating-rate liabilities, consistent with the applicable rating category as described in Fitch's "Structured Finance and Covered Bonds Interest Rate Stresses Rating Criteria."

Fitch assumes cash balances held in a transaction's accounts between payment dates will earn a spread of 50 basis points below the relevant reference index, floored at zero. Fitch will adjust these assumptions if the contractual rates are less favorable to the issuer than the above assumptions. In certain transactions where cash balances are expected to be large and invested over longer periods, Fitch may increase the earning rate to reflect the longer maturities of investments.

Investment and Re-Investment Periods

PE CFOs may feature an investment period permitting the transaction's investment manager to acquire additional fund interests or to ramp-up the portfolio of funds. Investment periods present additional risks relative to transactions with known and static portfolios at inception. These risks include potential migration to riskier strategies or geographies, higher concentrations, exposure to weaker fund managers and/or funds, increased FX exposure, and higher liquidity needs than expected.

To reflect the investment period Fitch will model expected and stress scenarios for the portfolio composition based on the parameters described in this section. In constructing expected and stress portfolios, Fitch will make assumptions about when investments are made and in which strategies, geographies, etc. The degree of portfolio migration risk is also informed by the investment period parameters and structural features such as amortization triggers, maximum levels of unfunded commitments, and potential termination of the transaction manager. Fitch may not rate PE CFOs that have excessive investment or re-investment risk, where optionality in modeling assumptions leads to a materially broad set of different results.

Fitch assesses the extent to which certain features and mechanisms of the PE CFO mitigate the risks associated with investment and re-investment periods, including highly defined investment guidelines and concentration limits, exposure to strong transaction managers with historical track records and amortization triggers tied to the portfolio composition. Lastly, Fitch considers the primary and secondary market dynamics of the funds' targeted investment strategies to identify additional risks or constraints.

Investment guidelines that can reduce investment and re-investment risk include those which seek to limit potential concentrations to specific vintages, asset classes, managers, funds, geographies and/or industries. Fitch will look to these guidelines to develop potential expected and stressed portfolio scenarios. In addition, Fitch will take into account the transaction manager's track record and consistency of investment strategy.

Fitch's review of a transaction managers' track record includes prior allocations and performance, as well as underwriting criteria, stated investment strategy, risk controls, and resources. All else equal, shorter investment periods, more specific investment guidelines, and

managers with longer and more consistent track records will result in more narrowly defined stress portfolios, and therefore relatively higher ratings.

Misalignment of interests between the investment manager and noteholders may also be an issue during an investment period. For example, the investment manager may acquire or sell fund investments from affiliates of the sponsor at a price favorable to the seller. Restrictions on the transfer price, such as a floor of the NAV of the investment, and affiliates of the investment manager owning equity in the structure can reduce the risk of unfavorable pricing to the PE CFO.

Alternatively, re-investments that maintain the NAV can be accretive for PE CFO noteholders if the excess cash flows generated by the portfolio would otherwise be distributed to the equity holders. The investments can also allow an investment manager to have more control over the composition of the portfolio. For example, if younger underlying funds are realizing investments at a faster pace than older underlying funds, the weighted average age of the overall portfolio will increase. The portfolio manager could acquire additional funds in the portfolio that would decrease the age of the portfolio so as to more closely align the weighted average age of the portfolio to the targeted weighted average life of the notes.

Cash Flow Modeling and Scenario Analysis

The results of Fitch's cash flow modeling are a key driver of the ratings for PE CFOs. In constructing the modeled scenarios, Fitch incorporates its analysis of the portfolio as described above, as well as the structural features of the transaction as described below.

Fitch's cash flow modeling involves selecting comparable historical data sets based on the PE CFO portfolio, adjusting or haircutting the data based on Fitch's analysis of the portfolio, and performing scenario analysis to derive model-implied ratings.

Modeling Framework

The underlying investments in PE CFOs exhibit structural features and incentives that allow the cash flows to be modeled and projected within a reasonably predictable range. Fitch's approach to projecting PE CFO cash flows involves reviewing how funds comparable to those in a given PE CFO portfolio have performed historically, taking into account each fund's strategy, age, NAV and unfunded capital commitments. Fitch also takes into account how the economic cycle affects fund performance.

