FitchRatings

U.S. Affordable Housing Rating Criteria

Sector-Specific Criteria

Scope

This criteria report details Fitch Ratings' methodology for assigning obligation-specific ratings to U.S. mortgage revenue bonds secured by less than 10 cross-collateralized: (1) federally subsidized multifamily affordable housing (AH) properties; (2) solely unsubsidized multifamily affordable housing properties (with 100% of the units deemed affordable); or (3) properties with a combination of subsidized and unsubsidized affordable housing units. This includes workforce housing and senior affordable housing properties with access to home-based and community-based services. Ratings under these criteria are issue ratings assigned to individual debt instruments and do not incorporate any assessment of recovery prospects. The criteria apply to new ratings and the surveillance of existing ratings.

Key Rating Drivers

The weighting between the individual and aggregate qualitative and quantitative factors outlined below may vary among properties and could change over time. As a general guideline, where one factor is significantly weaker than others, this weakest element tends to attract a greater weight in the analysis. The ratings are capped at 'A+' and are constrained by the stressed debt service coverage ratio (DSCR) in the financial strength profile assessment.

Revenue Defensibility: In assessing revenue defensibility, Fitch considers the demand and pricing risks related to the property. Given the affordable nature of the property type, there is typically built-in demand; however, Fitch evaluates the risk that the property will suffer a reduction in demand or marketability, which could have a negative impact on occupancy levels and/or rent rates. Fitch's analysis also looks to the stability and predictability of rental income (pricing risk), which is partially driven by the degree to which the property receives federal subsidies. Pricing flexibility is limited given fair market rent (FMR) maximums for subsidized properties and income restrictions for unsubsidized affordable housing properties.

Operating Risk: Fitch considers an affordable housing property's risk of incurring costs greater than projected after completion and evaluates the property's ongoing exposure to cost increases based on the property's physical condition, operating history and management experience. Fitch also evaluates the presence of maintenance reserves and any future capital requirements.

Financial Profile: Fitch's assessments of revenue defensibility and operating risk are used to determine the degree of stress for various scenarios analyzing the property's financial flexibility to achieve stressed DSC parameters despite volatility in certain factors such as rental revenue, vacancy rates, and expenses. The results of the cash flow scenarios are typically summarized in a key metric, the stressed DSCR, which measures the adequacy of coverage to service debt on a forward-looking basis. Additionally, the financial profile is assessed through break-even stress scenarios.

Asymmetric Risk Factors: Risk factors such as the transaction's debt structure, legal provisions, and investment quality and counterparty exposure are also considered when assigning a rating. These are not scaled, and only weaker characteristics affect the final rating.

Table of Contents

Related Criteria

Public Sector, Revenue-Supported Entities Rating Criteria (September 2021)

U.S. Public Finance Not-For-Profit Life Plan Community Rating Criteria (March 2021)

Completion Risk Rating Criteria (December 2020)

Analysts

Karen Fitzgerald
+1 415 796 9959
karen.fitzgerald@fitchratings.com

Kasia Reed
+1 646 582 4864
kasia.reed@fitchratings.com

Teresa Galicia
+1 312 368 2083
teresa.galicia@fitchratings.com

Framework

The sector-specific criteria described in this report are used by Fitch analysts to assess indicative metrics, rating benchmarks and attribute expectations in line with the master revenue criteria, "Public Sector, Revenue-Supported Entities Rating Criteria". The construction phase of the property, if relevant, is reviewed in line with the "Completion Risk Rating Criteria". Ratings that are exposed to completion risk may be constrained by either the completion risk assessment or projected financial metrics during the operating phase of the property. Not all rating factors outlined in this report may apply to an individual rating or rating action. Each specific rating action commentary or rating report will discuss the factors most relevant to the individual rating action. Most transactions will exhibit credit features consistent with the 'A', 'BBB' or 'BB' rating category. Fitch caps affordable housing ratings under these criteria at 'A+'.

'AAA' and 'AA' ratings are not assigned because, even if affordable housing properties demonstrate high DSCRs, the lack of pricing flexibility on the revenue side and the susceptibility to local market conditions on the operating side cannot be mitigated. These inherent risk factors are further detailed in the criteria.

Use of Risk Factor Attributes to Determine Stress Levels

Fitch assigns attribute rankings of 'a', 'bbb' or 'bb' for revenue defensibility and operating risk. The revenue defensibility and operating risk assessments then affect the magnitude of the stress for those variables in the forward-looking financial profile analysis. A weaker attribute would directly translate into a more severe assumption (e.g. a revenue defensibility attribute assessment of rent volatility or historic high vacancy rates would increase the revenue stress in a forward-looking rating case). Other risk factors work asymmetrically, where only below-standard features would be reflected in stress levels or rating levels, while more credit-positive features are expected to be the rule, and would have a neutral impact on the rating. The risk factors translate into differentiated quantitative assumptions to determine the property's overall stressed DSCR.

Consideration of financial profile in the context of revenue defensibility and operating risk and its correspondence with ratings is presented in the Key Rating Factors Table. Transactions that receive the assignment of ratings in the 'A', 'BBB' or 'BB' category generally demonstrate attribute characteristics primarily in that category combined with stressed DSCRs consistent with that rating category. Transactions that do not meet the break-even thresholds as described on page 13 will not be eligible for an investment grade rating. The ratings are capped at the stressed DSCR parameters for each respective rating category as outlined on page 12.

Requested Issuer Information

- An overview of the transaction and the proposed structure.
- A detailed summary of key loan and property-level attributes.
- Descriptive materials about the collateral and tenancy, property descriptions, maps, photographs and relevant market data.
- Three or more years of property operating history, cash flow projections and rent rolls.
- Appraisals, environmental and engineering reviews, as well as seismic reviews, if applicable, typically completed within the prior 12 months.
- Government-related agreements pertaining to the subject properties, including tax abatement documentation and Housing Assistance Payment contract assignment agreements, as well as Real Estate Assessment Center (REAC) reports for Section 8 properties.
- Summary of the terms and conditions of the underlying loan and loan documents as requested, as well as background information on the property manager's experience and financial resources relative to business plans, including the property manager agreement.
- Transaction documents, including the trust servicing agreement (or pooling and servicing agreement, if applicable); offering document, including the waterfall description; mortgage loan purchasing agreement, including representations and warranties; and legal opinions.

The above information is commonly requested and is considered in Fitch's analysis. In some cases, Fitch may request supplemental information based on transaction, loan, borrower, collateral, tenancy and ownership-specific attributes. To the extent information is limited or lacking, and not offset by substitute information or mitigating factors, Fitch may apply more conservative stress assumptions, cap the ratings or decline to rate the transaction.