For example, for a transaction with a 10-year life that includes a five-year-old buyout fund, Fitch will review how five-year-old buyout funds performed over 10-year periods (to match the transaction life) through different historical economic cycles or theoretical idealized economic cycles. This might include reviewing how a typical five-year-old buyout fund performed during the periods 2005–2014, 2006–2015, 2007–2016, etc. Fitch will then apply additional haircuts based on its portfolio analysis as described in this report to build cash flow profiles for each fund in the PE CFO portfolio.

To project the performance of a PE CFO, the cash flow curves built for each underlying fund in the portfolio based on its characteristics as described above are then aggregated to arrive at the overall portfolio cash flow profile. The portfolio-level cash flow is then run through the transaction waterfall, taking into account the various structural features, such as expenses, interest payments, amortization, de-leveraging triggers, ability to draw on liquidity facilities, etc.

Each cohort of performance as described above (e.g. 2005-2014) is referred to as a "launch year scenario", as it attempts to simulate how the PE CFO being reviewed would have performed over a historical period if launched at that time.

Fitch will select the most relevant stressed historical performance period for each portfolio. For example, the 2008 downturn for real estate funds, 2015-2016 for energy focused funds, 2000 for venture capital funds, etc. Pertinent performance drivers that will be included in the data are primarily distributions, capital calls, and NAV changes. Fitch bases its analysis on comparable portfolios using data from Cambridge Associates L.L.C., Burgiss Group, LLC, Preqin Ltd., and other robust data sources.

Fitch uses cash flow data sourced from third parties to project the performance of each fund based on its characteristics. Using the same five-year-old buyout fund example from above,

Fitch can determine how this fund would have performed in a 2005 launch year. For this fund, Fitch would utilize the cash flow data from the years 2005 (launch year) to 2014 (final maturity of 10 years) for all 2000 vintage buyouts funds (since a five-year-old fund in 2005 is of the 2000 vintage). To normalize the cash flow data, Fitch will account for appreciation/depreciation and distributions during the period as a percentage of beginning of period NAV, and capital calls during the period as a percentage of beginning of period unfunded commitments. The percentages for the universe of the 2000 vintage buyout funds are applied on an annual basis starting with the initial NAV and unfunded commitment of each individual fund.

For example (see table below), assume the five-year-old buyout fund (2000 vintage) has a NAV of $1,000 and an unfunded commitment of $500 at the beginning of 2005. In the cash flow data, it is determined that 2000 vintage buyout funds distributed 20% of NAV and called 10% of unfunded commitments in their sixth year (2005). As such, Fitch would apply the 20% distribution rate to the $1,000 NAV and the 10% capital call rate to the $500 unfunded commitment. This would result in $200 of distributions and $50 of calls for the five-year-old buyout fund in its first year of the Fitch 2005 launch year scenario, or the sixth year of the fund's life. The cash flows are projected using this method for each fund in the portfolio and aggregated to determine the cash flows for each year of the transaction for each launch year scenario.

Example: Cash Flow Modeling for a Fund in the PE CFO Portfolio

A	Launch Year Scenario	2005
—	Fund Type	Buyout
—	Age	5 Years Old
B	NAV	$1,000
C	Unfunded Commitments	$500
Historical Data of Fund Vintage Performance		
D	Fund Vintage	2000
=(A - D)+1	Targeted Performance Year	Year 6
E	% of Beginning of Period NAV Distributed	20%
F	% of Beginning of Period Unfunded Commitment Called	10%
Hypothetical Performance for Year 6 of the Fund in the PE CFO		
= B x E	NAV Distributed	$200
= C x F	Capital Called	$50

Source: Fitch Ratings.

Model-Implied Ratings

Assuming all other criteria aspects are also satisfied, PE CFO notes that pass Fitch's scenario analysis using data from funds of all quartile performance levels in the historical data universe can achieve a 'BBsf' rating, while notes that pass using third-quartile performance data can achieve a 'BBBsf' rating, and notes that pass using fourth-quartile performance data can achieve a 'Asf' rating. Notes that are only able to pass modeling of non-stressed economic environments, based on historical data and/or expected cash flows, will be assigned 'Bsf' ratings, while notes where a default is a real possibility based on such modeling will be assigned 'CCCsf' ratings.