Key Rating Factors Table

Key Rating Factors — Affordable Housing Transactions

Operating Risk	Relevant Indicators	a	bbb	bb
Demand Risk				
Characteristics of affordable housing demand and risk of not maintaining projected occupancy rates.	*Occupancy Trends* Analysis of historical and current local market occupancy trends.	Average annual occupancy rates greater than 95% with steady rates throughout the year and strong waiting list. Historical occupancy rates demonstrating the same strong trend. Low tenant turnover rates.	Average annual occupancy rates between 90%-95% with some fluctuation in occupancy trends and waiting list throughout the year. Steady historical occupancy trends. Some fluctuation in tenant turnover rates.	Average annual occupancy rates 90% or lower with fluctuation throughout the year. Minimal or no waiting list. Fluctuation in historical occupancy trends. High tenant turnover rates.
	Quality of the AH Property Analysis of the quality of the housing in relation to its impact on demand.	Properties offering higher quality housing units than similarly priced units in the local market. Strong accessibility to employment, transportation, schools, and retail services.	Properties offering housing units comparable in quality to similarly priced units in the local market. Accessible to employment, transportation, schools, and retail services.	Properties with housing units of lower quality than the local rental market. Limited accessibility to employment transportation, schools and/or retail services.
	Local Market Assessment Assessment of the strength of the local real estate market/ barriers to entry using third-party market studies and data.	Availability of alternative quality rental housing stock is highly limited due to high demand in the area and/or limited competitive properties in the market. No concessions offered in the market.	Property surrounded by a market area that has competing units with sound occupancy levels and product that is comparable in term of age, quality or amenities. Some concessions offered in the market.	High rental housing vacancy levels in market and/or surrounded by large amounts of recently built, quality affordable rental units that are possibly offering concessions.
Pricing Characteristics				
Stability and predictability of rental income, including analysis of subsidy payments, as well as rent-raising ability.	Review of percentage of rent covered by project-specific Housing Assistance Payment (HAP) or other subsidy contract and the terms of the contract. Assessment of Fair Market Rent (FMR) rates and/or income restrictions and impact on pricing.	N.A. – given the nature of the transaction as affordable housing; the inability to raise rental rates beyond a certain cap constrains the pricing characteristics to 'bbb' and 'bb' assessments.	Affordable housing property receives subsidy payments for a majority of the rental units (creating stable revenue stream) with any remaining units unsubsidized. Located in market area where the trend for rents is rising. FMR not above market rate, allowing for annual rental increases and ability to recover at least inflationary increases in costs.	Affordable housing property consists of primarily unsubsidized units. Located in an area with a weak rental market. FMR capped and/or property income restrictions constrain ability to collect revenues sufficient to recover unanticipated costs.
Operating Risk				
Exposure to cost increases based on property's physical condition, assessment of management's operating history and transaction's maintenance protections.	*Cost Management* Review of financial statements to determine cost drivers.	Long operating history demonstrating a stable cost profile with 5-year average annual expense growth at or below average rental rate increases. Maintenance and repair costs consistent year-over-year and in line with overall expense growth.	Operating history demonstrating modest variability with 5-year average annual expense growth,demonstrating some fluctuation, but overall in line with rental rate increases. Some fluctuation in maintenance and repair costs with increases above overall expense increases.	Operating history demonstrating high volatility with 5-year average annual expense increases above rental rate increases. Spikes in maintenance and repair costs potentially reflecting unanticipated property expenses.

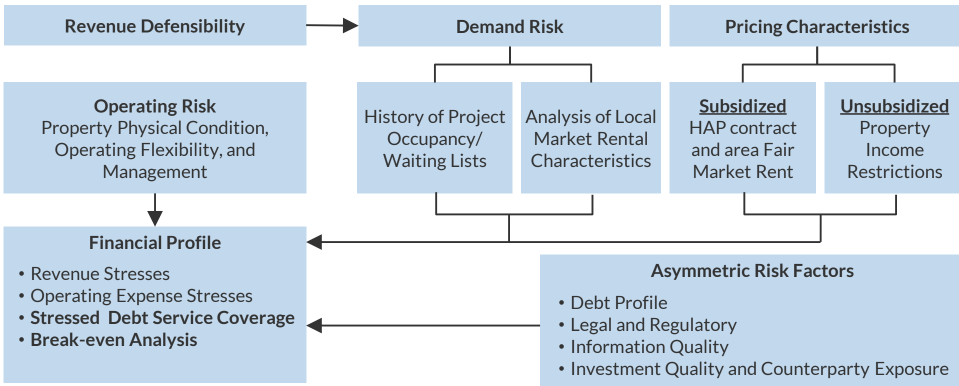
Key Rating Factors — Affordable Housing Transactions

Operating Risk	Relevant Indicators	a	bbb	bb
	Property Management Review of U.S. Department of Housing and Development (HUD) oversight reports to assess management operating history.	Management with strong track record in multifamily property management experience and a strong local presence.	Management with some proven experience in the multifamily asset type and local market. Demonstrated experience in stable operating management performance at other AH properties.	Management with little experience in the multifamily asset and/or local market. Management has a history of being replaced on a previous property, and/or has demonstrated poor operating management performance at other AH properties.
	Capital Expenditure Needs Review of third-party engineer reports to assess property condition. Evaluation of maintenance plan and capital repair and replacement reserve funding.	Multiyear forward-looking maintenance reserves and active detailed maintenance plan with little to no deferred maintenance. Set repair and replacement reserve amounts in the flow of funds on a per-unit basis.	Some maintenance reserve features and outlined reactive maintenance plan with possible deferred maintenance exposure. Set repair and replacment reserve amounts in the flow of funds on a per-unit basis.	Inadequate maintenance reserves or limited maintenance plan with high exposure to deferred maintenance. No provision for repair and replacement reserve deposits in the flow of funds.
Financial Profile				
Revenue defensibility and operating risk assessments used to determine magnitude of stress for those variables in cash flow pro forma. Financial flexibility evaluated through resulting stressed debt service coverage ratios (DSCRs). Additionally, financial profile assessed through break-even stress scenarios.	Financial flexibility evaluated through resulting DSCRs in a forward-looking stressed scenario. Additionally, financial profile assessed through break-even stress scenarios.	Refer to the Stressed DSCR Parameters table on page 12 and and Breakeven Stresses on page 13.	Refer to the Stressed DSCR Parameters table on page 12 and and Breakeven Stresses on page 13.	Refer to the Stressed DSCR Parameters table on page 12 and Breakeven Stresses on page 13.
Asymmetric Risk Factors			**Neutral**	**Negative**
Legal Attributes An assessment of the various structural features that underpin the cash flows supporting the debt service.	Analysis of legal documents to determine general covenants, payment waterfall, and other transaction structural features.		DSRF sized at maximum annual debt service; payment waterfall in trust indenture consistent with cash flows; ability to transfer control of property in the event of underperforming management; lease that extends beyond the term of the bonds.	No DSRF or DSRF sized at less than six months debt service; payment waterfall in trust indenture does not reflect cash flows; weak or vague mechanics to transfer control of property in the event of underperforming management; lease that does not extend beyond the term of the bonds.

Source: Fitch Ratings.

Credit Review Process

Overview of the Credit Review Process



Source: Fitch Ratings.

Key Rating Drivers

Fitch's key rating drivers are: 1) Revenue Defensibility, 2) Operating Risk and 3) Financial Profile. The key rating drivers are assessed using the following guidance outlined in these criteria, which defines general expectations for a given rating category. Subfactors in each of the key rating drivers highlight the components that are most critical in making the assessment. All assessments are grounded in issue-specific historical data along with a quantitative and qualitative analysis to support a forward-looking view on the expectation for future performance rather than at a single point in time.