In analyzing PE CFOs, Fitch typically models multiple scenarios with different assumptions and data adjustments, and notes may pass different rating stresses in each of the scenarios. In assigning ratings Fitch's committee has discretion to decide which scenarios are the most relevant to a particular transaction. For example, in reviewing ratings during a downturn, scenarios that simulate a downturn would be more relevant than scenarios that simulate a strong market environment. As another example, when building cash flow curves for mezzanine funds, Fitch may model scenarios using data for both mezzanine funds, as well as a broader data set for different debt funds that might be more stressful. As a further example, for portfolios with more sector concentration Fitch may run additional scenarios that include extra haircuts to cash flows, beyond what is reflected in a standard scenario. In all of the situations illustrated above it is possible that notes pass different stresses in different scenarios, and the committee will take all of them into account when deciding on the rating.

Due to the number of different scenarios Fitch runs for a given PE CFO, there may be more than one model-implied rating generated. Fitch's committee will take these cash flow model results into account, together with the qualitative overlay factors discussed throughout this report, to assign PE CFO ratings.

Structural Features

Structural features that seek to protect rated obligations and bridge liquidity shortfalls are important considerations in Fitch's rating analysis. These structural features can include sufficiently long debt maturities to weather market downturns relative to expected cash flows, cash reserving mechanisms, deleveraging triggers and liquidity facilities, among others. Structural features are embedded in Fitch's cash flow modeling .

LTV and De-Leveraging Triggers

Fitch limits investment-grade ratings to PE CFO obligations with LTV of up to 50%. Within this limit 'Asf' and 'BBBsf' category ratings are differentiated by taking into account modeling results and other aspects as discussed in this report. PE CFO obligations with LTV detachment points higher than 50% will be assigned non-investment-grade ratings, even if modeling results show that these obligations could be rated investment grade.

A lower LTV ratio provides notes with more cushion to account for market downturns that would reduce a PE CFO's NAV, as well as idiosyncratic weak performance of the PE CFO portfolio that would lead to lower realization of cash flow from the NAV. Therefore, lower LTVs indicate lower risk and thus relatively higher ratings, all else equal.

PE CFOs typically contain LTV triggers intended to protect noteholders from a decline in NAV due to valuation declines in a market downturn. In such an instance, distributions will be re-directed to de-lever the structure in accordance with the transaction waterfall and the applicable LTV ratio. Alternatively, in the event of high distributions, the LTV trigger can protect noteholders from excessive distributions to the equity, which would otherwise decrease the NAV and future distributions for the noteholders. The absence of a LTV trigger, or a LTV trigger that is not sufficiently effective in de-leveraging a transaction, would likely result in lower relative ratings, based on the results of cash flow modeling and Fitch's qualitative overlay.

Note Maturities

Fitch's PE CFO ratings address the full and timely principal repayment of the notes at their legal final maturities. While notes typically have shorter expected lives than their legal final maturities, longer legal maturities provide the structure more time to weather a downturn and wait until distributions from the underlying funds recover. During downturns, GPs tend to hold on to investments for longer periods and wait for markets to recover and valuations to improve, rather than sell at depressed prices.

Fitch assesses a PE CFO's note maturities relative to the LTV, the amortization schedule, and the profile of the portfolio. Transactions with higher LTVs, slower amortization schedules, and younger portfolios require relatively longer legal final maturities to repay the notes. Conversely, transactions with lower LTVs, more rapid amortization schedules for the notes, and more seasoned portfolios that generate significant cash flow may have the ability to support shorter legal final note maturities. For example, a PE CFO note with a 10-year legal final maturity and 50% LTV that amortizes 50% of distributions starting in year 8 is likely to perform worse than a note with a 5-year maturity and 30% LTV that amortizes 100% of distributions from year one, despite the first note's longer maturity than that of the second note.

Fitch will deem the legal final maturity of the note as sufficient to support the relevant rating level if the cash flow scenarios Fitch runs, as described throughout this report, show that the notes are paid off on time in accordance with their terms. It is possible that the notes are not paid off in every scenario run by Fitch, and Fitch's rating committee has discretion to determine the impact of stress scenario results on the rating, based on the margin of failure and the severity of the stress applied relative to expectations.