Revenue Defensibility

Fitch considers demand and pricing characteristics in its assessment of revenue defensibility for affordable housing developments. An analysis of market trends with regard to occupancy and rental rates supports Fitch's assessment. Given the price-taking nature of affordable housing rental rates, with income restrictions for tenants and the regulatory limits on government subsidy payments, Fitch expects that most of the developments will be assessed as having no better than midrange pricing attributes.

Certain senior affordable housing properties may provide additional home-based and community-based services and, therefore, share revenue risk characteristics similar to those of life plan communities — risks related to strength of the service provided, market position and service area characteristics. In such cases, an analysis of the attributes used to assess the revenue defensibility of life plan communities may be applied. For additional information, see Fitch's "U.S. Public Finance Not-For-Profit Life Plan Community Rating Criteria" published 2 March 2021. Senior affordable housing properties with contractually provided, fee-based assisted living or skilled nursing care are not covered under the criteria.

Demand Risk

Occupancy Trends

As the properties covered under these criteria provide affordable housing to low-income and moderate-income individuals at below-market rent levels, the demand for these units will typically be strong and occupancy levels high. Subsidized properties, in particular, typically have waiting lists and are less exposed to demand risk; therefore, the analysis of other risks typically becomes more important when assigning a rating. Although unsubsidized affordable housing properties may offer better amenities and/or have greater curb appeal than subsidized affordable housing properties, they may also be exposed to more competition from surrounding market rate properties.

As noted in the Key Rating Factors Table, the demand assessment considers current and historical annual occupancy rates; the fluctuation of such rates; the strength of the waiting list;

and the property turnover rates. A property with consistently high occupancy and a strong waiting list has greater resiliency to withstand rental rate fluctuations and/or increases in operating expenses. Conversely, properties with lower and/or fluctuating occupancy rates with a minimal or no waiting list are much more susceptible to fluctuations in revenue and/or expense growth. Fitch applies the results of the demand assessment to determine the types and levels of revenue stresses that are included in the financial profile rating case and evaluates the impact on the property DSC.

As part of the demand analysis, Fitch also evaluates the history of tenant turnover. Low tenant turnover helps stabilize revenues, while ongoing vacancies can increase expenses due to unit preparations for new tenants and tenant recruiting costs.

Quality of the AH Property

The best positioned AH properties tout well-built housing compared to comparably priced units in the local market. Access to employment, schools, transportation, shopping, hospitals, parks and recreation can all affect demand for affordable housing properties. Strong accessibility to these services mitigates the risk of fluctuation in demand for units, whereas a lack of accessibility increases the risk of higher vacancy rates during tenant turnover.

Local Market Assessment

For all affordable housing properties, regardless of occupancy history, Fitch reviews the surrounding local market to determine the quantity and quality of the inventory in the market area. Additionally, trends in the local rental market are reviewed to establish current market occupancy rates, the directions rents are trending and whether concessions are being offered at local properties.

Potential future competition to the subject property is also considered as part of the credit analysis. Fitch analyzes the number and type of competing or alternative living options in an AH property's market area that could potentially limit demand. This includes information on the number, type and size of units; amenities; up-to-date fee schedules; and occupancy rates. Fitch evaluates the effect that any potential new entrants into the market area may have on demand. The potential saturation of a market has a negative impact in the analysis as it could lead to lower occupancy at the property if alternative options are more desirable, Fitch views favorably subject properties in areas with high barriers to entry for construction of units that may compete with the subject property. In its analysis of the local market, Fitch solicits information from the local municipality about any new properties that may become competitive in the near future.

Pricing Characteristics: Rental Revenue Stream

Given the income restrictions for affordable housing properties and the regulatory limits on government subsidy payments, affordable housing providers are effectively price takers, with rental revenue rates capped and generally outside the control of management. Fitch considers the history and trend of revenue growth and margin stability when evaluating pricing risk. The inability to raise rental rates beyond a certain cap restricts the pricing attribute to the 'bbb' or 'bb' range.

Federally Subsidized Programs: Pricing Considerations

Project-specific Housing Assistance Payment (HAP) contracts for Section 8 properties specify the number of units eligible for the subsidy, the U.S. Department of Housing and Urban Development (HUD)- approved "contract rent" for each type of unit and utility allowances, if any. The contracts further obligate the contract administrator for HUD to directly pay the property owner monthly the difference between the contract rent and the HUD-required rental contribution from eligible tenant families typically defined as 30% of the tenant's income. Contract rents are based on comparable fair market rents (FMRs), including utilities, of similar units in the same geographic area. The FMR, determined by HUD, is used to establish the ceiling on contract rents for the area.

The subsidies remain with the units, rather than the individual tenants, over the contract's life, provided the units continue to meet HUD's housing-quality standards and tenant-eligibility requirements. The subsidies, in addition to tenant payments, typically provide the majority of revenue pledged to secure mortgage revenue bond payments and lend a high degree of stability to revenue flow. To offset potential rent losses due to even nominal tenant turnover, HUD makes available partial rent payments for vacant units for a specified period. Partial rent payments, in conjunction with efficient property management, protect against temporary cash flow disruption and contribute to steady revenue intake.

The HAP contract also provides for automatic annual adjustment factor (AAAF) rent increases. AAAFs ensure that contract rents are adjusted regularly to keep pace with changes in rental rates in the private housing market; however, adjustments are calculated so as not to result in material differences between rents charged for subsidized units and comparable unsubsidized units. Any adjustments to the AAAF increases are capped and require the owners of project-based units to demonstrate evidence of higher comparable market rents.

Ideally, for a financing in which the bonds are secured by a Section 8 property, the term of the HAP contract, which governs the subsidy payments, is coterminous with the final bond maturity to ensure adequate revenue cash flow. If the Section 8 or other subsidy contract ends before bond maturity, Fitch takes a hybrid approach to rating the bonds by applying a subsidized analysis until the HAP contract expires and then, when the property is no longer receiving subsidies, by using an unsubsidized affordable housing approach for the remainder of the term of the bonds. In this scenario, Fitch would need to be confident that the property was poised to transition into an affordable housing property, would be able to compete with the rest of the market, and that the owner and manager have demonstrated a cogent plan for the transition.

Terms and Definitions

HAP Contract	Project-specific housing assistance payments contract between the federal administrator and the property owner.
Housing Assistance Payment (HAP)	The monthly assistance payment by the administrator for a contract unit, which includes: (1) a payment to the owner for rent to the owner under the family's lease minus the tenant rent; and (2) an additional payment to, or on behalf of, the family if the utility allowance exceeds total tenant payment.
Contract Units	The housing units covered by the HAP contract.
Tenant Rent	The portion of the rent to owner payable by the family, as determined by the administrator in accordance with HUD requirements. The administrator is not responsible for paying any part of the tenant rent.

Source: U.S. Department of Housing and Urban Development (HUD).

In addition, federally subsidized programs with a sunset period and/or HUD-required mandates in place to obtain and maintain the subsidy for the life of the outstanding bonds or during a regulation period will be analyzed according to the program requirements. For example, HUD programs such as Section 142 (d) have sunset periods and tenant mix requirements that must be met to maintain the subsidy. These programs will be analyzed based on the likelihood of the program administration meeting the requirements and the risk of transition from affordable housing to traditional market-rate multifamily housing during the life of the bonds.