Fitch will incorporate into its modeling any extension options embedded in the transaction that are at the discretion of the issuer. Where a transaction includes extension options that require the consent of both the issuer and investors, Fitch will analyze the transaction assuming that the extension is not exercised and assume the non-extended maturity is the final maturity. If

investors consent to provide such an extension, Fitch will then re-analyze the transaction taking into account the new maturity, which may impact the ratings.

Liquidity and Contingent Liquidity

Fitch evaluates the ability of the PE CFO to meet ongoing obligations, such as capital calls, expenses, and interest payments, through a stress period. While PE CFO portfolios often generate net positive cash flows, contingent liquidity sources may be needed to support the structure during a stress period when cash flows may turn negative. Contingent liquidity sources typically include liquidity facilities, contractual commitments to cover capital calls, or reserve accounts. Fitch reviews whether available sources of liquidity, including modeled portfolio cash flow and the contingent liquidity, are sufficient to cover ongoing obligations at the indicative rating stress.

The first source of liquidity in a PE CFO is typically the cash distributed by the underlying funds. Contingent liquidity sources can include a reserve account (prefunded or building over time), a committed liquidity facility, or a guarantee by a third party to fund certain items (such as capital calls). A liquidity facility is often provided by a bank, an insurance company, or the sponsor or its affiliates. Fitch will review the liquidity facility provider as a counterparty in accordance with the "Structured Finance and Covered Bonds Counterparty Criteria." A PE CFO's reliance on contingent liquidity often diminishes over time as unfunded commitments and interest payments decline. Therefore, a counterparty providing contingent liquidity may have a lesser impact on the PE CFO's ratings over time.

In analyzing the sufficiency of the contingent liquidity, Fitch reviews the modeled usage of contingent liquidity in cash flow scenarios, the profile of the portfolio (including fund strategies and ages), and stated and expected remaining unfunded commitments. Factors that indicate a more positive liquidity profile include more seasoned portfolios that are expected to generate more cash, lower levels of unfunded commitments, lower usage of contingent liquidity in modeled scenarios, deferrable or pay-in-kind interest, and fund strategies that produce steadier distributions and are less reliant on capital markets realizations.

In reviewing a transaction's liquidity position, Fitch will review the sources (distributions, liquidity facilities, etc.) and uses (capital calls, expenses, interest payments, principal payments, etc.) of liquidity in both the initial and ongoing analysis of a PE CFO. Fitch will analyze the liquidity position based on the cash flow scenarios described in this report, as well as based on recent actual cash flows, and adjust items such as distributions and capital calls based on projected changes (i.e. lower distributions in a downturn) using market expectations and available data.

The liquidity profile of the PE CFO will be an output of the cash flow modeling, for example in showing a default in a certain scenario due to a missed interest payment, and therefore not passing at the modeled rating level. The liquidity profile also features in Fitch's qualitative overlay, which could lead to notching up or down from the model-implied ratings.

Principal Reserve Accounts

Some PE CFO transactions may have bullet repayments of note principal, with accompanying amortization into reserve accounts. Reserve accounts receive funds from the priority of payments to hold for ultimate repayment of principal on the obligations. Funds in the reserve accounts will be reviewed in accordance with Fitch's "Structured Finance and Covered Bonds Counterparty Criteria." In assigning ratings to PE CFO notes that are fully defeased with collateral, Fitch takes into account the contractual terms of collateral investments as well as expectations for collateral management.

Transaction Manager and Sponsor

PE CFO transactions are reliant on the transaction manager to manage the fund investments, administer key fund matters, manage eligible investments, supervise the administration of assets and notes, administer capital calls, operate the liquidity facility, manage cash flows in accordance with the waterfall, manage investor relations and reporting to stakeholders, and perform various other administration and management services. Fitch assesses the manager's experience in the alternative investment industry, along with its ability to manage associated operational risks. Fitch reviews the manager's investment selection guidelines, operational

processes, including managing capital calls and distributions, recording valuations and other risk management tools.

The transaction manager is assessed on a pass/fail basis and is usually neutral to the PE CFO ratings, particularly as transactions generally include procedures that provide for the replacement of the manager.

Alignment of Interests

The sponsor's or equity owner's reputation and alignment of interests with investors in the rated obligations are a consideration in Fitch's rating analysis. Clear alignment of interests, such as the prior owner of the PE CFO portfolio retaining a subordinated stake in the PE CFO to bear losses prior to the debtholders and/or a commitment to retain interests in the underlying funds, is viewed positively as part of Fitch's qualitative overlay.

Fund Dispositions

The transaction manager may have the ability to sell interests in the PE CFO's underlying funds. Restrictions on dispositions may include the total amount of NAV that can be sold, independent board oversight of sales, sale price floors, and restrictions on the use of proceeds from fund dispositions, among others. An affiliate of the transaction manager holding an equity position in the PE CFO is a mitigant to the risk of an asset being sold at a steep discount from the fair market value, as the equity holder would be the first to experience the associated losses. Fund dispositions on the secondary market allow the PE CFO to immediately realize some or all of the remaining NAV. This ability can be a benefit to the PE CFO if related organic distributions are lower or slower than needed to pay the structure's liabilities. However, if fund interests are sold at significant discounts to their NAVs, the structure's aggregate realizations may be less than modeled, leading to more adverse outcomes for the notes than contemplated in Fitch's analysis and potentially resulting in rating downgrades.

Transaction Counterparties

The following section highlights counterparty risks that are common in PE CFO transactions. This section should be considered in conjunction with Fitch's "Structured Finance and Covered Bonds Counterparty Rating Criteria" (in the context of commingling, hedging, account banks and eligible investments) and "Global Structured Finance Rating Criteria."

Counterparty Risk

To the extent the PE CFO structure relies on counterparties for performing certain functions, such as hedging, administering bank accounts or providing liquidity, Fitch will evaluate the counterparty terms based on Fitch's "Structured Finance and Covered Bonds Counterparty Rating Criteria."

Counterparties to a PE CFO may include:

Liquidity Provider	Most PE CFO transactions include a committed liquidity facility to cover transaction expenses, interest and capital calls in periods of reduced distributions from the underlying funds. The liquidity facility is often provided by a bank (or a number of banks), an insurance company or sometimes an affiliate of the sponsor. The liquidity facility provider is usually a rated entity, which allows Fitch to rely on the liquidity facility in its analysis of the PE CFO provided such provider(s) are appropriately rated.
Hedge Provider	Some PE CFO transactions that involve funds denominated in a different currency from that of the notes issued by the PE CFO include hedges (often forwards) provided by rated bank counterparties.
Account Bank Provider	Encompasses all bank accounts that are held in the name of the issuer, including distribution accounts, collateral accounts and reserve accounts.

Source: Fitch Ratings.

Legal Considerations

Fitch's analysis of special-purpose vehicles (SPVs) in structured finance is described in detail in its "Global Structured Finance Rating Criteria" report. Structural risks can affect the rating in

the event that legal uncertainties pose a threat to the availability of cash flows or the collateral itself. Fitch's analysis includes a review of the legal structure, including transaction documents.

Private equity and other alternative investment fund interests are generally prohibited by their partnership agreements from being pledged as collateral. For this reason, PE CFOs typically have a dual SPV structure, where one SPV (AssetCo) holds the private equity fund interests and the issuer SPV pledges its interest in AssetCo to noteholders. AssetCo sometimes also guarantees the notes to give noteholders a direct claim against AssetCo, and AssetCo may also give noteholders a perfected security interest in AssetCo's bank accounts and the money in those accounts.

Fitch expects that in a PE CFO default scenario, noteholders and the trustee will have discretion to continue holding the underlying funds, sell interests in AssetCo as a whole to raise cash to repay the issuer's obligations, or seek consent from the GPs of underlying funds and sell individual fund interests on the secondary market to maximize noteholders' recovery value.