Subsidized versus Unsubsidized Pricing Approach

Fitch's approach considers subsidized properties to pose fewer risks to the stability of operating revenues given the mechanics of the project-based subsidy providing a predictable revenue stream. At the same time, the pricing is less flexible for subsidized properties as rental rate increases are restricted by FMR. Fitch views uninsured/unsubsidized affordable housing loans (AH loans) as having a greater potential for fluctuations or interruptions to the revenue stream but potentially more flexibility to raise rents depending on property income restrictions [generally up to 80% of area median income (AMI), which is deemed affordable housing] and/or local market characteristics.

In the assessment of revenue defensibility, both subsidized and unsubsidized properties with Low Income Housing Tax Credit (LIHTC) equity benefit from the stability provided by additional underwriting, compliance and monitoring requirements. In addition to state housing agency underwriting, the properties are underwritten by lenders and tax credit syndicators. During the 15-year compliance period, property owners are required to report annually on compliance with tenant income and rental rate restrictions, and are subject to additional monitoring by the syndicator, including housing quality inspections. Fitch considers LIHTC compliance to provide greater stability to the property's operating revenues, which, in general, has led to strong performance. Therefore, all other factors equal, an unsubsidized property with LIHTC equity has a stronger revenue defensibility assessment than an unsubsidized property without LIHTC equity. This may lead to a hybrid approach between the subsidized and unsubsidized benchmarks when assessing the debt service coverage parameters for an unsubsidized property with LIHTC equity.

Following the 15-year compliance period, properties are required to meet affordable rent requirements for at least an additional 15 years. However, Fitch recognizes that the active oversight of the property by the investor/syndicator is not in place after the initial 15-year period once the tax credits can no longer be reclaimed. Therefore, if the property remains 100% affordable after the 15-year compliance period, Fitch will monitor the transaction as an unsubsidized property rather than with a hybrid approach to the revenue defensibility and debt service coverage parameters.

Operating Risk

Operating risk is the risk that the property will incur costs greater than projected, the realization of which may result in a reduction of projected cash flows or a breach of contractual performance requirements. Fitch evaluates the issuer's financial flexibility to address operating and maintenance issues and allow sufficient net operating income for the property to service its debt.

Cost Management

A property's physical condition and curb appeal are key factors to maintaining successful multifamily operations and cash flow. Fitch gains an understanding of the property's physical condition through various sources. If a property is subsidized by Section 8, Fitch uses both a U.S. Department of Housing and Urban Development (HUD) Real Estate Assessment Center (REAC) report and an independent, third-party engineer's assessment to evaluate the property's physical condition. If a property is unsubsidized, an independent, third-party engineer's assessment of the facility is reviewed. Typically, as a follow-up to these reports, Fitch conducts its own site visit of the property to determine firsthand its condition. Fitch also assesses whether a Phase I environmental report is provided and looks to see the incorporation of any and all findings into the legal documentation.

Property Management

Post construction, the property manager plays a vital role in an affordable housing property's success as the key participant responsible for day-to-day operations. Fitch views favorably a manager that has a positive history of operating properties that are of similar type to the subject property, has a significant presence in the local and regional market, and experience with the applicable HUD or regulatory requirements. A well-managed property will have a current and substantial waiting list from which to draw prospective tenants, a strategy in place for tenant retention and the ability to prepare a vacated unit for a new tenant in a timely manner. A well-managed property will also demonstrate control over operating expenses, without unanticipated year-to-year volatility in expenses.

Conversely, Fitch views less favorably a property manager that is just entering into the management of affordable housing properties and/or has a history of being replaced on a previous property, and/or has demonstrated poor operating management performance at other AH properties. A weaker-managed property may demonstrate higher vacancy rates and/or longer turnover times, as well as challenges in controlling operating expenses.

In the assessment of management capabilities, Fitch uses REAC scores to evaluate management's track record with other affordable housing properties (when available). Fitch considers average scores trending above 79% to be indicative of capable management with a history of expense and compliance proficiency for affordable housing properties. Fitch notes that scores can vary greatly between inspections and generally views consistent scores as better indicators of solid management experience compared to volatile/lower readings.

For properties with LIHTC equity, the sponsor provides an additional layer of oversight by managing reporting requirements and ensuring the property is operating in compliance with tax credit laws. This includes monitoring that the property has safe occupancy conditions and that building code standards are being met, in addition to compliance with tenant income and rental rate restrictions. Given the importance of the property remaining in compliance, Fitch evaluates the tax credit sponsor's experience with LIHTC reporting requirements in the assessment of a property's operating risk. Similar to the property manager, Fitch views favorably a tax credit sponsor with positive history of managing compliance at other properties and significant experience with regulatory requirements.

Capital Expenditure Needs

Fitch's analysis includes an assessment of whether the term of the rated debt is consistent with the economic life of the property. Upon initial rating assignment, Fitch will typically rely on third-party engineer reports to determine the useful life of systems and the property itself. The final maturity of the rated AH property should be within the proven economic life of the property as documented in third-party reports.

The proven economic life of the property may only be achieved by capital expenditure over the life of the transaction, which is typically required and accounted for in the original property bond documentation. Making annual deposit amounts on a per-unit basis for the funding of the repair and replacement reserve funds is consistent with an AH property with an investment-grade rating. Additional accounts may also be funded by excess cash flow available for the future redevelopment of the property.

Additionally, for subsidized properties, Fitch reviews whether there have been any recent findings of infractions with HUD, or the administrative authority of the HAP contract, and any related, deferred maintenance issues. For unsubsidized properties, Fitch assesses the extent of any deferred maintenance issues from the third-party engineer's assessment, and in both cases, looks for funds to be set aside to address these items, as well as appropriate reserve and replacement funds to be annually allocated and deposited to meet future needs. Part of the risk associated with deferred maintenance issues is that units will need to be brought offline, thereby decreasing occupancy rates at the property. Fitch assesses whether preventative maintenance measures are in place to mitigate the risk of unoccupied units.

Financial Profile

Fitch's assessments of revenue defensibility and operating risk are used to determine the degree of stress for various scenarios analyzing the affordable housing property's financial flexibility. A large part of Fitch's financial analysis centers on a property's DSCR, since the primary security for a multifamily affordable housing bond is the cash flow the property generates. Fitch's tax-exempt housing group calculates DSCR by dividing net available revenues, after Fitch stresses have been applied, by maximum annual debt service (MADS). Net available revenue is net rental revenue less operating expenses, including deposits to the replacement reserve fund. Operating expenses typically include administration, utility, operations and maintenance, insurance and taxes. Depreciation and amortization costs are not included for purposes of calculating the DSCR.

Cash Flow Analysis

Evaluate Stress Scenarios

Stress scenarios are used to test the cash flow sensitivity in a range of outcomes for key rating drivers. Rating cases are established to assess the level of financial flexibility that a transaction can sustain as it encounters stresses that can be expected over the relevant forecast period. The ability of the property to make timely payments takes into account its full resources and capacity as captured in the DSCR, a key metric of financial strength. In all transactions, a break-even analysis is conducted.

Base Case and Stress Case (the Rating Case)

New Affordable Housing Property Ratings

For the assignment of a new rating for an AH property, Fitch's property financial analysis begins with a review of base case cash flows as provided by the issuer and/or its agents with a set of assumptions regarding revenue, occupancy levels and expenses. Fitch will also request that the issuer construct a stress case using the base case as a starting point to test the cash flow sensitivity to changes in the parameters that are specific to the individual property. Fitch reviews issuer-provided supporting information that typically includes historical, appraisal, budgeted and projected cash flows; rent rolls; third-party reports; and market data. Fitch adjusts for nonrecurring items (for example, a non-fixed expenditure such as a roof repair or elevator replacement), above-market performance, volatile market conditions, and revenue and expense items that deviate from sustainable long-term market or property levels, and normalizes capital expenditures.

The stress case is a modified projection that incorporates certain additional stress factors as described in the 'Revenue Stresses' and 'Operating Expense Stresses' sections to reflect the potential for decreases in occupancy rates and rental income, and increases in operating expenses. For additional information on the cash flow analysis for a new rating, please see the section 'Third-Party Models'.

Scenario Analysis for Surveillance Reviews

Fitch applies the same type of stress factors during a surveillance review; however, rather than using third-party cash flows, Fitch uses the most recently available audited financials as the starting point for the analysis. Fitch will evaluate a base case cash flow scenario that serves as Fitch's expected case in the current operating environment. Fitch's stress case scenario will consist of a through-the-cycle scenario that incorporates revenue and operating expense assumptions based on Fitch's review of historical performance of rental revenue, vacancy rates, and expense increases, and expectations for future performance, as further described on pages 11-12. Fitch's expectations reflected in the scenario will be shaped by the revenue defensibility and operating risk key rating driver assessments.

The stress case scenario analysis will reveal shifts in net operating income contrasted to the base case to determine if the benchmark DSCR levels are maintained despite volatility in the various factors. The scenario analysis should not be interpreted as a forecast of actual performance under stress; it is only intended to illustrate performance under given certain stresses and a set of assumptions for a specific transaction.

For both new ratings and surveillance reviews, the analysis of the cash flow scenario used in the rating process is a key quantitative and qualitative determinant of the rating and is typically a central point of discussion in rating committees.

Use of Attributes to Determine Stress Levels

Most key rating drivers and the applicable attributes analyzed in the criteria will determine types and levels of stresses that Fitch will include, notably through the assumptions underlying the rating case. The magnitude of the stress depends on the outcome of the revenue defensibility and operating risk assessments as 'a', 'bbb' or 'bb'. A 'bbb' or 'bb' attribute would directly translate into a more severe assumption (e.g. assuming more revenue volatility would increase the NOI stress in a rating case). Other risk factors would work asymmetrically, where only below-standard features would be reflected in stress levels or rating levels, while more credit-positive features are expected to be the rule, and would have a neutral impact on the rating. Below-standard features can in some cases result in Fitch being unable to assign any rating to the debt. The risk factors translate into differentiated quantitative assumptions to determine the stressed DSCR parameters outlined in the table on page 12.

Revenue Stresses

Rental Rate

Fitch stresses rental assumptions in the cash flow analysis. For unsubsidized AH properties, the stress assumption is to hold rental rates flat. This scenario addresses the risk of flat revenues and rising expenses to determine whether bond debt service can still be satisfied. For Section 8 properties, Fitch assumes the HAP contracted rental rate in the cash flows. However, if a Section 8 property has rents that are above the FMR for the area and is no longer receiving annual rent increases (a bbb to bb revenue defensibility assessment), Fitch reviews a cash flow scenario holding rental revenues flat at the current rents for the remainder of the bond term while raising expenses annually at a percentage based on the annual average increases of the previous three years.

Vacancy Stress

Projected physical vacancy rates may be discounted to assume lower occupancy than that expected by property participants to reflect the volatility of multifamily real estate. Fitch uses third-party market demand studies and real estate data, combined, in some cases, with analyst site visits, to determine the prevailing rental market vacancy rate. When the revenue defensibility and/or operating risk assessments are in the 'bbb' to 'bb' ranges, Fitch may use a stress vacancy factor beyond what is typically used as described below to reflect expected softness in the surrounding rental market.

Fitch assesses the consistency of occupancy over a 36-month period and determines if the properties incorporate in their pro forma cash flows an economic vacancy factor based on the annual average of the previous three years. In a Section 8 and other subsidized property analysis, net rental revenue is computed using a physical vacancy rate of the greatest of 5%, the actual past 36-month vacancy rate or prevailing market rates. For unsubsidized properties, the physical vacancy rates are typically higher given that these properties do not benefit from the built-in demand inherent for Section 8 properties. Therefore, the vacancy assumption is the greatest of 10%, the actual past 36-month vacancy rate or prevailing market rates.

Other Revenue Sources

Fitch considers the inclusion of revenue sources other than rent and subsidy revenues in a property's pro forma cash flows on a case-by-case basis, for example, laundry income, vending machine fees, common-area rental and cable television charges. One-time items, such as a forfeited tenant deposit, will not be recognized. Fitch considers those items with a documented and detailed revenue stream and determines the likelihood that this revenue will continue to be generated. Another common form of additional revenue in bond transactions backed by multifamily housing properties is the earnings of the debt service reserve fund. If a guaranteed investment contract (GIC) is present, Fitch assesses the counterparty rating in line with the "Public Sector, Revenue-Supported Entities Rating Criteria" published 1 Sept. 2021.

Operating Expense Stresses

In addition to the revenue stresses, Fitch's analysis includes a review of both prior and projected property expenses. Fitch uses audited property financial statements for the most recent three to five years to verify expenses and assess the proposed projected expenses over the life of the bonds. The stressed net cash flow typically assumes expenses at 3% higher than the higher of the most recent audited fiscal year or the average of the past three audited fiscal years.

Fitch includes in the pro forma cash flow the property insurance premiums when budgeted and paid as an operating expense. Fitch also considers whether bond documents include the funding of a cumulative annual repair and replacement reserve for extraordinary maintenance. The age of the property, the quality and condition of the property, and the engineering evaluation are key determinants in estimating replacement costs; Fitch normalizes these capital amounts over their useful lives at assumed market costs, which for multifamily housing is typically $300 per unit. These reserve deposits are included in the pro forma cash flow, and adjustments are made depending on the operating risk attribute assessment and variation from typical market rates.

Fitch also reviews the management and trustee fee calculations defined in the management agreement or bond legal documents to determine whether fees are paid out of the regular cash flow and are included in the pro forma cash flows. Fitch adjusts management fees to the higher of the contractual fees and market levels. Typical management fees for multifamily housing properties are 3%-6% of effective gross income.

For expenses that are eligible for tax exemption, Fitch will only assume the exemption if final and approved, and otherwise will assume the expenses as part of the pro forma cash flow. For subsidized or unsubsidized properties that are acquisitions, Fitch will assume the current property tax rate unless the property already maintains a tax abatement plan or any other property tax benefit. If tax abatement is in place, Fitch will request documentation outlining the terms of the payments, and upon the expiration of the tax abatement, Fitch will assume the higher property tax rate.