Fitch notes that ongoing material obligations, like the unfunded capital commitments of AssetCo, are unique to PE CFOs and unusual in other structured finance transactions. This presents a risk that if AssetCo does not meet a capital call obligation, one or more GPs of the portfolio's funds may pursue claims against AssetCo and potentially cause it to enter bankruptcy proceedings. However, there are a number of mitigants to this risk. Fitch's analysis takes into account the transaction's available liquidity and ability to pay capital call obligations (typically in a senior position), by assessing the risk that capital calls are not paid due to insufficient cash flows. Fitch also reviews the transaction manager's operational capabilities and historical performance in meeting capital calls, as well as the alignment of incentives between the manager and noteholders, to assess the risk that capital calls will not be paid. The manager may have the ability to deliberately not pay capital calls in limited circumstances, such as if it disputes the validity of the capital call or if it believes it is not in the best interest of the transaction to pay the capital call. In that case, Fitch believes it is unlikely that a GP will be able to successfully cause a bankruptcy filing of AssetCo because of the presence of the dispute. Finally, GPs historically exercised other remedies available to them to address a default on a capital call, aside from pursuing a claim or bankruptcy proceeding against the LP, because of the time, expense and potential reputational damage associated with a GP pursuing claims against its LPs. A typical remedy to capital call defaults includes forfeiture of some or all of the LP's interest in the fund. For the reasons above Fitch considers the bankruptcy risk to AssetCo associated with its capital call obligations as sufficiently remote within the scope of Fitch's ratings, and therefore a neutral factor in the PE CFO ratings outcome as it present in all PE CFOs.

Fitch does not repeat the legal analysis of transactions during the life of the transaction unless a material change is identified.

Data

Fitch requests portfolio data to develop cash flow assumptions for the funds as the first step in the review process. Fitch evaluates the quality of the underlying portfolio, the experience and ability of the respective managers, and the robustness/suitability of the third-party cash flow benchmarks and models. This information may include qualitative and quantitative information on the underlying managers, funds, and portfolio holdings and historical cash flows for funds in the portfolio. Additionally, Fitch requests fund financials, in particular audited financials and capital account statements.

Data Adjustments

Fitch relies on robust historical cash flow performance data grouped by quartiles dating through a full market cycle to model performance of the PE CFO. Third-party data providers have robust cash flow performance data by quartile for the more developed alternative investment asset classes, such as buyout, growth and venture capital. Less developed asset classes like infrastructure, distressed debt, and turnaround generally have more limited cash flow data, particularly for older vintage cohorts. For cohorts where historical data are more limited, Fitch may use proxy data, using historically observed relationships between different strategies, or using data for the same strategy but from a different time period. Fitch may apply additional

haircuts to any such extrapolations or otherwise not afford credit to such asset class depending on the reliability of the data available.

Valuations

Fitch generally accepts valuations of holdings as reported, assuming that market conditions have not changed materially between the valuation date and Fitch's review. Fitch believes that GPs are generally incentivized to appropriately value their funds due to audit requirements, clawback provisions in LP agreements, oversight from institutional LPs, and reputational risk. While holdings are sometimes sold below where they were previously marked, on average exits happen above previous valuation marks. The historical data that Fitch uses to project performance of PE CFOs reflects reported NAVs and the actual cash flows that were generated off of these reported NAVs.

In cases where market conditions have materially changed since the reported valuation dates, Fitch will estimate the change in NAV based on available data, and incorporate the updated NAV in its analysis. To project the change in NAV since prior reporting dates, Fitch maps the PE CFO's portfolio exposures to relevant public indices, and applies a ratio to the public valuations that reflects historical relationships between public and private valuations. Public valuations tend to be more volatile, up and down, relative to private valuations. Fitch will also incorporate publicly and privately available data on expected valuation changes for similar exposures as those in the portfolio from sources that include GPs and the PE CFO transaction manager.

If Fitch cannot gain sufficient confidence about a transaction's NAV and the cash flows expected to be generated relative to the NAV, the agency will not be able to assign or maintain ratings.

Rating Sensitivities

PE CFO note ratings may be subject to downgrade if cash flows are lower than previously modeled in stress scenario analysis. A material decline in NAV that, in Fitch's view, would indicate insufficient forthcoming cash distributions to support the notes under the indicative rating stresses could also lead to negative rating actions. However, since sharp market declines are often followed by recoveries, Fitch may place notes on a Negative Rating Watch or Rating Outlook until there is better clarity about fundamental economic conditions and expectations for cash flow generation to avoid undue rating volatility.