Fitch recognizes that concentration of expenses differs among multifamily project types. For example, multifamily housing typically requires more intensive day-to-day maintenance services, while senior housing requires social services and other tenant-specific amenities, such as supplemental security measures. Occupational training, support groups and tenant organizations also may be property-specific expenses.

Net Operating Income and Debt Service

After incorporating revenue discounting and expense stresses to the pro forma cash flows, a discounted net operating income is calculated for the property. This amount serves as the numerator in the stressed DSC ratio calculation. Fitch views fully amortizing, level debt favorably, as it allows for a more accurate prediction of the property's ability to make debt service payments. In calculating DSC for rating purposes, Fitch uses maximum annual debt service (MADS) as the denominator in arriving at the DSC ratio.

In its approach to analyzing multifamily properties, Fitch's tax-exempt housing group is consistent with its structured finance commercial mortgage-backed securities (CMBS) group in that it arrives at a discounted net operating income amount for each property after applying various revenue and expense stresses. However, a typical tax-exempt multifamily financing does not need to address the 10-year refinancing risk that most CMBS structures incorporate because fully amortizing level debt is standard in the industry.

Stressed DSC Parameters for Affordable Housing Transactions

(x)

Rating	Subsidized Section 8/Section 236	Uninsured/Unsubsidized
A	1.35	1.55
BBB	1.20	1.40
BB	1.10	1.30

Source: Fitch Ratings.

The DSC parameters outlined above are guidelines and demonstrate both ends of the spectrum for each rating category. There are properties that will fall between the subsidized and unsubsidized ranges; for example, an unsubsidized property with tax credit equity (as discussed earlier in the report). Further, a transaction that demonstrates these coverage levels will not always qualify for a commensurate rating within the corresponding range if there are other credit factors that carry more weight in assigning a rating.

Break-Even Analysis

Fitch will review a series of break-even scenarios using pro forma cash flows for new transactions as a starting point and apply various stresses related to revenue, vacancy rates and aggregate lifecycle operating expenses (as outlined in the cash flow analysis section of this report). Furthermore, Fitch will review the same break-even scenarios for existing Fitch-rated transactions but use the reported operating cash flow as a starting point. The purpose is to determine the magnitude of change that can be incorporated for any given factor (resulting in a maximum revenue shortfall or maximum expense increase) while still demonstrating that the rated instrument does not fall below 1.0x coverage. When the outcome of the revenue defensibility and/or operating risk assessment is considered weaker, Fitch may conduct additional breakeven scenarios to determine whether the transaction can sustain historical levels of stress for the various factors and stay within the rating category.

Ultimately, stressing the net operating income will allow Fitch to determine the overall financial strength of the transaction. In addition, the expectation is that the results of these break-even scenarios will fall within the range of results of Fitch-rated peers within the scope of this criteria with the same profile and rating.

The break-even scenarios are as follows (holding all other variables equal):

- **Revenue Stress:** Stress the annual revenue to determine how much it can decline while all rated debt still maintains 1.0x coverage. Typical investment-grade-rated transactions can sustain a minimum of a 10%-15% decline in revenue.

- **Vacancy Stress:** Stress the vacancy rate to determine how much it can increase while all rated debt still maintains 1.0x coverage. Typical investment-grade-rated transactions can sustain a minimum 15%-20% increase in the vacancy rate.
- **Expense Stress:** Stress the aggregate expenses to determine how much they can increase and all rated debt still maintains 1.0x coverage. Typical investment-grade-rated transactions can sustain a minimum 20%-30% increase in expenses.

Peer Analysis

Information on appropriate AH peer properties will be used for a comparative analysis of individual risk to assess consistency when it is available to Fitch. However, properties may present quite different qualitative features and credit metrics at a similar rating level due to different legal frameworks, cash flow variability or structural features, thus making such comparisons less valuable.

Third-Party Models

Due to the idiosyncratic and complex nature of some transactions and issuers, Fitch also may use third-party models provided by the issuer and its agents if they better reflect the many individual features of the credit. The agency considers the plausibility of results from external cash flow models, for example by reviewing key formulae, examining trends and the model's behavior when sensitized. Despite these precautions, as with all types of information provided by issuers, Fitch is dependent on sponsors or issuers ensuring that the information is timely, accurate and complete. Failure to do so may result in the withdrawal of ratings. The independent audit or review of external cash flow models by a reputable third party is viewed positively by Fitch. This is of particular importance for very complex models as they provide an added level of comfort that the model is working as intended. In certain instances, if Fitch is unable to replicate the calculations in a third-party model the absence of an independent audit may cause the transaction to be unratable or an existing rating to be withdrawn.

Use of Models

Models used in complex affordable housing transactions are cash flow models that project operational cash flows, debt service and resulting financial metrics. These models are not stochastic. Fitch may modify sponsor case assumptions in its base and rating cases as part of its analytical process. Models allow single and combined factor sensitivities to assess the possible impact on debt service.

Credit-Related Assumptions

There are no embedded Fitch credit-related assumptions (including hard-coded, hidden or default values) in the models.

Application of Assumptions

Fitch uses financial models to apply a range of stresses reflecting its assessment of the key rating drivers of the transaction, with the aim of assessing the capacity of the cash flow to repay each rated instrument given the features of the applicable debt structure. The stresses applied are asset-specific or transaction-specific.

Significance of Model Outputs

Model outputs are one of a number of factors in the determination of the rating. Model outputs are used in conjunction with the Key Rating Factors Table and the underlying Key Rating Driver assessments. A transaction for which model outputs show a strong ability to repay rated debt may still be assigned a lower or speculative-grade rating if more qualitative risks are deemed material.

Asymmetric Risk Factors

The final rating assigned will also consider certain additional risk factors that may affect the rating conclusion. These additional risk factors work asymmetrically, where only below-standard features are factored into the final rating levels, while more credit-positive features are expected to be the rule, and would have a neutral impact on the rating.

The asymmetric risk factors include debt characteristics, legal and regulatory matters, and investment quality and counterparty exposure. The presence of asymmetric risks would support a conclusion that the rating will have a higher risk of transition of the financial profile than transactions similarly rated that are not exposed to such risks. In applying these additional risk assessments, it will be noted if an assessment has affected the rating suggested when assessing the financial profile. The final rating will reflect a qualitative assessment of the extent and impact of the asymmetric risk factors. The asymmetric considerations are discussed fully in Fitch's "Public Sector, Revenue-Supported Entities Rating Criteria."

Debt Profile

Multifamily loans that secure tax-exempt housing bonds are typically fixed rate and fully amortizing, thereby eliminating any refinance risk that is typically seen in multifamily commercial mortgage financings.

The characteristics of a bond financing, including its amount, maturity and structure, are usually sourced from the bond documentation. The obligation to pay interest and principal according to an amortization schedule is established together with the priority of these payments in the bond trust indenture. Fitch reviews the sizing of the debt service reserve fund and the quality of the reserve investments. Fitch also confirms the funding of any other reserves, such as any insurance reserve funds, as specified in the bond documents.