A transaction's strong performance and deleveraging, or more limited sensitivity to the underlying funds' performance may lead to positive rating actions.

A ratings downgrade of a relevant counterparty may also materially affect the ratings of notes, where the PE CFO relies on counterparties to provide material functions, including providing liquidity facilities, hedging and bank accounts.

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

Rating Assumptions Sensitivities

Fitch will run a range of sensitivity analyses on key input parameters to examine the rating stability of each rated note. The objective of this stress testing is not to eliminate rating migration through unrealistically conservative assumptions, but rather to test the rating impact of changes in input parameters. The sensitivity analysis results will be published in the agency's presale and new issue reports for each rated transaction.

Fitch will review the impact on the rating for the following sensitivities.

Rating sensitivity to NAV: Portfolio NAV immediately reduced by 10%, 20% and 30%.

Rating sensitivity to fund distributions: Portfolio-level fund distributions reduced by 5%, 10%, and 15% in each period. For purposes of calculating the ending-period NAV for each period, the full modeled distributions will be taken into account before reducing the cash flow generated by the percentages listed above.

Rating sensitivity to fund capital calls: Portfolio-level fund capital calls increased by 10%, 20%, and 30%.

Additional sensitivity analysis may be performed as needed to reflect specific considerations of a transaction.

A rating committee will review the stability of the proposed rating under these sensitivities and determine whether the results are commensurate with the rating(s) being proposed for the structure.

Surveillance

Once Fitch rates a PE CFO transaction, and if the ratings are not point in time, the transaction will be subject to surveillance, and ratings will be reviewed at least annually or on an ad-hoc basis if there is a material change to the transaction or economic conditions. Fitch receives at least quarterly reporting provided by the issuer or its agents throughout the life of the transaction. Performance analysis of transactions forms an essential part of Fitch's rating process to assess whether transactions are performing in line with expectations.

Fitch relies on the performance information of the underlying funds and trustee reports for ongoing surveillance. Fitch receives trustee reports for each distribution date and reviews the waterfall payment to determine whether all obligations of the structure are met. Additionally, Fitch will assess whether the transaction's obligations are supported by regular distributions of the underlying funds or require utilization of contingent liquidity sources. Fitch monitors the portfolio-level performance by reviewing the cash flows generated by the funds and changes in the NAV of the transaction. Fitch will assess whether the current NAV is sufficient to support the notes and the available contingent liquidity is sufficient to support the cash flow needs of the transaction during a downturn.

When reviewing PE CFO performance, Fitch updates the relevant models with actual cash flows, note balances, and account balances from the reports provided by the trustee or transaction manager. The model runs through the structure's waterfall with the updated figures to determine how the PE CFO is performing through the various cash flow scenarios relative to previous analysis. Fitch will use the cash flow scenario results of the updated model to determine the likelihood of the PE CFO to meet future obligations and the LTV levels afforded to the noteholders, similarly to its initial rating review.

Model

In its analysis, Fitch relies on third-party models to implement its rating criteria assumptions and construct NAV and distribution projections under various scenarios. These models use historical data on fund performance metrics to project distributions, capital calls, and market value changes for the underlying assets in the portfolio, which then flow through the transaction's waterfall and determine the PE CFO's ability to pay its obligations, in accordance with the transaction's terms. Fitch uses the models to apply the assumptions and stress scenarios described in these criteria. While Fitch reviews the models in accordance with its third-party model management procedures, Fitch primarily relies on the model's providers to ensure its accuracy.

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 action commentary strengthens Fitch's rating process while assisting market participants in understanding the analysis behind the 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 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 initial rating report or rating action commentary, Fitch expects to disclose the following items:

- Main rating drivers.
- Key cash flow assumptions.
- Rating sensitivities.
- Any variations to criteria will be detailed in Fitch's transaction rating reports (as previously mentioned in the Variations from Criteria section).

In many cases, Fitch uses the assumptions derived from its initial rating analysis in its surveillance reviews. To focus Fitch's rating action commentaries on the most important changes to the rating, Fitch will not disclose these assumptions in subsequent rating action commentaries, unless there is a material change to the assumption.

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