A weak debt structure will constrain the overall assessment of the transaction's financial profile. Absent unrestricted cash resources sufficient to address structural shortcomings, Fitch considers the following debt characteristics and terms consistent with a "weak" assessment:

- Material exposure to refinance risk (use of bullet maturities; debt not fully amortized at maturity), which distorts near-term financial metrics and increases the uncertainty of both market access and the cost of debt at a future date.
- Material exposure to unhedged floating-rate interest. Fitch considers whether the unhedged portion of exposure, if any, would have a material impact to the issuer's financial profile under stressed interest rate assumptions.
- Material exposure to contingent liabilities, including swap and derivative contracts that include collateral posting requirements and termination events that require a payment of the current marked-to-market value of the swap contract.
- Lack of a debt service reserve fund or a debt service reserve fund that is funded at less than 6 months debt service coverage.

For more information on Fitch's global approach to analyzing debt structures, see Fitch's master criteria, "Public Sector, Revenue-Supported Entities Rating Criteria."

Legal and Regulatory

Forming an opinion of the quality of the legal framework upon which many assumptions rest is a prerequisite to the credit analysis. Fitch confirms that the bonds are secured by a first-perfected security interest in the property. Fitch reviews the bond indenture to ensure that property (or multiple properties') gross revenues (and HAP contracts in the case of Section 8 properties) are deposited directly with the trustee and used to pay debt service, Fitch confirms in the legal documents that any such revenues supporting the debt are pledged solely to the transaction as available funds.

Fitch assesses whether the flow of funds and payment waterfalls in the trust indenture are consistent with the pro forma cash flows. Fitch confirms that the flow of funds includes principal and interest debt service payments as the first payment. See the below example of typical payment priorities in the flow of funds. Fitch also reviews the bond indenture allowance of additional parity debt and considers the allowance to be a potential credit weakness.

Typical Flow of Funds

1	Interest Account for Debt Service
2	Principal Account for Debt Service
3	Debt Service Reserve Account

4	Insurance/Tax Escrow Fund
5	Operating Fund
6	Administrative Fund
7	Repair and Replacement Reserve Fund
8	Operations and Maintenance Reserve Fund
9	Rebate Fund
10	Surplus Account, All Remaining Amounts

Source: Fitch Ratings.

For affordable housing transactions with a multiple tranche debt structure (senior/subordinate), the methodology for assigning ratings involves a review of the bond's cash flow and projected debt service coverage ratios for each tranche as well as a review of bond legal documents. Fitch will review bond legal documents for the sequence in which the trustee is instructed to pay bonds and will also consider default provisions and remedies specific to the subordinate tranches and any resulting impact on the senior tranche of debt.

Fitch also reviews the legal provisions upon the sale or disposition of the property. Fitch looks to the indenture and related mortgage documents to confirm that they provide that either: the mortgage and bonds will be paid in full in the event of a sale or disposition of the property; or a change in ownership or management will not result in a downgrade of the existing bond rating, and that all rental payments will continue to be deposited directly with the trustee.

For private ownership, Fitch confirms that a special-purpose bankruptcy-remote ownership entity is established that has no other business activities outside of owning and operating the property and no commingling of assets with any other entity. For limited partnerships, a nonconsolidation bankruptcy opinion generally is reviewed stating that, pursuant to applicable law, voluntary and involuntary bankruptcy by the property owner's general partner would not, in and of itself, cause the ownership entity's property to be included in that partner's bankruptcy estate.

Information Quality

The quality of information received by Fitch, both quantitative and qualitative, can be a constraining factor for ratings. Information quality may constrain the rating category to a maximum level or, in extreme cases, preclude the assignment of a rating. Information quality for the initial rating and for surveillance purposes is considered when a rating is first assigned. Fitch must be confident adequate ongoing data will be available to monitor and maintain a rating once assigned. Information quality encompasses such factors as timeliness and frequency, reliability, level of detail and scope.

The information provided to Fitch may contain reports, forecasts or opinions provided to the issuer or their agents by various experts. These include legal advisors, financial advisors, third-party engineers, market or environmental consultants, insurance advisors and others. Where these reports contain matters of fact, Fitch will consider the source and reliability. Where the information is a forecast or opinion, Fitch expects these to be based on well-reasoned analysis supported by the facts.

The degree to which Fitch uses expert information will depend partly upon the above issues and on the relevance of the information to the identified key risks. Where available, if expert information does not address a material issue, but might be expected to, Fitch may request further information or make an appropriate assumption. Fitch may choose not to provide a rating if it determines the reports are not sufficiently supported, complete or reliable.

Fitch considers this attribute to be negative when information is substantially based on assumptions, extrapolated or subject to material caveats; or if the data are often subject to delay, have a history of revisions or errors, or are limited in scope.

Investment Quality and Counterparty Exposure

Although the pledged assets primarily consist of the mortgage loan, the investment portfolio also comprises a portion of the assets. Funds held in the various reserve accounts may be invested until needed. In the review of an affordable housing property's investment portfolio, Fitch considers the quality of the investments in line with the "Counterparty Risks" section of Fitch's "Public Sector, Revenue-Supported Entities Rating Criteria". As such, the minimum direct support ratings for guaranteed interest contracts (GICs) or similar accounts with eligible direct support institutions are considered in accordance with the referenced criteria. If under Fitch's review it is determined that a significant portion of the transaction funds are held in qualified investments, or the cash flows are dependent on the financial performance of the counterparty, the program would not be viewed as sufficiently isolated to achieve ratings higher than that of the counterparty.

In addition to the investment providers, Fitch reviews insurance provisions to ensure that adequate levels of insurance have been procured and will be maintained continuously to coincide with the term of the bonds. Fitch confirms that hazard and special hazard insurance coverage, net of deductibles, is sufficient to redeem outstanding bonds in the event of property destruction. Fitch also looks to the rental interruption insurance provisions to determine whether one year of gross rent revenue is covered. Depending on the property location, earthquake and/or flood insurance coverage may also be provided. Fitch confirms that the insurance coverage is consistent with market standards from qualified insurance providers.

Surveillance

Fitch monitors all multifamily affordable housing bond ratings. The methodology for the surveillance of ratings is similar to new issuances, but focuses primarily on DSC, vacancy and operating expenses with respect to the property's financial profile; the impact of the local rental market on its operating profile; and any changes to the property's physical condition/capital needs. DSC and operating information is requested and reviewed on a quarterly basis in addition to the annual surveillance review.

Fitch monitors for the following events that may prompt a review outside the regular surveillance cycle:

- Changes to or termination of the subsidy contract.
- Material changes to the local rental market that would have an immediate impact on property demand.
- Change in property management.

Rating Assumption Sensitivity

Multifamily affordable housing bond ratings are subject to positive or negative adjustment based on actual property experience. The list below includes a non-exhaustive list of the primary sensitivities that can influence multifamily affordable housing bond ratings.

Revenue Defensibility: Ratings are sensitive to changes in attributes of revenue defensibility that affect the overall assessment. Changes to the subsidy payment, fluctuations in market rental rates, changes in expected occupancy levels or the termination of a subsidy contract could all affect the property's revenue stream and change the final assessment.

Operating Risk: Ratings are sensitive to changes in operating risk attributes reflecting greater than expected cost volatility, higher than expected funding needs, and/or changes to the property condition or compliance with federal programs.

Financial Profile: Ratings are sensitive to changes in stressed cash flows that result in a different rating assessment in the stressed debt service coverage parameters table.

Asymmetric Risk: Ratings are sensitive to changes in liquidity, covenants, maintenance or capital replacement reserves or other legal aspects of the financing structure that could affect creditor's protection and affect the property rating.

Data Sources

The key rating assumptions for the criteria, and the data sources used to assign ratings, are informed by Fitch's analysis of the following documents, in addition to Fitch's analytical judgement:

- **Third-Party Reports:** Market demand study, independent engineer's assessment of physical condition and HUD REAC report for Section 8 properties, Phase I environmental review (Phase II if determinations in Phase I warrant additional review).
- **Historical Financial Statements and Property Data:** Property audited financial statements for the previous three to five years or property operating statements, current rent roll and waiting list.
- **Pro Forma Cash Flows:** Projected cash flow for the property or properties and bond debt service schedule.
- **Legal Documents:** Bond trust indenture, mortgage instruments, insurance policies, management agreements, legal opinions, assignments of security, leases and rents, HAP contract for Section 8 properties and investment agreements.
- **Insurance Policies:** Hazard and special hazard policies, as well as one year's business interruption insurance. Depending on a property's location, other policies may be appropriate, such as earthquake or flood insurance.

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 Disclosure

In the initial rating report or rating action commentary, Fitch expects to disclose the key adjustments to the revenue (including rental rate, vacancy and any other revenue sources) and expense assumptions in the cash flow pro forma. The resulting stressed DSCR based on the discounted net operating income will be provided. Fitch will also disclose the legal framework for the transaction and the impact of any asymmetric risk factors on the rating. 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 disclose any material changes to the property or market area that affect revenues and/or expenses, will discuss trends in debt service coverage performance, and will disclose any changes to asymmetric risk factors.

Limitations

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

DISCLAIMER & DISCLOSURES

All Fitch Ratings (Fitch) credit ratings are subject to certain limitations and disclaimers. Please read these limitations and disclaimers by following this link: https://www.fitchratings.com/understandingcreditratings. In addition, the following https://www.fitchratings.com/rating-definitions-document details Fitch's rating definitions for each rating scale and rating categories, including definitions relating to default. Published ratings, criteria, and methodologies are available from this site at all times. Fitch's code of conduct, confidentiality, conflicts of interest, affiliate firewall, compliance, and other relevant policies and procedures are also available from the Code of Conduct section of this site. Directors and shareholders' relevant interests are available at https://www.fitchratings.com/site/regulatory. Fitch may have provided another permissible or ancillary service to the rated entity or its related third parties. Details of permissible or ancillary service(s) for which the lead analyst is based in an ESMA- or FCA-registered Fitch Ratings company (or branch of such a company) can be found on the entity summary page for this issuer on the Fitch Ratings website.

In issuing and maintaining its ratings and in making other reports (including forecast information), Fitch relies on factual information it receives from issuers and underwriters and from other sources Fitch believes to be credible. Fitch conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or in a given jurisdiction. The manner of Fitch's factual investigation and the scope of the third-party verification it obtains will vary depending on the nature of the rated security and its issuer, the requirements and practices in the jurisdiction in which the rated security is offered and sold and/or the issuer is located, the availability and nature of relevant public information, access to the management of the issuer and its advisers, the availability of pre-existing third-party verifications such as audit reports, agreed-upon procedures letters, appraisals, actuarial reports, engineering reports, legal opinions and other reports provided by third parties, the availability of independent and competent third- party verification sources with respect to the particular security or in the particular jurisdiction of the issuer, and a variety of other factors. Users of Fitch's ratings and reports should understand that neither an enhanced factual investigation nor any third-party verification can ensure that all of the information Fitch relies on in connection with a rating or a report will be accurate and complete. Ultimately, the issuer and its advisers are responsible for the accuracy of the information they provide to Fitch and to the market in offering documents and other reports. In issuing its ratings and its reports, Fitch must rely on the work of experts, including independent auditors with respect to financial statements and attorneys with respect to legal and tax matters. Further, ratings and forecasts of financial and other information are inherently forward-looking and embody assumptions and predictions about future events that by their nature cannot be verified as facts. As a result, despite any verification of current facts, ratings and forecasts can be affected by future events or conditions that were not anticipated at the time a rating or forecast was issued or affirmed.

The information in this report is provided "as is" without any representation or warranty of any kind, and Fitch does not represent or warrant that the report or any of its contents will meet any of the requirements of a recipient of the report. A Fitch rating is an opinion as to the creditworthiness of a security. This opinion and reports made by Fitch are based on established criteria and methodologies that Fitch is continuously evaluating and updating. Therefore, ratings and reports are the collective work product of Fitch and no individual, or group of individuals, is solely responsible for a rating or a report. The rating does not address the risk of loss due to risks other than credit risk, unless such risk is specifically mentioned. Fitch is not engaged in the offer or sale of any security. All Fitch reports have shared authorship. Individuals identified in a Fitch report were involved in, but are not solely responsible for, the opinions stated therein. The individuals are named for contact purposes only. A report providing a Fitch rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. Ratings may be changed or withdrawn at any time for any reason in the sole discretion of Fitch. Fitch does not provide investment advice of any sort. Ratings are not a recommendation to buy, sell, or hold any security. Ratings do not comment on the adequacy of market price, the suitability of any security for a particular investor, or the tax-exempt nature or taxability of payments made in respect to any security. Fitch receives fees from issuers, insurers, guarantors, other obligors, and underwriters for rating securities. Such fees generally vary from US$1,000 to US$750,000 (or the applicable currency equivalent) per issue. In certain cases, Fitch will rate all or a number of issues issued by a particular issuer, or insured or guaranteed by a particular insurer or guarantor, for a single annual fee. Such fees are expected to vary from US$10,000 to US$1,500,000 (or the applicable currency equivalent). The assignment, publication, or dissemination of a rating by Fitch shall not constitute a consent by Fitch to use its name as an expert in connection with any registration statement filed under the United States securities laws, the Financial Services and Markets Act of 2000 of the United Kingdom, or the securities laws of any particular jurisdiction. Due to the relative efficiency of electronic publishing and distribution, Fitch research may be available to electronic subscribers up to three days earlier than to print subscribers.

For Australia, New Zealand, Taiwan and South Korea only: Fitch Australia Pty Ltd holds an Australian financial services license (AFS license no. 337123) which authorizes it to provide credit ratings to wholesale clients only. Credit ratings information published by Fitch is not intended to be used by persons who are retail clients within the meaning of the Corporations Act 2001.

Fitch Ratings, Inc. is registered with the U.S. Securities and Exchange Commission as a Nationally Recognized Statistical Rating Organization (the "NRSRO"). While certain of the NRSRO's credit rating subsidiaries are listed on Item 3 of Form NRSRO and as such are authorized to issue credit ratings on behalf of the NRSRO (see https://www.fitchratings.com/site/regulatory), other credit rating subsidiaries are not listed on Form NRSRO (the "non-NRSROs") and therefore credit ratings issued by those subsidiaries are not issued on behalf of the NRSRO. However, non-NRSRO personnel may participate in determining credit ratings issued by or on behalf of the NRSRO.